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THE FOOD INSPECTOR'S
ENCYCLOPEDIA



A. H. WALKER



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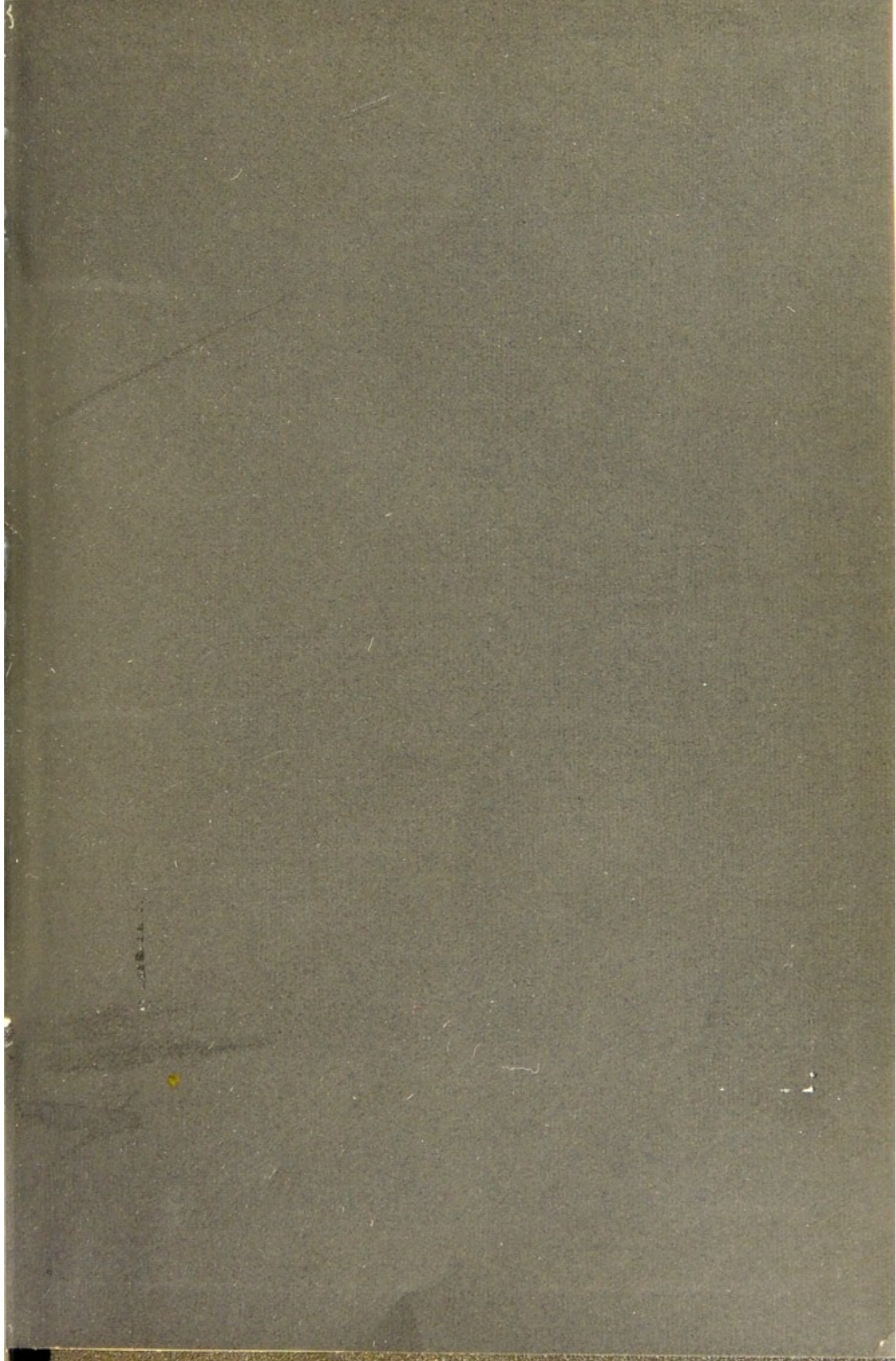


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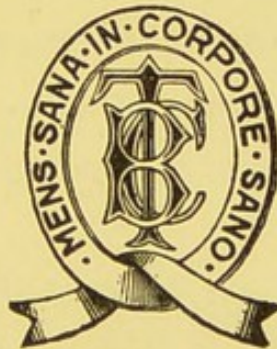
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FOOD INFECTORS
ENCYCLOPEDIA



PREFACE

DURING recent years attention has been specially directed to food inspection, with the result that numbers of books devoted principally to meat inspection have been published. For some years I have felt the great necessity for a book dealing, not only with meat, but with all classes of food, and treating them, from the food inspector's point of view, as a vade-mecum.

Briefly put, my principal object in compiling this book has been to collect as much information as possible that is likely to be of value and interest to all engaged in public health work within the limits allowed to a work of reasonable price, and by the adoption of an alphabetical arrangement to render reference simple and speedy.

Many standard works have been consulted, and much valuable information has been extracted from the leaflets of the Board of Agriculture. It is possible that in dealing with so many different subjects I may inadvertently have omitted to acknowledge some source of information. Should this prove to be the case, I trust that any authority not acknowledged will accept my apologies.

The legal aspect has not been dealt with, as so many officers, through their authorities, are in possession of the different Acts.

The analyst's sphere, also, has not been encroached upon, except where a few simple tests have been given.

As far as I am aware, no work has been published exclusively for inspectors dealing, simply and concisely, with so many of their subjects, and it is hoped that my efforts in that direction will be appreciated.

My acknowledgments are due to the following authors, whose works have been consulted and much information obtained therefrom: Messrs. Symons, Hutchinson, Notter, Kenwood, Leighton, Douglas, Oliver, Vacher, Porter, Robertson, Macewen, Thompson, Garrett, Mayo, Smythe, Tisdale, Mee, Senn, Leach, Wright, Hill, Willoughby, Andrews, Sanders, Murray, etc.

The help received from my brother, Mr. G. Wistow Walker, of Luton, in revising the proofs is also gratefully acknowledged.

A. H. W.

LONDON, N., *July*, 1912.

THE FOOD INSPECTOR'S ENCYCLOPÆDIA

A.

ABATTOIRS.—Most large towns are now provided with public abattoirs; they possess few disadvantages and many advantages, of which the following are a few: (1) Animals slaughtered with minimum amount of cruelty. (2) Modern appliances and labour-saving machinery generally in use. (3) Better degree of cleanliness attained. (4) Constant and strict supervision and examination. (5) Pollution of air, water, and earth obviated. (6) Inspection of live animals better carried out, and animals isolated easier if necessary. (7) The public has more confidence in meat-supply.

Planning of Abattoirs—*Chief Points.*—1. Administrative block and superintendent's house.

2. Slaughter halls, often subdivided into—(a) Hall for cattle; (b) calves and sheep; (c) pigs; (d) hanging and cooling rooms for various animals.
3. Cold storage, cooling and chilling rooms.
4. Lairs and slaughter-house for infected or suspected animals.
5. Offal and tripe room.
6. Veterinary and meat inspectors' rooms.
7. Pathological room.
8. Condemned meat-room.
9. Destructor.
10. Engine and boiler-house.
11. Manure depot.
12. Workmen's mess-room, kitchen, baths, lavatories, and water-closets.

ABDOMINOSCOPY.—The inspection of the abdomen.

- ABERNETHY.**—A biscuit which takes its name from this town in Scotland. It is thin, fine, round, and of several sizes; it is made from flour, milk, and caraway seeds. For the inspection of biscuits, see heading Biscuit.
- ABERTAM CHEESE.**—A hard rennet cheese made from sheep's milk at Carlsbad.
- ABLACTATION.**—This term is used to denote the stoppage of the milk-flow in the mammary glands.
- ABNORMAL ODOUR OF MEAT.**—This may arise from a variety of causes. The meat may be from an old bull, ram, or boar, and in such a case smells of urine. Death by choking often impregnates the meat with the odour of the substance which caused the choking. Pigs fed on fish and putrifying foods often give the flesh an abnormal smell. If animals have been doctored just previously to slaughtering, a very peculiar odour is sometimes imparted to the meat. Such flesh must be judged on the merits of each case.
- ABOMASUM.**—The fourth or true digestive stomach in ruminants. It is also called the "reed" or "rennet," the latter from the fact that rennet is obtained from this stomach in the calf.
- ABORTION, OR MISCARRIAGE.**—Bringing forth young prematurely. The premature expulsion of the fœtus from the womb.
- ABRASION.**—The act of wearing or rubbing off the outer skin and causing an exposure of the true skin.
- ABSCESS.**—A collection of purulent matter in some part or organ of the body. The term is used chiefly to denote a painful swelling which often ends by discharging a thick, creamy, or yellowish fluid called "pus," or "matter." The abscess may be very acute and rapid, or it may be slow.
- ABSINTHE.**—A strong liqueur obtained from a bitter plant called "wormwood." In colour it is a yellowish-green, this being obtained from the juices of the spinach, parsley, etc. Absinthe is flavoured with peppermint, aniseed, cloves, cinnamon, etc., to render it more agreeable to the taste. It is largely consumed in France, but is on sale at a large number of London stores, public-houses, etc. It is also used as a tonic, but taken in excess is a great destroyer of the nervous system. The cheap absinthe is much adulterated, copper sulphate, indigo, turmeric, and picric acid having been found.

ABSOLUTE ALCOHOL.—Alcohol perfectly free from water. It is a colourless, inflammable liquid, with a pleasant odour.

ACAJOU NUTS.—Another name for cashew nuts, which see.

ACARIASIS.—Diseases produced in cattle and birds by acari or mites.

ACETABULUM.—A cavity in a bone for receiving the end of another bone.

ACETIC ACID.—A colourless liquid with a strong and sharp acid odour and sour taste. It is used in the fried-fish shops much diluted and coloured with burnt sugar, in lieu of vinegar.

ACIDIMETER.—An instrument for testing the strength of acids in various liquids, such as milk.

ACINIFORM OF GLANDS.—In clusters like grapes.

ACNESTIS.—That part of the spine in quadrupeds between the shoulder-blade and the loins which an animal cannot reach to scratch.

ACRID.—A term applied to any substance sharp and biting to the taste, which causes irritation, especially in the stomach.

ACTINOMYCOSIS.—This disease, which is also known as “lumpy jaw,” “wooden tongue,” etc., is caused by a vegetable micro-organism called the “ray fungus.” It is thought that the animal contracts the disease by means of infected grains inoculating wounds, decayed teeth, etc. The parts most commonly affected are the head and tongue, more especially in young cattle. When the tongue is affected, it becomes hard, dense, lumpy at the tip, and often contains hard nodules. It is sometimes enlarged and hard; when in this condition it is called “wooden tongue.” On section, it shows nodules of the ray fungus colonies, which might on first sight be taken for tuberculosis, but which are rarely caseous or calcareous. When the jaw is affected, it is more frequently the lower one. It becomes swollen or “lumpy.” The bone becomes enlarged, and often large sores may be seen on the outside discharging pus. All organs and parts affected are usually condemned, but the rest of the carcass is generally passed.

ADENITIS.—Inflammation of a lymphatic gland. It usually proceeds to suppuration and destruction of the gland.

ADHESION.—A term in pathology used to express the union between two cut surfaces, or between two membranes by the effusion of lymph between the opposed surfaces.

ADIPOSE.—A term for the fatty tissue which is present in the body.

ADULTERATION OF FOOD.—The following list gives some of the most common ways of adulterating food, also some substitutes and other tricks by which people are defrauded :

Allspice.—Ground Brazil-nut, walnut, almond, cocoanut and cocoa shells, date-stones, spruce, oak, and red sandalwood sawdust.

Almond Oil.—Adulterated by a mixture of cheaper oils, such as cotton-seed, walnut, poppy-seed, sesame, peanut, apricot, and peach-kernel oils.

American Anchovies.—Packed in inferior oils ; often inferior fish, and not anchovies.

American Sardines.—Often sprats are packed in cotton-seed oil of doubtful quality.

Anchovy Paste.—Largely made from herrings, flour meal, and coloured with cochineal, etc., and various preservatives.

Annatto.—Adulterated by the addition of starch, turmeric, rye, barley, and wheat flours ; also sulphate of lime, carbonate of lime, venetian red, red lead, copper, etc.

Apple Rings and Dried Apples.—Soaking in water to increase weight.

Apricots.—Soaking in water to increase weight.

Armenian Bole.—Venetian red and chalk.

Arrowroot.—Cheaper starches such as potato, but rice and maize preparations are substituted.

Asparagus.—In fresh asparagus, sprouts of artichokes, cardoons, seakale, rampion, etc. Inferior asparagus is also put inside the bundles.

Bacon.—The addition of preparations of boric acid.

Baking-Powder.—Addition of rice, flour, alum, etc.

Barley.—Bleaching with sulphurous acid gas to add to weight and appearance, coating the grains with powdered French chalk to improve the appearance of pearl and other barley.

Beer.—Addition of water, saccharine, salicylic acid, contamination with arsenic.

Bloater Paste.—Coloured starch, bread and preservatives, red oxide of iron.

Blood Oranges.—Pricking the skins and soaking ordinary oranges in dye.

- Brandy.**—Addition of water, silent spirit, substitution of coloured and flavoured silent spirit.
- Bread and Flour.**—Addition of potatoes in large quantities, rice, pea, bean, and rye flours ; chalk, gypsum, and alum.
- Buckwheat Flour.**—Mixtures of rye, Indian corn, wheat flours, etc.
- Butter.**—Admixture of foreign fats, such as cocoanut oil, etc., excess of water, addition of preservatives, boric acid, borax, etc. Substitution of margarine wholly or partly.
- Cake.**—Unwholesome flavourings, eggs, etc. Imitation acid flavourings, artificial colouring matters.
- Canned and Bottled Asparagus.**—Sulphate of copper for the purpose of greening.
- Canned and Bottled Beans.**—Sulphate of copper for the purpose of greening.
- Canned and Bottled Peas.**—Sulphate of copper for the purpose of greening.
- Canned Peaches, Apricots, etc.**—Artificial sweetening, saccharine, mineral salts, and preservatives.
- Canned Poultry.**—Preservatives and the meats of fowls cheaper and of different kind, also such meats as pork, veal, rabbit.
- Canned Tomatoes.**—Artificial colourings, such as cochineal, coal-tar dyes, preservatives, and presence of salts of lead, tin, zinc, etc.
- Capers.**—Addition of copper salts for the purpose of greening.
- Castor Oil.**—Addition of cheaper oils, such as resin, cotton-seed, linseed, and colza oils.
- Caviare.**—Roes of common fishes other than the sturgeon and sterlet.
- Cayenne Pepper.**—Addition of brick dust, red wood dust, red ochre, red lead, and iron.
- Chartreuse.**—Often made from silent spirit, with chemical flavourings added.
- Cherries (Canned).**—Addition of preservatives, artificial colouring with coal-tar dyes, presence of mineral salts.
- Cherry Brandy.**—Imitations made of cherry juice, burnt sugar, and ginger essence.
- Chocolate.**—Addition of foreign fats, of ground cocoa shell, etc.
- Cinnamon.**—Cassia bark substituted.
- Cloves.**—Addition of stems, clove fruit, and exhausted cloves from extract works.

- Cocoa.**—Addition of foreign substances, such as sago, and potato starch, arrowroot, etc. Sugar, the powdered shell of the cocoa bean, etc.
- Cod-liver Oil.**—Fish oils of lower value, such as seal, whale, and blubber oils.
- Coffee.**—Addition of chicory or other roasted vegetable substances, such as dandelion roots, acorns, date-stones, bread, beans, exhausted coffee grains, etc.
- Confectionery.**—Poisonous colours, glucose containing harmful substances.
- Crabs.**—Decomposing crabs freshened up by boiling a few minutes. When tinned or bottled, the flesh of other fish, not crustaceans, added together with dyed bread, flour, and similar substances.
- Dates.**—Freshening up mouldy or sugary dates with treacle or molasses.
- Demerara Sugar.**—Beet sugar crystals dyed and sold as genuine Demerara.
- Dried Mushrooms.**—Poisonous fungi and decomposing mushrooms.
- Fruit Syrups.**—The use of preservatives instead of sterilization, such as salicylic and benzoic acids, the addition of imitation fruit juices, or syrups.
- Gelatine.**—Presence of bleaching agents, manufactured from substances utterly unfit for food and from unedible portions of animals.
- Golden Syrup.**—Mixing glucose with molasses.
- Ground Ginger.**—Addition of exhausted ginger from ginger-ale and similar works.
- Ground Spice.**—Addition of ground walnut, Brazil, almond, and cocoanut shells, date and olive stones, mustard and pepper husks.
- Ham.**—Addition of preservatives, such as boric acid.
- Honey.**—Cane sugar, glucose, invert sugar, and gelatine to thicken it.
- Jams.**—Artificial colours and flavours, glucose, coal-tar dyes; the substitution of marrow, carrot, turnip, and similar vegetable substances, also residues from fruit-juice works.
- Jellies.**—Artificial colouring and flavours.

- Lard.**—Admixture with cheaper fats, such as cotton-seed oil, beef, water, etc.
- Lemon and Lime Juice.**—Tartaric acid and mineral acids, glucose, cane, and invert sugar, coal-tar dyes, and preservatives.
- Lemon Curd.**—Made from lime juice, sugar, or glucose, and butter colouring.
- Macaroni.**—Pastes of rice, Indian corn, potato, and other flours.
- Mace.**—Wild inferior kinds of mace used, also turmeric.
- Malt Vinegar.**—Addition of burnt sugar to acetic acid, sulphuric acid, nitric acid, and hydrochloric acid; salts of lead, zinc, copper, through storage contamination.
- Maple Sugar.**—Molasses, common brown sugar, glucose, etc.
- Meat Extracts.**—Glycerine, boric acid, sulphate of soda, and extracts of yeasts.
- Milk.**—Abstraction of fat and cream, addition of skimmed milk, water, and preservatives.
- Mixed, Chopped, and Devilled Meats.**—Addition of starch, boric acid, borax, colouring matters, etc., sulphate of soda, salt-petre to retain colourings.
- Mustard.**—Colouring matters such as turmeric, etc. Addition of cayenne pepper, ginger, potato starch, pea flour, radish and rape seed, linseed meal, yellow ochre, plaster of Paris, clay, abstraction of mustard oil.
- Nutmegs.**—Artificial nutmegs made from damaged nutmeg powder.
- Oatmeal.**—Addition of barley meal, ground husks of other cereals, maize, etc.
- Oleomargarine.**—Addition of egg yolks from China, often heavily dosed with boric acid and other preservatives.
- Olive Oil.**—Mixing with cotton-seed oil, castor oil, lard oil, and other cheaper oils.
- Oysters.**—Floating in fresh water, thus giving a fictitious fat appearance.
- Pepper.**—Addition of wheat, sago, rice, pea flour, linseed meal, mustard husk, presence of an undue amount of sandy matter, ground, olive stones, etc.
- Pickles.**—Mixed inferior and decomposing vegetables, spices, vinegar, etc.

- Plovers' Eggs.**—Gulls and similar cheaper eggs substituted after colouring.
- Potted and Canned Tongue.**—Addition of starch, boric acid, salts of tin, zinc, etc. ; saltpetre to impart red colour, fat dressing from other animals.
- Potted Meats.**—Starch to increase weight and bulk and the quantity of water it will carry.
- Powdered Cassia.**—Often a mixture of inferior ground bark and cassia buds.
- Prawns.**—Large pink shrimps substituted, sometimes dyed brown shrimps.
- Preserved Vegetables.**—Peas, beans, spinach, etc., often have sulphate of copper added for greening purposes.
- Rice.**—Polished with French chalk.
- Rum.**—Made from beet-sugar molasses, silent spirit, coloured and flavoured, addition of water.
- Saffron.**—Adulteration by using flowers of a similar kind.
- Sago.**—Potato starch.
- Salmon (Foreign).**—Chilled salmon passed off as Scotch.
- Sausages.**—Excessive quantity of bread, coloured with coal-tar dyes, also partly decomposed meat heavily dosed with preservatives.
- Sherry.**—Raisin wine, flavoured and doctored up with oil of almonds, or made from malt wort and rectified spirit.
- Shrimps (Potted).**—Preservatives, chiefly boric acid and sulphites.
- Soup Squares.**—Addition of gelatine, coloured, seasoned, and flavoured so as to resemble meat soup.
- Standard Flour.**—Adulterated with pea and other common meals, and refuse of milling.
- Sweetbreads.**—Substitution of lambs' testicles and large lymphatic glands.
- Sweets.**—Addition of paraffin wax and coal-tar dyes for colouring.
- Tapioca.**—Gum, potato flour, and other starches added.
- Tea.**—Presence of leaves similar in appearance, such as willow, beech, elder.
- Tinned Foods.**—Contamination by tin, lead, zinc, etc., from unwholesome, decayed, or partly decayed foods.
- Vanilla Extract.**—Made from tonka beans.

Whisky.—Coloured and flavoured silent spirit, addition of silent spirit.

Wines.—Watering, fortifying, addition of wines of low value to those of high value. Manufacture from figs, raisins, glucoses. Addition of bitartrate of potash to age it, coal-tar dyes, sulphurous acid, alum to brighten colour, etc.

AERATE.—To combine with carbonic or other acid, to change the circulating fluids of animals by means of air.

AERATED BREAD.—A process of making bread which was patented by Dr. Daughlish. It consists in making the dough with water heavily charged with carbonic acid gas instead of yeast, and mixing in special vessels under pressure. Its advantages are stated to be—(1) Rapidity and certainty of manufacture; (2) cleanliness of processes; (3) economy of materials, etc. Its chief disadvantage is its poor flavour.

AERATED WATERS (Artificial).—Large quantities of aerated or mineral waters, as they are more often called, are consumed in this country. Of the different kinds little need be said, so many exist, and fresh ones are being put on the market every week. The principal are—Soda water, ginger beer, lemonade, ginger ale, potash, seltzer, Carrara, magnesia waters. The aeration is effected by means of carbonic acid gas under pressure. Inspectors seldom examine the bottled waters; however, it sometimes happens that sediment and weedy growths are present in the bottles in sufficient quantities to warrant seizure and condemnation.

AËROBIC.—A term applied to micro-organisms which require oxygen to enable them to grow.

AGARICUS.—One of the largest and most important genus of fungi. It contains the common mushroom.

AGE OF ANIMALS.—This is generally approximated by an examination of the teeth in cattle. The animal will have lost its milk teeth, and in place of these have full-grown incisor teeth at about the following:

2 incisor teeth	..	..	..	..	at 2 years.
4 "	"	..	..	..	" 2½ "
6 "	"	..	..	..	" 3½ "
8 "	"	..	..	..	" 4½ "

If the animal has a full mouth of teeth, some idea can be formed by their condition. The two central incisor teeth show signs

of a neck at about five and a half to six years, while the outer incisor teeth first show signs of a neck at nine years.

Sheep :

2 incisor teeth	..	..	..	at $1\frac{1}{4}$ years.
4 " "	..	..	..	from $1\frac{1}{2}$ to 2 years.
6 " "	..	..	..	" $2\frac{1}{4}$ " $2\frac{3}{4}$ "
8 " "	..	..	..	" 3 " $3\frac{1}{2}$ "

The horns of cattle are also a guide to their age. Farmers and others generally allow three years for the tip, and a year for every ring on the horn, so that at five years it has two rings, six years three rings, and so on. Generally speaking, young animals show bones which are soft and small, with the joints large and well supplied with bluish-white cartilage, and the ribs are pink in colour, and soft and porous. Up to three years the aitch bone can be cut through with a knife, but afterwards it gradually becomes harder, and has to be sawn through. The pads of cartilage at the end of growing bones disappear when maturity is reached.

AIX-LA-CHAPELLE WATER.—This is obtained from the town of this name in Rhenish Prussia ; it is sulphurous. The water from some springs also contains iron. It acts chiefly upon the liver and skin.

AIX OIL.—An olive oil of the finest grade, used largely for edible purposes.

ALBUMIN.—A chemical compound which forms a very important constituent of food. It belongs to a class of carbon compounds called "proteids." The purest albumin is the white of eggs, which is used by confectioners on their pastry.

ALCOHOL.—Is a highly rectified spirit, obtained from fermented saccharine solutions by distillation. All ordinary intoxicants owe their stimulant properties to it.

ALCOHOLIMETER.—An instrument for ascertaining the amount of pure alcohol in a liquid.

ALDERMAN'S WALK.—The name given to the centre cut of a haunch of mutton or venison. It is also given to the best part of sirloin of beef. These cuts are the most delicate and best flavoured. The name appears to have been given because of the special liking of city aldermen to this cut, and (the latter part) from the fact that they had plentiful helpings, or "walked" into the joint.

ALE.—The explanation of this term is difficult, for in some parts of the country it is quite contrary to others. It is a liquor made by fermentation, or, in other words, is beer, either strong or weak, according to the custom in the locality. Two kinds are in general use, mild and pale, the former being sweetish strong beer, the latter having a bitter flavour.

ALEMTEJO CHEESE.—A rather soft cheese made in the district of this name in Portugal. It is sometimes made of goats' milk, but more often from sheep's.

ALEUROMETER.—An instrument for estimating the quality of wheaten flour.

ALEXANDER.—A plant found growing wild in this country; in flavour it is similar to celery. It is not used much at the present time.

ALIMENTARY CANAL.—The great intestine where the nutritive ingredients of the food are absorbed, and by which the useless parts are carried off.

ALISANDER.—A plant belonging to the parsley and celery order.

ALKALIS.—These are the oxides which, when dissolved in water, restore the blue colour to reddened litmus. They form a subdivision of a larger class of oxides.

ALKALINE WATERS.—These contain, as a rule, carbonic acid and carbonate of soda, while some contain common salt or sodium chloride and sulphate of soda.

ALKALOIDS.—A group of organic compounds containing carbon, nitrogen, and hydrogen, as invariable constituents.

ALKANET ROOT.—A plant grown in Spain, France, etc., for its dark red root. The coloured extract is used for colouring fats, cheese, oils, spirits, imitation wines, etc. It is also called "alcanna" and "anchusa."

ALLSPICE, PIMENTO, OR JAMAICA PEPPER.—The first name is so given on account of the berries combining the flavour of cloves, cinnamon, and nutmeg. It is the berry of a small tree called the *Limenta officinalis*, a kind of myrtle growing in the West Indies, Mexico, and South America. The chief source is Jamaica. The berries are picked by hand when fully grown, but before they are quite ripe they are put to dry in the sun or kilns, and turn brown. Large quantities are used in the manufacture of pickles and bottled sauces. Occasionally mixed with

the berries are to be found the fruits of the barberry tree and Mexican spice, but both these berries are larger and have a different appearance, and consequently this substitution is easily detected.

ALLIGATOR PEAR.—See Avocado.

ALMONDS.—This nut is credited with supplying three times more nutriment than meat, and is considered a perfect food. It contains about 21 per cent. protein, 54 per cent. fat, and 17 per cent. carbohydrates. It is thought to be indigestible, but this is said to be remedied by having the nuts blanched, as the skin has a slightly irritating tendency.

The sweet almond, known as the "Jordan almond," is most valuable on account of its fine flavour. The most noted come from Spain, Malaga and Valencia, where they are largely grown. Other kinds are grown in Sicily, Barbary, Persia, the Canary Islands, etc.

Bitter almonds are similar to the sweet variety, and are often very difficult to distinguish from them; but they differ greatly in composition, and are largely used for cooking.

ALPIN CHEESE.—A cheese made in the Alpine regions of France. It is also known as "clerimbert."

ALTENBURG CHEESE.—A goat's milk cheese made in Germany; it is about 8 inches in diameter, 1 or 2 inches thick, and weighs about 2 pounds.

ALUM.—A double sulphate of alumina potash, etc. It has an acid and astringent flavour. It is produced commercially near Whitby and Glasgow.

AMBERT CHEESE.—A cheese made in imitation of Roquefort from cow's milk. It is cylindrical in shape.

AMBOYNA CLOVES.—A small dark-coloured variety of cloves of superior quality.

AMERICAN ANCHOVIES.—These are also termed "moss bunkers." Unfortunately, these have been found packed with inferior oil, and in some cases poor quality anchovies.

AMERICAN CHEDDAR CHEESE.—This is similar to the English made cheese, except that it is often made from skimmed milk.

AMERICAN PRUNES.—Large quantities of these prunes are now imported into this country from California, packed in boxes of various sizes.

AMERICAN SARDINES.—Large quantities of sardines are packed in the United States, but cotton-seed oil is extensively used both for cooking and packing the fish, and some very inferior fish, probably sprats, have been sent to this country under the name of "sardine."

AMYLOID, OR WAXY DISEASE.—A disease which is seldom seen in the slaughter-houses of this country.

ANAËROBIC.—A term applied to organisms which will not grow in the presence of air.

ANAL FINS.—One of the unpaired fins of fish, near the tail and on the under side.

ANATOMY.—This subject treats of the various portions and structures of the body, and is both general and descriptive, comparative and morbid.

ANCHOVY.—The distinguishing features of the fish are—the head terminates in a fleshy, pointed snout, which projects beyond the jaws; the gape of the mouth is very deep; body slender and elongated; belly without spines on the edge; colour dark greenish along the back, silvery on the sides and belly. The length is about 5 to 7 inches.

They are caught in the Black Sea, off the coasts of France, Spain, Portugal, and in the English Channel. The Gorgona fish are supposed to be the best, but quantities are sent from Holland, Russia, Norway, etc. The Dutch species are imported in brine only, while the Russian fish are pickled in highly spiced vinegar, the Norwegian in spiced brine; the Gorgona are imported in brine and oil. The best fish are those which are small and plump. The pickle in which they are preserved should be red. The fish soon spoil if exposed to the air. The Dutch, Russian, and Norwegian varieties are distinguished by their having no scales. Sprats and other small fish are sometimes sold instead of the real fish.

ANCHOVY BUTTER.—This is usually made by grinding one part of boned anchovies to two parts of ordinary butter, mixing and grinding together into a paste. It is often flavoured with a little spice.

ANCHOVY PASTE.—Originally this was made by cleansing, boning, and drying the anchovies, then grinding and forcing through a sieve to remove bones, skin, etc. It is then mixed with flour or meal, lard or bacon fat, and flavoured with mace, cayenne

pepper, etc. At the present time it is largely made from fresh herrings, with just enough anchovies added to give it the requisite flavour. The flour or meal used is generally coloured with cochineal or Armenian bole. It is usually sold in pots covered with a thin layer of melted butter to exclude the air.

ANCHOVY PEAR.—This is a stone fruit grown in the West Indies. In colour it is a russet brown, and is much used for pickling. It is seldom seen in this country except in hot-houses.

ANCHYLOSIS.—An immovable stiffening of the joint caused by disease, also known as “stiff joint.”

ANEURISM.—A swelling in the coat of an artery.

ANGEL FISH.—See Monk Fish.

ANGELICA.—This plant is a native of Great Britain, and is thought by some people to be of great medicinal value. The leaves and stalks are blanched, and eaten in a similar manner to celery. Angelica is perhaps better known in its preserved form; the tender stems are preserved with sugar, and largely used for decoration and flavouring by the confectioner. The seeds are also used in the manufacture of several liqueurs.

ANGLEBERRIES.—These are also called “warts,” and the term is used to denote the unsightly growths which may be seen about the eyelids, lips, teats, etc., of cattle. They vary in size very much, and by some authorities are thought to be parasitic in origin. The term is also used in some parts of the country for tuberculosis.

ANGLER FISH.—A fish with a very large head and mouth, and not much body. It is rarely seen on the market or in shops, though it is sometimes sent to the fried-fish shops minus the head. It is also called the “fishing frog.”

ANGOSTURA BARK.—A bark which is used as a tonic.

ANGOSTURA BITTERS.—A bitter liqueur made by distilling angostura bark, lemon peel, and other ingredients.

ANILINE DYES.—These are obtained from coal tar; beautiful colours are now produced in several hundred tints. They are, unfortunately, sometimes used for colouring food products.

ANISEED.—The small, oblong, and aromatic seed of a plant which grows in France, Spain, Egypt, the Levant, etc. It is used as a flavouring for puddings, pastries, creams, sweets, and liqueurs. The leaves are also used for seasoning or garnishing. A powerful

volatile oil is also distilled from this plant. It has a pale yellow colour, and a warm, sweetish taste. It is used in sweets and cough mixtures.

ANISEED CORDIAL.—This is made by flavouring weak spirit with aniseed, coriander, and sweet fennel seed.

ANISETTE.—A liqueur made in Holland and France from aniseed, coriander, and fennel.

ANNATTO.—A harmless vegetable dye which is obtained in the form of a paste by pulping the seeds of the annatto tree or plant grown in Brazil, Ceylon, South America, West Indies. It is an orange-red colour, and is used to colour milk, butter, cheese, margarine, etc., to the same rich appearance. It is also used by the fried-fish merchants to colour the batter, and so add to the appearance of the cooked fish. Fish fillets are also dyed with a solution of annatto. It is sometimes adulterated by the addition of lime, starch, flour, etc., and rarely red lead.

ANTHRAX.—Anthrax is a contagious disease caused by a microbe, *Bacillus anthracis*. Human beings and all animals are liable to become infected. The disease, which shows itself suddenly, chiefly attacks cattle, pigs, and sheep, but horses are not uncommonly affected. It is very quickly fatal, usually within forty-eight hours; but in the United Kingdom it does not often spread with rapidity from animal to animal, though it may affect a number of swine at the same time, if they have been fed on flesh affected with anthrax.

Symptoms.—A beast, which a short time before appeared to be well, may be found dead, or in a dying condition, frequently with blood oozing from the nostrils and anus. In cattle there are no typical symptoms, but in horses and pigs the region of the throat is often found to be swollen.

Post-Mortem Appearances of the Disease.—The carcass is swollen. Blood is often found around the nostrils and anus. The muscles may be infiltrated with blood at certain points. The lungs and glands are congested. The spleen is very much enlarged. It is softer and darker than normal, and its substance usually resembles tar.

In most parts of this country the enlargement of the spleen in cattle is of great diagnostic importance, but in those districts where red-water exists, enlargement of the spleen may be due to this disease and not to anthrax. In such a case, however, the spleen substance has not the same fluid, tarry appearance.

In horses and pigs, and much less frequently in cattle, the spleen may be of normal size, although the animal has died of anthrax. The flesh is dangerous to animals and human beings.

Difficulty of Recognizing the Disease.—One of the greatest of the difficulties which present themselves in dealing with this disease is, that the symptoms during life are not such as to lead a person who is unacquainted with anthrax to suspect the presence of the disease. Moreover, the death of the animal attacked often occurs when the owner or attendant is absent. It frequently happens that an animal which has sickened is killed, or that the carcass of an animal dead of anthrax is cut up, and the blood, which is the main source of danger, is freely spilt about the premises or on the soil. The disease is in this indirect manner spread to other animals, and in some cases the persons who have handled the carcass contract it. In every case of sudden and unaccountable death amongst stock the owner of the animal should await a skilled opinion before disposing of the carcass.

Anthrax or Suspected Anthrax to be Reported.—Every person in Great Britain having, or having had, in his possession or under his charge an animal (that is, a ruminating animal, pig, horse, ass, or mule) affected with, or suspected of, anthrax, is required by law to give notice of the fact with all practicable speed to the police. Failure to give such notice renders a person liable to a fine of £20, and in certain circumstances to a month's imprisonment with hard labour.

It is the duty of the Local Authority under the Diseases of Animals Acts on receiving such notice to institute inquiries, and to make proper provision for the disposal of the carcass of any animal suspected of anthrax, and for the disinfection of the premises upon which disease has existed. The Inspector of the Local Authority is also required to give information to the Medical Officer of Health.

Precautions to be taken Pending Inquiry.—Pending inquiry, the owner can do much to assist in preventing the spread of the disease amongst his stock, and it is clearly to his own interests that he should do so.

The sick animal should on no account be killed, but should be carefully isolated from all other animals. Should it die before the arrival of the veterinary inspector, the carcass must not be dragged along the ground, but should be allowed to remain where it is, until the examination has taken place. It is essential that *the carcass of the animal should not be cut or*

opened, and steps should be taken to prevent the escape of blood or of excretions which may contain blood. Precautions should also be adopted to prevent the possibility of any person or animal obtaining access to the carcass, or to any blood which may have exuded therefrom. As an additional precaution, quicklime may be freely spread on the floor or on the ground surrounding the carcass. Animals with whom the suspected animal has been in association should be carefully watched, and isolation at once adopted in the case of the appearance of symptoms similar to those of the suspected animal. Such precautions are particularly necessary in the case of milch cows affected, or suspected of being affected. The milk of these cows may contain anthrax bacilli, and so be the means of infecting human beings.

Procedure of the Local Authority.—Local Authorities are required by Article 3 of the Anthrax Order of 1899 to obtain the assistance and advice of a veterinary inspector in all instances in which anthrax is reported to them. Although the clinical symptoms may in many instances justify a veterinary inspector in forming the opinion that anthrax exists, it is desirable that his diagnosis should be supported by the positive evidence of a microscopical examination of the blood of the suspected animal. Such examination, if the specimen be obtained soon after death, is by no means difficult. The specimens should be taken in duplicate and carefully preserved for future reference.

Investigations as to the origin of the outbreak should include careful inquiries as to the use, for or about the animals, of manufactured feeding-stuffs, or bone and other artificial manures, as such substances are known in some cases to have been the media by which the disease has been introduced. The possibility of infection being conveyed by the water which the animals drink should not be overlooked.

It is very advisable that the owner of all cattle, sheep, or swine, which have been in association with the diseased or suspected animal, and are pronounced by the veterinary inspector to be apparently healthy, should move them under the supervision of an officer of the Local Authority from the shed, or field, or place where the disease has originated, to some other place on the farm or premises, where they can be isolated and kept under observation. The period of incubation of anthrax is short, and seven days will, as a rule, suffice to enable the veterinary inspector to determine whether any of these animals have become infected or not.

Disposal of the Carcass.—Special attention should be given to the disposal of the carcass of an animal dead of anthrax. Cremation upon the spot where it died is, where possible, the safest method of disposal. Information on this subject has been issued to Local Authorities by the Board. If it is necessary that the carcass be moved to some convenient spot for the purpose of cremation, the nostrils and all the natural openings should be carefully plugged with hay or tow saturated with a strong solution of carbolic acid, in order to prevent the oozing of any blood therefrom. The dragging of the carcass along the ground is to be avoided. Where burial is resorted to, the grave should be dug in some part of the farm, remote from any water-course, to which animals cannot, or do not, ordinarily have access, such as a wood or enclosure. The method of burial is prescribed in the Anthrax Order.

The disinfection of the place or premises where a diseased animal has been detained, or has died, is then to be carried out in the most thorough manner of which circumstances permit. All manure, or broken fodder, remaining thereon, should be disinfected or destroyed by fire.

General Observations.—It is important that it should be widely known that anthrax is due solely to the introduction of the minute germs or spores of anthrax into the blood of an animal or of man. The disease may therefore be introduced by any medium capable of conveying these germs or spores. Feeding-stuffs brought on to a farm, or manures made from animal substances, may be vehicles of infection. If a stream becomes contaminated, as has been found to be the case where certain industries involving the use of the hides, hair, etc., of animals are carried on, the spores may be carried to the farm by the water. The spores of anthrax develop into bacilli, which find their way into the circulation of an animal through a cut or abrasion.

Where infection has once been introduced upon a farm, it has frequently been continued by the ignorance or carelessness of individuals, and in some cases farms have become permanently infected with anthrax.

It is a common practice amongst owners of stock to slaughter their cattle as soon as they present symptoms of serious illness, in order that the carcass and hide may be utilized. Where, as is not uncommonly the case, the sudden illness is due to the presence of anthrax, the greatest mischief is done by such a practice. The blood of the diseased animal is distributed on the ground, or it may be on the floors of the cattle-shed, or upon

the mangers, or is carried on the boots of the attendants to other parts of the farm or premises. The bacilli contained within the blood of a diseased animal will, when exposed to the air, multiply and produce spores which may become the means of infecting other animals at short or long intervals. Many cases have come under the notice of the Board from time to time of persons having contracted anthrax whilst engaged in slaughtering animals, or in dressing or otherwise handling the carcasses of animals. Between the beginning of July, 1904, and the close of that year, as many as twelve persons are known to have contracted the disease whilst so employed, six of whom died, whilst in one case amputation of the arm became necessary. Since 1904 similar cases involving deaths have been reported to the Board.

On the other hand, the bacilli of anthrax die *if kept within the intact carcass* of an infected animal. No spores are formed; and experience has shown that, where the precautions recommended above have been scrupulously adhered to, the disease frequently ceases after the death of one animal on the farm.—*Extract from Board of Agriculture Leaflet.*

ANTIFERMENTS.—These are substances which arrest or prevent putrefaction in foods and beverages. Common antiferments are salicylic, boric, boracic acids.

ANTISEPTIC.—A chemical substance used either to kill or prevent the growth of bacteria and putrefaction.

ANTITOXIN.—A substance which antagonizes a toxin.

ANUS.—The outlet from the lower end of the bowel.

AORTA.—The great artery which arises from the left ventricle of the heart and conveys the arterial blood to the numerous branches and all parts of the body.

APOLLINARIS WATER.—This well-known table water is obtained from springs in Rhenish Prussia. It contains about 12 grains of carbonate of soda to the pint, besides small quantities of magnesia of lime. It is also charged with carbonic acid gas.

APOPHYSIS.—A prominence on the surface of a bone. It is distinguished from an epiphysis, which is a prominence having a separate centre of ossification.

APPENZELL CHEESE.—A cheese made from skim milk in Switzerland, Bavaria, and Baden.

APPLES.—Probably the apple is the fruit in the greatest demand at all seasons. It is therefore one of the most important fruits

to the inspector. To enumerate the varieties of apples now on the market would be an almost endless task. It is, however, sufficient for our purpose to know an apple. They may be classed as—(1) Dessert, (2) kitchen or cooking, (3) those suitable for the table and kitchen, (4) for cider-making. Large quantities of apples are imported from the United States in November, December, and January; from Canada, November to March; from Lisbon during July and August; from Australia, May to July.

The nutritive value of the apple is very small, but its adaptability for cooking purposes makes it a very valuable addition to our food-supply. When cooked and of good quality, it is easy of digestion, cooling, and slightly laxative. The brown colour of the bruised and bad spots is familiar to everyone. It is a common practice for fruiterers to sort apples over, pick out the speckled ones, and, after cutting out the bad bruises, specks, etc., to sell them at a much reduced price. Some, however, do not do this, but sell the speckled apples as such, and therefore come within the scope of the inspector.

Apple-rot is caused by a fungus which is very destructive to the ripe fruit. It appears first as minute scattered spots on the skin. These spots rapidly extend, and form large brown, sunken patches. Within a short time this fungus reduces the fruit to a brown, rotten mass.

APPLES AND APPLE RINGS (DRIED).—Both the dried and evaporated apple and apple rings are now sold. If for rings, the fruit is pared, cored, and sliced in a machine. These are next placed in brine to prevent discoloration, afterwards taken on sieves to the drying or evaporating machine, where they go through several processes in drying.

APRICOT.—This fruit is very similar to a peach in its roundish form. It is of an orange or yellow colour, and has a downy skin. One end is perforated, and the other pointed. They are extensively grown in France, Italy, Spain, Turkey, South Africa, and are exported from those countries in the raw, canned, and dried state. Unfortunately, they keep fresh only a short time. Some of the fruit is small, but of good flavour.

APHTHOUS FEVER.—See Foot and Mouth Disease.

ARACHIS.—See Pea Nut.

ARCHANGEL OX-TONGUES.—These are exported from the port of this name in North Russia. It is by no means certain that

ox-tongues are the only ones sent, the tongues of old cows and horses having been stated to have been discovered in some consignments.

ARMENIAN BOLE.—A red earthy mineral originally exported from Armenia. It is silicate of aluminium, and is used for colouring various substances, such as sauces, pastes, essences, etc. Venetian red is sometimes mixed with chalk and sold under this name.

AROMATICS.—Vegetable products which owe their properties to a volatile oil. They aid digestion.

ARRACK.—This is a distilled liquor exported from India, Siam, and the East generally. It is also known as "rake," "rack," "raki," etc., and is used in the British Isles for flavouring punch.

ARROWROOT.—Is a starch or carbonaceous food which is extracted from the root or underground stems of a kind of myrtle growing in the West Indies, South America, South Africa, Ceylon. The roots are about 12 inches in length, and $\frac{3}{4}$ inch in thickness. The roots are carefully washed and peeled; they are then pulped and the starch extracted. The best arrowroot comes from Bermuda, but the other chief sources of supply are Natal, St. Vincent, the Cape, and Mauritius. It is often adulterated with potato starch. "Portland arrowroot" is a starch obtained from the common arum, sago, tapioca, etc. A rough test for purity is to take a pinch between the finger and thumb. If it makes a crackling sound on being rubbed, it is pure. Another simple test is that genuine arrowroot when formed into a jelly will retain its firm consistency, while the adulterated article will become thin and resemble milk in the course of twenty-four hours.

ARTERY.—A vessel or tube which conveys the blood from the heart to all parts of the body.

ARTHRITIS.—Any inflammation of the joints.

ARTHROLOGY.—The study of the joints.

ARTICHOKES.—Two kinds are known by this name—the Jerusalem artichoke, which is a species of sunflower with tuberous roots; and the green, or globe, the flower of which resembles a thistle, and provides the edible portion. The flower-buds must be used before they open. The parts of the flower in the centre of the bud are called the "choke," and must always be removed. When young and tender, the edible parts may be eaten raw as a salad. The nutritive value of the Jerusalem artichoke is very

small, being similar to that of turnips. They are in season from November to March, while the globe artichoke is in from July to October. The former is commonly grown in this country, while the latter is largely imported from France. See *Globe Artichoke*.

ARTICULATION.—A term used to describe the various methods of union between the bones of the skeleton, such as movable, immovable joints, and joints of a limited motion.

ARTIFICIAL BUTTER.—A substance made from various materials, such as pea nut, cotton-seed, cocoanut, sesame, oleo oils, neutral lards, etc., coloured, and so worked up as to resemble butter.

ARTIFICIAL LARD.—This is made from fats not derived from pigs. It solidifies to a coarsely crystalline mass, with a polished surface; whilst the genuine lard is finely crystalline, with a dull, wrinkled surface.

ARTIFICIAL SUETS.—These are now to be found on the market. Usually they are mixtures of various substances, such as cotton-seed oil, tallow, stearin, etc. They are not so firm as the natural suet, but are a little firmer than stiff lard.

ASCARIDES.—These are commonly called “threadworms.” They are of two kinds, male and female, the latter being the larger. They are found in the intestines of the sheep, pig, and calf. They are sometimes present in large numbers, and the flesh from infested animals has an offensive smell and taste, and on that account is condemned. It is the custom to condemn and destroy the intestines of animals infested with these worms.

ASHBERRY.—This is the fruit of the common mountain ash. It is sometimes used in preserves. A jelly is also made from the berries, and is eaten with venison. The berries themselves are acid and bitter.

ASPHYXIA.—Is a name given to the mode of death which occurs in drowning, suffocation, strangulation, choking, etc.

ASPARAGUS.—This vegetable is a native of Great Britain, France, the Channel Isles, etc., where it is extensively cultivated. It is one of the oldest vegetables known, but in spite of this is one of the most expensive. It is in season from March to July. The early asparagus comes chiefly from the Channel Isles and the South of France. The tender green portions of the young shoots are eaten when they are about 7 inches long. Asparagus is wholesome, most digestible, and nutritious; the

consumption of it stimulates the kidneys and imparts a strong smell to the urine. Its chemical properties are acetate of potash and phosphate of potash. It is sold in bunches, usually 100 heads, which, if fresh, have the heads straight up and the cut portion clean and moist; while stale bunches have the heads on one side, the cut portion showing brown and dry. Among the plants which have been used as substitutes for asparagus are the sprouts of artichokes, cardoons, sea-kale, rampions, etc.; some of these have been mixed with the bunches of asparagus. Sometimes inferior sticks are placed inside some of the bundles.

ASPARAGUS (PRESERVED).—Is both canned and bottled; the earth is washed off the stalks, the tough outer skin is scraped, and the stalks selected for thickness. The stalks are cut off to the length of can or bottle, then washed and put into a wire basket, which is placed with one-third of the length of grass in boiling salt water for about four minutes. The asparagus is covered up to two-thirds of its stalk and cooked for five minutes, afterwards put into cold water. It is then filled into cans and bottles with brine, and exhausted and sealed up.

ASPERGILLUS.—A species of fungus or mould which causes localized inflammation in the lungs. Usual practice is to condemn lungs only.

ASPIC.—The name given to a jelly or glazing which is used for covering cold game, poultry, fish, etc. It is now generally made of gelatine, and is coloured and flavoured according to individual fancy.

ATHERINE, OR SAND SMELT.—A fish very similar to the smelt. It is, however, easily distinguished from the proper smelt by the absence of the adipose fin, which is a distinguishing feature of the smelt and salmon family. The freshly caught fish also lacks the cucumber odour of the smelt, and is inferior in flavour and taste. It is sometimes packed with smelts, but though inferior, it is delicate and wholesome.

ATROPHY.—Or wasting of the muscular substance of the heart; a rather rare disease in cattle.

AUBERGINE.—These are the fruits of the egg-plant, which originally came from India. They are a delicate and delicious vegetable extensively eaten in France and South Europe. They are now seen in most of the best fruiterers' shops in this country, and are rapidly coming into use in the large towns. They vary in size up to 8 inches in length and 3 inches in

diameter. There are many varieties, and they range in colour from white to a dark purple. They are eaten in a similar manner to tomatoes, either raw or cooked.

AURICLE.—The name given to the two muscular cavities of the heart, from their supposed resemblance to the ear.

AUSCULTATION.—A term often used in the testing of tinned foods. It means the application of the sense of hearing to the detection of blown or bad tins. It is also used for the detection and diagnosis of disease by means of the stethoscope.

AUSTRALIAN MOSS.—An edible seaweed which is imported in small quantities into this country.

AVOCADO, OR ALLIGATOR PEAR.—This fruit is a native of the West Indies, and is said to be the most delicious fruit in the world. Three kinds are known: red, purple, and green; it is the same size as an ordinary pear, but is only sold in the very best shops and stores in this country.

B.

BABY BASKETS.—A small basket used chiefly for exhibiting home-grown grapes in fruiterers' windows. The grapes are sent to market in these baskets, and consequently the fruit may be shown without further handling.

BABY BEEF.—This is a term used by farmers and butchers to describe fat cattle which have been sold for slaughter before they have reached maturity. The baby beef age is supposed to be from fourteen to eighteen months, but the term is rather elastic. The advantage to the butcher is rather smaller cut joints.

BACON.—The characteristics of good bacon are a thin rind; fat, firm, white, and tinged a little red towards the rind by curing; the flesh a good red colour. If improperly cured, it usually has a slimy feel, is soft and flabby, smells more or less offensively, and is a bad colour. Bacon is cured in several ways, but the following method is a modern cure: The prepared sides have brine pumped into them, afterwards they are laid rind downwards, saltpetre and dry antiseptic being dusted over them. They are then stacked one on top of another for ten days or longer, according to their size and weight. The cured sides are then washed, trimmed, and ready for market.

Bacon imports are largest from U.S.A., but Denmark, Canada, Holland and Belgium, Sweden and Russia send considerable quantities.

BACON CUTS.—These vary slightly according to the locality ; the following are the chief, and their average weights :

Fore-End.—Collar, 8 lbs. Fore-hock, 8 lbs.

Middle.—Thin streaky, 4 lbs. Thick streaky, 8 lbs. Flank, 3 lbs. Back and ribs, 8 lbs. Long loin, 7 lbs.

Hind-End.—Corner of gammon, 4 lbs. Gammon, 10 lbs.

BACON TRIER.—This is a sharp-pointed skewer, 6 to 12 inches long, used for testing thick meats—fresh, cured, and salted. In testing meat the trier is first inspected and smelt to see if clean, it is next pushed into the mass or alongside a bone, afterwards withdrawn and smelt ; if tainted, the smell will be easily detected on the trier.

After testing any kind of meat, the hole made by the trier should be carefully closed up with the finger to prevent it from becoming fly-blown.

BACILLUS.—A term applied to many micro-organisms which are like small rods.

BACKSTEIN CHEESE.—A brick-shaped cheese made in a similar manner to Limberg.

BADDERLOCHS.—An edible seaweed, also called “henware,” “honeyware,” “murlins,” etc. ; the part eaten is the thick midrib.

BAD-SMELLING MILK.—Is thought to be caused by indigestion in the cow, or where she has eaten foul turnip-tops ; but it may also be caused by dirty utensils.

BAD-TASTING MILK.—Thought to be due to cows cleansing badly after calving.

BAG.—A measure used in the vegetable trade ; it varies in capacity according to the produce being marketed. Generally it holds from $\frac{1}{2}$ to 1 cwt.

Bag of Barcelona Nuts.—Weighs 126 lbs.

Cochineal.—Usually weighs 200 lbs.

Cocoa.—Usually weighs 1 cwt.

Coffee.—Weighs $1\frac{1}{4}$ to $1\frac{1}{2}$ cwt.

Ginger.—Weighs 1 to $1\frac{1}{4}$ cwt.

Pepper.—(White) weighs 168 lbs. (Black) weighs 316 lbs.

Pimento.—Weighs 1 cwt.

Rice (East Indies).—Weighs $1\frac{1}{2}$ cwt.

Sago.—Weighs 1 cwt.

Sugar (East Indies).—Weighs 1 to $1\frac{3}{4}$ cwt.

Walnuts.—Weighs 1 cwt.

BAGS.—A term used by butchers to denote the tripes.

BAKERS' ITCH.—A skin disease produced on the hands of bakers by the yeast in bread-making.

BAKING POWDERS.—These are used by the baker, etc., to produce carbonic acid gas, and cause the bread, pastry, etc., to rise on being mixed with water. They are usually composed of bicarbonate of soda and tartaric acid; it is essential that they should be kept dry, and consequently they are considerably adulterated with arrowroot, rice, potato, and cornflour, and to increase their weight gypsum has been added.

BALE OF CINNAMON.—Usually weighs $92\frac{1}{2}$ lbs.

BALM.—This is a common garden herb originally a native of South Europe. The young shoots are sometimes used in salads, but its chief use is for the manufacture of balm tea, which is given to sick persons to induce profuse perspiration.

BANANAS.—The popularity which this fruit has attained in recent years is thoroughly well deserved. Many analysts' reports have now proved it to be a fruit which contains all the principal elements necessary for a complete and perfect diet. According to some authorities, it contains more nitrogenous matter than the majority of other fruits, and less water.

The fruit is now in season all the year round. About 176 varieties are known. It is very prolific, and one authority states that it is over a hundred times more productive than wheat, the yield being about 300 bunches per acre per annum. The fruit imported to this country comes chiefly from the Canary Isles and Jamaica. Besides the ordinary yellow banana, we get a certain quantity of claret, or red, bananas, but the latter are not nearly so popular as the former. It is imported in bunches packed in crates and protected with cotton-wool. The number of clusters on a bunch varies—the divisions of the banana bunch are technically known as "hands," and the separate bananas as "fingers"—and, in order that the fruit may reach this country in good condition, the bunches are cut while the fruit is still green. The fruit thus ripens in this country either

naturally or by being stored in warm ripening rooms. Some years ago inspectors were in the habit of seizing bananas when they were pappy, and having the same condemned ; but now, owing to the variety of expert opinion that has been given, it seems doubtful at which stage a banana really becomes rotten or dangerous to the consumer. We often see bananas with black skins, but this does not necessarily mean that they are bad or unsuitable for food, for when the skins are taken off, the fruit is often found in good condition. This discoloration of the skins is more noticeable during the winter months, and is due to the cold winds or exposure to the weather. Should a banana become frozen, however, it is absolutely worthless. The costers and fruiterers therefore protect their fruit by wrapping in blankets or keeping in warmed rooms on frosty nights. It is largely a matter of opinion when bananas are ripe, but when they are passing beyond the mealy stage it is thought to be properly ripe. In choosing bananas one often finds that the smallest fruit is the best flavoured. The skin should be thin and without coarse ridges, the latter usually indicate a coarse fruit. The Jamaica source of our supply has lately been threatened by a destructive rodent. It does not touch the fruit, but it nibbles away at the roots until the plants wither away and become unproductive. A party of scientists have recently been sent on a mission to try and find out a way to exterminate the rodent with poisons, etc., as it cannot be kept down by trapping. See also Plantain.

BANBURY CAKES.—The real cakes are made at the original cake shop in the town of Banbury. They are composed of a kind of mincemeat enclosed in rich, flaky pastry.

BANBURY CHEESE.—A rich, dry cheese with a thick rind, made in the vicinity of Banbury.

BANNOCKS.—Thin, round, flat cakes made with oatmeal, butter, etc. ; they are baked on an iron plate over the fire, and largely eaten in Scotland.

BANTAM FOWL.—A very small variety of fowl, the name derived from Bantam in Java ; it is not much eaten, but is of good quality if small in quantity.

BAP (IRISH AND SCOTCH).—A form of breakfast roll or small bread. It is made in different shapes, and is about 2 inches thick. It is light and pleasant to eat.

BARBE.—A cultivated form of the roots of wild chicory ; they are usually blanched and eaten in salad ; rather bitter in taste.

BARBERRY.—A fruit that resembles the black-currant ; it grows in this country, but is used more extensively in Chili and the United States. It is very acid in taste, and is consequently used for making jellies, pickles, preserves, etc.

BARBERRY CHEESE.—A soft cheese made near Troyes in France. It is from 5 to 6 inches in diameter and about $1\frac{1}{2}$ inches thick.

BARCELONAS.—A variety of hazel nut, which are kiln-dried ; largely imported from Spain.

BARK.—A term given (*a*) to the external surface of a carcass, and also to (*b*) inferior pieces of cinnamon bark.

BARLEY.—This is chiefly used for the manufacture of malt ; it contains nutritious qualities in a high degree, and germinates more quickly than other cereals. The two-rowed barley is chiefly used in England, but other varieties are grown. Inferior barley is sometimes made to resemble that of better quality by bleaching with sulphurous acid gas, the weight is increased, and there is less danger of deterioration.

BARLEY SUGAR.—A sweetmeat made by heating refined sugar till it melts ; it sets into a yellowish, non-crystalline mass, and is made into a variety of shapes and sticks. Barley water is seldom used in the modern manufacture.

BARM.—This is brewers' yeast ; it is a thick brown liquid, and is used instead of the German and other yeasts.

BARN GALLON.—An illegal measure used in the milk trade. It consists of 17 imperial pints ; 8 barn gallons = 17 imperial gallons.

BARON OF BEEF.—Is an old-fashioned joint ; it is a double sirloin, and may weigh from 40 to 100 lbs.

BARREL.—This is a measure used in the fish trade ; a barrel of fresh herrings usually contains about 500 medium-sized herrings.

Barrel of Anchovies.—Weighs 30 lbs.

Butter.—Weighs 224 lbs.

Coffee.—Usually weighs 1 to $1\frac{1}{2}$ cwt.

Flour.—Weighs 196 lbs.

Prunes.—Weighs 1 to 3 cwt.

Tapioca.—Weighs $1\frac{1}{4}$ cwt.

BARREN EWE.—An animal proved sterile.

BARTLEBERRY.—See Bilberry.

BASIL, OR SWEET BASIL.—This herb is a native of the East Indies. The leaves are very aromatic, and are largely used for seasoning soups, especially mock turtle. It is also used by some people in salads.

BASIL VINEGAR.—This is made by steeping the leaves in vinegar.

BASKET OF ALMONDS.—Usually weighs $1\frac{1}{4}$ to $1\frac{1}{2}$ cwt.

BASS, THE.—This is a beautiful fish, very similar in appearance to the perch. In colour it is a greenish-brown, with silvery scales. It attains a weight of 24 lbs. and a length of 2 feet; but the ordinary weight of the fish is about 5 lbs., and in the latter size is good eating, though the larger-sized fish are rather insipid. They are found chiefly on the coasts of Devon and Cornwall, and are not sent much to the inland towns. In some cases it has been sold as “salmon bass.”

BATH CHAPS.—These are the cheek and jaw bones of small pigs. They are soaked in brine, cured, and finally smoked. The name appears to be derived from the city of Bath, where they were first cured. They are also known and sold under the following names—cheeks, jowls, chaps, etc.

BATH CHEESE.—This cheese is now used chiefly for local consumption. It is made from whole milk, and is a soft cheese. When ripe it has a creamy texture, and is close-grained.

BATLEMAT CHEESE.—A cheese made in Austria, Switzerland, North Italy. In shape it is circular, about 16 inches diameter, 4 inches high, and weighs from 40 to 80 lbs.

BAUDEN.—A sour milk cheese made in the mountains of Bohemia and Silesia. It is made in two forms, one conical and the other cylindrical.

BAVARIAN BEER.—A beer with a low alcoholic strength, is slightly bitter, has fine flavour and aroma.

BAVARIAN CHEESE.—These are very similar to the Swiss makes.

BAY-LEAVES.—These are the leaves of a species of laurel or sweet bay-tree. They are generally dried for use by the cook, and are employed chiefly as a flavouring for fish, sauces, soups, pickles, etc. They have a fragrant smell and a slightly bitter taste. The leaves are gathered in the summer, and tied in bunches and dried in paper bags.

BAY SALT.—The coarsest-grained salt manufactured. It is used largely in curing-rooms for making brine or pickles.

BEANS.—These may be said to consist of three kinds—French, broad, and runner—but a large number of varieties of each are on the market. The French beans are in season from May to November, the broad from July to August, and runner beans from July to October.

BEARBERRIES.—See Bilberries.

BEASTINGS.—See Colostrum.

BEAUJOLAIS.—A still red wine produced in the Burgundy district of France.

BEAUNE.—A still red wine produced in the Burgundy district of France.

BÊCHE-DE-MER.—A gelatinous mass found on the sandbanks near the Chinese Archipelago.

BEDAGOSA.—A fictitious coffee prepared from cassia seed, and said to be used extensively on the Continent for the adulteration of the natural coffee.

BETROOT.—This is a wholesome and nutritious vegetable ; there are a number of varieties, and large quantities are used in the manufacture of sugar. It is used in salads, pickled, and boiled as a vegetable. It is easily injured by frost.

BELLELAY CHEESE.—A soft cheese made from whole milk ; it is sometimes called Monks' Head, and is made at Berne in Switzerland. It has a diameter of 7 inches, and weighs from 9 to 15 lbs.

BENGAL, OR PATNA RICE.—This is more generally used as a vegetable and in curries, etc.

BENZOIN.—A gum-resin used for flavouring and giving body and aroma to cordials and liqueurs.

BERKLEY CHEESE.—Another name for Gloucester cheese.

BERQUARA CHEESE.—A cheese resembling Gouda, but made in Sweden.

BEST HOUSEHOLD.—A trade term applied to the best quality of bakers' bread.

BIFFINS.—Are apples which have been peeled, partly baked, and dried in an oven and under pressure.

BIG JOINT.—See Navel Ill and Joint Ill.

BIG LEG.—This is a term used by veterinary surgeons for the disease lymphangitis.

BILBERRIES.—These are also known as blaeberris, bearberries, blueberries, hurtleberries, bantleberries, windberries, whortleberries, etc. The fruit, which is about the size of a small black currant, grows on a low shrub, and when ripe bears a delicate bloom. The berries should be picked when of a rich blue-black colour, with the bloom on them at its best. This is usually in July and August. The delicate bloom is lost soon after picking, and the fruit should be handled carefully. They are sent to market in small barrels and chip baskets.

BILE, OR GALL.—A secretion formed by the liver. It flows into the gall-bladder, and finally into the intestines, where it mixes with the food.

BILTONG.—Long strips of dried and preserved meat used in South Africa ; in America a similar article is called "pemmican."

BISCUIT.—It is impossible to give a description of the biscuits on sale at the present time ; new kinds are constantly being put on the market. The chief materials used in the modern manufacture of biscuits are—Flour, sugar, butter, lard, margarine, carbonate of soda, milk, eggs, and flavourings. To-day very little hand labour is necessary, the biscuits being made by machinery from start to finish. When inspecting biscuits, the inspector should bear in mind the following points : Paleness or whiteness in biscuits indicates age and imperfect baking. If made from unsound, musty flour, or badly dried, look for weevils and moulds. Rich biscuits often turn rancid on long storage. Damp soon penetrates the ordinary biscuit tin and produces mould.

BITTER ALMONDS.—These are very similar in appearance to sweet almonds, but in taste are very dissimilar. The chief kinds are sent to this country in boxes from France, Barbary, and Sicily. They are used in cooking for flavouring, in perfumery, and for extraction of oil.

BITTER BUTTER.—See Bitter Milk.

BITTER MILK.—A defect in milk due to an organism. It appears chiefly in the cream which is to be used for butter. It makes both the cream and the butter bitter and unfit for food.

BITTER WATERS.—These are obtained from springs containing sulphates of magnesia and soda.

BITTERNESS OF WINE.—This disease is caused by a sediment ; it seems to affect the Burgundy class of wines mostly. Wines affected give off carbonic acid gas in quantities, and because of this it is thought to arise from second fermentation.

BLACKCOCK, OR MOOR FOWL.—This is sometimes called “ black grouse.” The male is a fine glossy black, while the female is a rusty brown, with feathered legs. It is found on the Scotch moors, as well as in Russia, Siberia, etc. The average weight of the cock is 4 lbs., and the hen 2 to 2½ lbs. The males are hardly distinguishable from the females until half grown, when the black feathers begin to appear, first about the sides and breast. The birds are in season from the middle of August to November. Blackcock is hard, dry, and flavourless, if not well hung.

BLACKBERRY.—Is the fruit of the common bramble. The dew-berry and cloudberry are similar to it in appearance, and are found growing wild in all parts of the country. Thousands of hundred-weights of Irish blackberries are imported into this country every season. They are picked when they have a blue-black bloom on them, for if gathered too ripe they will not bear carriage, and often arrive in a smashed and mouldy condition. They are in season in September and October.

BLACK BREAD.—See Rye Bread.

BLACKHEAD DISEASE OF TURKEYS.—This disease is well known to the American and Canadian breeders. There do not seem to be any prominent symptoms during life by which this disease can be recognized, but by examination of the internal organs after death it can be seen. The disease runs a chronic course, and birds do not show signs of illness until just before death, when it is too late for treatment. Changes are observed in the blind intestines and liver. The latter shows marked alterations. It is enlarged and darkened, due to engorgement of blood ; besides which scattered over its surface are round spots, sometimes whitish, and sometimes of a yellowish tinge. These spots are so distinct that no inspector could fail to recognize them. The disease is said to be caused by a parasite which attacks young turkeys especially.

BLACK JACK.—This is a variety of burnt sugar which is used for adulteration purposes, such as colouring vinegar, rum, brandy, darkening coffee, etc.

BLACK LEG.—For description see Black Quarter, which is another name for it.

BLACK PUDDINGS.—These are made by boiling groats, farina, etc., mixing with small pieces of leaf lard or pork fat and warm bullock's or pig's blood, and properly seasoned. This mixture is filled into casings in length of about 18 inches, tied and bent into the form of a circle. They are then boiled for about twenty minutes, and afterwards dyed black by means of a wash of log-wood chips.

BLACK QUARTER, BLACK LEG, QUARTER-EVIL, QUARTER-ILL, PUCK, SPEED, JOINT MURRAIN, STRIKE, ETC.—

Quarter-ill may be said to lack much of the importance and interest which is attached to anthrax, inasmuch as it is confined to two domestic animals—sheep and cattle—and is not communicable to man. It, however, resembles anthrax in so far as they are both caused by the introduction of specific bacilli into the system of the healthy animal.

Both diseases have a tendency to recur on farms or premises on or in which animals affected with these diseases have been previously kept.

On the other hand, neither anthrax nor quarter-ill is communicable by direct association of the affected with the healthy animal, and in that respect they differ from most of the contagious diseases which are legislated for in this country.

Another peculiar feature of quarter-ill is that cattle over two years old may be said to have a high degree of immunity against the disease.

Symptoms.—The symptoms of quarter-ill in young cattle are so strikingly different from any other disease that an error in diagnosis is almost impossible. The first indication of an animal being affected is a marked stiffness or lameness of one of the limbs; it is exceedingly dull, and presents a most anxious and dejected appearance, does not feed, and it is with extreme difficulty that it can be forced to move. Very soon after the limb is attacked a swelling appears beneath the skin, usually upon one of the hind-quarters. This swelling, which is extremely hot, increases in size rapidly, and is most painful when touched. It also has a disposition to extend down the leg, or perhaps along the loins and back, and when pressed gives a peculiar crackling sensation to the fingers. In almost every instance death supervenes within a few hours after the swelling has appeared.

In the case of sheep the symptoms are not of so marked a character. The first indication is lameness, but the swelling is not so observable in sheep as in cattle.

There is no doubt that the disease exists to a greater extent among the sheep in certain counties in England than reports generally show, and from the rapidity with which sheep frequently die it is often locally called "strike."

Should any doubt exist in the mind of an owner as to whether his sheep have died from quarter-ill, he should make an incision into the affected part of the dead animal, when he will often find that the muscular tissue is very dark red in colour and exudes a quantity of dark bloody fluid. Any fluid that may thus escape should be carefully collected and destroyed. The organism causing the disease, like that of anthrax, is believed to exist in the soil. It has not yet, however, been determined how it finds its way into the system of the affected animals, but the probabilities are that it is through the digestive system.

The carcasses of animals which have died of quarter-ill should be buried in accordance with the rules laid down for anthrax, or, still better, cremated on or in the place where the animal died.—*Extract Board of Agriculture Leaflet.*

BLACK SPAULD.—The Scotch name for black-quarter, black-leg, etc.

BLACKWATER.—Is a severer form of redwater; it causes a deeper colour of the urine. See Redwater.

BLAEBERRIES.—See Bilberries.

BLANCHED ALMONDS.—These are largely used by confectioners in the manufacture of cakes, etc.; they consist of the sweet almonds with the skins removed.

BLANC-MANGE POWDERS.—These powders are sold in packets. Their composition varies slightly with the makers. Generally they consist of cornflour, sago flour, and some flavouring, such as lemon, strawberry, etc. When mixed with milk and cooled the sago flour gives it the stiff appearance so well known, and allows it to keep the shapes of the moulds in which it was poured when hot.

BLAST.—Another term for hoven.

BLEBS.—These are large vesicles which form on the surface of the skin in some diseases; in appearance they are like little blisters.

BLEEDING AGARIC.—This is an edible fungus recognized by the dark-coloured gills, and by every part becoming deep red when bruised or cut; in flavour it is superior to the common mushroom.

BLEEDING BREAD.—A disease to which bread is subject. The cut surface of an affected loaf seems to be covered with what appears

to be spots of blood, but in reality are patches of bacteria. Years ago and in some country districts this disease was called the "Miracle of the Bleeding Host," the "Bloody Sweat," and other equally impossible names. The disease appears in the late summer or early autumn, and seems to be much commoner in certain districts. It is not usually offered for sale in this condition.

BLEEDING OF ANIMALS.—Animals are bled in order that the meat may have good keeping qualities. The less blood remaining in the body the longer the time the meat can be kept. Meat that has been well bled has a much better appearance, and is a more appetizing food than that which has not. Animals which are tired, exhausted, excited, overdriven, or in a diseased condition, do not bleed well. The carcass would not set well, and the flesh would be dark in colour, and would soon decompose.

Imperfect bleeding is detected by a dark purple tint in the meat; the fluids remain in the minute veins. The internal organs also show quantities of blood; the flesh is dark and often sticky to the touch, and has not set well. The average quantity of blood found in animals is about one-thirteenth of the weight of the body. The blood of animals is said also to have a distinct characteristic smell. Male animals have a larger quantity of blood than female, and lean animals than fat ones.

The blood of pigs and calves is used for black puddings.

BLEU CHEESE.—A hard cheese made from cow's milk in South-East France.

BLIND TEAT.—This term is used to signify that the teat has no opening and will not give any milk.

BLOATER PASTE—The fish are headed, boned, skinned, minced, and mixed into a paste; afterwards lard and spices are added to taste, the whole again well mixed and placed in bottles, jars, etc., and sealed. Considerable adulteration is practised, large quantities of coloured starch being added.

BLOATERS.—A real "Yarmouth bloater" is described by De Caux as a full herring slightly salted and smoked.

To the food inspector the bloater is one of the most common of cured fish. The modern system of curing is as follows: The fresh herrings are thoroughly cleansed by rubbing them with coarse salt and afterwards thoroughly washing. The fish are next placed in brine for about twelve hours; afterwards they are threaded on sticks and allowed to dry. They are next hung in kilns

and smoked for about eight hours, after which they are allowed to cool thoroughly. Then they are packed about fifty to a box. The ordinary fishmonger often cures his own bloaters, and often does not smoke them, but lets them hang in the wind to dry.

BLOOD ORANGES.—This fruit is noticeable for the red colour of the pulp and rind. It is said to be due to the trees having been grafted on to pomegranate stocks. They are exported from Spain, Malta, Sicily, etc. Cases are on record where these oranges have been imitated by pricking the skins and soaking the oranges in a dye; this has only occurred when these particular blood oranges have been scarce.

BLOODSTAINED MILK.—This may be due to several causes, such as injury to the udder, bad milking, exposure to cold and damp, ulcers in the gland ducts, etc.

BLOODY FLUX.—Also known as inflammation of the bowels.

BLOWN.—This term is used to describe the enlargement of the rumen, and is also known as tympanitis and hoven. See Hoven.

BLOWN TINS.—See Tinned Fish, Examination of.

BLOWN VEAL AND LAMB.—The disgusting practice of blowing veal and lamb by the mouth of the butcher is happily becoming less common. In most large abattoirs and slaughter-houses a pump or apparatus of some kind is available for this purpose. Butchers make an incision in the skin, the tube is inserted in this and the air pumped in, the carcass being pounded with the fists, etc. By this means the air is forced under the skin, which makes it easier to strip off the hide. It also gives a fraudulent plump appearance to the carcass, while it does not add to its keeping qualities. The presence of bacteria in the pumped in air may help its deterioration, especially if blown by the mouth of a slaughterman suffering from some disease, such as tuberculosis, diphtheria, etc.

BLUEBERRIES.—See Bilberries.

BLUE MILK.—A disease which shows itself by means of blue-coloured patches on the surface of the milk; it is caused by the action of the *Bacillus cyanogenus*.

BOAR FLESH.—The flesh of a boar pig is of a deep red colour, the skin is very hard, fibrous, and difficult to cut through; the root of the penis and erector muscle are very pronounced.

BOAR OR BRAWN.—An uncastrated male pig.

BOBBY CALF, OR BOBBIES.—A calf less than four weeks old is usually called by this name, but this term is very elastic; large quantities exported from the Continent. See Bob Veal.

BOB VEAL.—The meat of a calf less than four weeks old, and weighing when dressed less than 60 lbs., is usually called by this name. As a rule the meat is bluish, watery, and gelatinous.

BOLOGNA SAUSAGE.—A large smoked sausage made of bacon, pork, veal, and suet finely chopped and forced in large casings or intestines. It takes its name from the town of Bologna in Italy, which is famous for these sausages.

BONBONS.—The name given to various kinds of sweets made of flavoured sugar, baked in a paste.

BONDON CHEESE.—This cheese is made in France, and is of two kinds, one from whole milk and one from skim milk. It resembles Gervais cheese in shape, but is slightly larger; its flavour depends upon whether made from whole or skim milk. The name is taken from the shape, which resembles a bung.

BONE TAIN.—This affects particularly frozen meat, beef chiefly, the principal cause being a too rapid reduction in the temperature. If the meat is placed in a very low temperature immediately after being chilled, the outside becomes frozen before the interior. Consequently the heat cannot get out readily, and causes putrefaction near the bone. It is also sometimes caused by synovial oil fermenting at the large joints, and various other reasons.

To test for bone taint it is usual to push in a clean skewer near the bone, withdraw and smell. In large pieces of frozen beef this could not be done, and it is usual, therefore, to use a brace and bit similar to that used by the joiner, boring a hole near the bone, withdrawing the core, smelling for decomposition, taking care to replace if quite sweet.

BONNEKAMP.—A bitter made in the Netherlands, usually taken with Hollands gin.

BONNYCLABBER.—This is a term used to denote milk which has become soured by lactic fermentation, producing a gelatinous coagulation of casein.

BORAGE.—This plant is grown in this country chiefly for the manufacture of cordials. It is used largely in the preparation of claret cup, but the flowers are also used for garnishing salads.

- BORECOLE.**—Is a species of cabbage sometimes called Scotch kale. It is one of the hardiest and most useful of winter greens; it stands very severe frosts. The tops of the plants and the side-shoots are eaten during the winter and spring months, when green vegetables are rather scarce; it is very wholesome.
- BOSH BUTTER.**—An inferior or imitation butter made abroad and imported into this country for the purpose of adulterating butter.
- BOSNIAN PLUMS.**—These dried plums and prunes are largely exported from Bosnia, Servia, etc.; they are sorted in sizes and exported in boxes, sacks, etc.
- BOTS.**—These are the larvæ of grubs of the warble fly. See this latter heading.
- BOTTLED SOUPS.**—See Tinned Soups.
- BOTULISM.**—Another name for sausage poisoning.
- BOUDANNE CHEESE.**—A cheese made in France from cow's milk, either whole or skimmed. It measures about 8 inches in diameter and 3 inches high.
- BOX.**—A measure used in the fish trade. It varies in size according to the locality and fish being sold. Thus a box of bloaters consists of about 50 fish; if kippers are being sold, the box contains about 20 pairs of large, 30 pairs of medium, and 40 to 50 pairs of small kippers. A box of red herrings contains about 60 to 70 fish. In wet fish, a box may contain 6 to 10 stones.
- Box of Jordan Almonds.**—Usually weighs 25 lbs.
- Malaga Raisins.**—Weighs 22 lbs.
- Raisins.**—Weighs 30 to 40 lbs.
- Salmon.**—Weighs 120 to 130 lbs.
- BOX CHEESE.**—This cheese is made in two kinds, hard and soft, and from both whole and skimmed cow's milk.
- BRA CHEESE.**—A hard rennet cheese made in Italy, weighs about 12 lbs.
- BRAN.**—The inner husk of wheat and other grains; it contains a substance called "cerealine," which acts like a ferment, and is supposed to aid digestion. Bran is used in brown or wholemeal bread.
- BRAND CHEESE.**—A sour milk cheese made in Germany, weighing about 5 ozs.

BRANDY.—This is obtained by the distillation of wine. Red wines are said to be preferred, but the finest brandy is produced from white wines, and is known as Cognac. The yield of spirit is diluted with water till it contains from 50 to 54 per cent. by weight of absolute alcohol. A large quantity of brandy is made from bruised French plums, French wine vinegar, a small quantity of good Cognac to spirit prepared from ordinary grain ferments, and redistilling; the spirit is coloured with burnt sugar. Inferior brandies are also made of the grape skins, lees, and wine refuse generally. The lowest strength at which it can be legally sold is 25 per cent. under proof.

BRAWN.—This is made from pigs' heads which have been boned when fresh, the meat is then placed in a mild pickle for about fourteen days. The meat is afterwards cooked, cut up into small pieces, seasoned, and filled into moulds with the boiled liquor and gelatine. When cool the brawn is set into a jellied mass; if stale or unwholesome, this will be semi-liquid, show mould spots, and give off an offensive smell.

BRAWNER.—A pig that has been castrated after being used for breeding purposes.

BRAXY MUTTON.—This may be distinguished by the tissues, which are stained a dark red colour; the bloodvessels contain dark-coloured blood. The meat gives off an offensive odour. If any doubt arises, cut into the kidney, when a strong smell of decomposition will be noticed.

BRAZIL NUTS.—Shoe nuts, or, as they are sometimes called, the "almonds of the Amazon," are imported, as the name implies, from Brazil, etc. They contain about 17 per cent. of proteid and 66 per cent. of fat. They possess a white flesh, and have a sweet and agreeable flavour. These triangular-shaped nuts grow inside an outer shell, packed together in divisions. The number of nuts this shell contains varies from twenty to fifty. The outer shell is broken, and the nuts extracted and dried in the sun before being packed for export. They arrive in this country from May to August from Brazil, French Guiana, Para, etc.

BREAD, CHARACTERISTICS OF GOOD.—The crust should be of brownish-yellow tint, well baked, and not burnt. It should be neither too light nor too dark in colour, and should be as thin as possible, but sufficiently baked. The crust should be evenly distributed, the crumb should be light and flaky, neither too

brittle nor too doughy. It should be elastic, and should regain its original position after being lightly pressed with the fingers. The whole of the crumb should be full of very small cavities, evenly distributed. The colour of the crumb should be creamy-white, and it should have a pleasant taste and smell.

BREAD, DEFECTS IN.—Very white, light, or brittle bread is in all probability adulterated with alum, etc. If the bread be badly risen, acid, or of a yellowish colour, the flour is probably old or fermented. Insufficient salt is told by the insipid taste, want of firmness, and large size of the loaf. On the other hand, bread which is salt-bound is very compact and tastes salty.

Sour bread may be caused by stale and inferior yeast, unsound or low-grade flour, dirty utensils, etc.

Sodden and heavy bread may be caused by the use of bad yeast, inferior flour, to the dough being badly worked or kneaded, baking in too hot an oven, which causes the loaves to have a crust on the outside before the inside is properly baked.

BREAST BONE.—This is also called the "sternum"; it runs down the front of the chest, and has the cartilages of the ribs attached.

BREWERS' SUGAR.—See Glucose.

BREWERS' YEAST.—Is obtained from the scum of the fermenting wort in the process of the manufacture of beer.

BRICK-BAT CHEESE.—A cheese made in Wiltshire from new milk and cream in the ordinary way, but moulded in the shape of a brick.

BRICK TEA.—This is exported from China, and is black tea dust pressed into bricks by machinery; the bricks usually weigh $2\frac{1}{4}$ lbs.

BRICKS.—These are loaves which are moulded in two parts like cottage loaves, only instead of being round they are in rolls.

BRIE CHEESE.—Is made from whole cow's milk. It is a flat, round cheese about 12 inches in diameter and about 1 inch thick. It is generally supposed to be the largest of the soft cheeses made in France, and is made in several qualities.

BRILL.—This fish, which is sometimes called a "workhouse turbot," closely resembles the turbot. It is very plentiful in the southern parts of the North Sea and on the German and Dutch coasts. The inspector should have very little trouble in distinguishing it from the turbot, the brill having smooth scales, whereas the turbot has blunt bony tubercles on the upper

side ; besides which the body is longer and narrower, and the lateral line more distinct. The fish is in season all the year round, and the marketable size is from 12 to 20 inches long. It does not grow to the same size as the turbot, rarely exceeding 10 lbs. in weight. The flesh is not so delicate in flavour, or of such thickness, but is much cheaper. The colour of the upper side is brown, and the lower side white. Some people prefer this fish in the spring. The flesh is coarser than the turbot's, and a bluish tint is said to denote the early stages of decomposition. Brill is sold by the stone in the wholesale markets.

BRIOCHE.—A cake made in various qualities, plain, fancy, and rich. It is made of fermented dough, and may contain cherries, peel, liqueurs, etc.

BRITISH ARROWROOT.—This name is given to potato starch which is derived from the ordinary tuber.

BRITISH BRANDY.—Is made in imitation of the French brandies from malt liquors. It is flavoured, coloured, and generally faked up to resemble the genuine article made from the grape.

BRITISH SHERRY.—A wine made in imitation of the genuine sherry ; it is made from raisin wine, flavoured and doctored up with oil of almonds, etc., or else made from malt wort, sugar, rectified spirit, etc.

BRITISH WINES.—These are wines which are made in a similar manner to those from the grape juice, but not from the latter article.

BROCCIO CHEESE.—A sour milk cheese made from sheep's milk in Corsica. It is sometimes mixed with sugar, rum, and made into small cakes.

BROCCOLI.—This vegetable is very similar to the cauliflower, but usually smaller. Many varieties are now grown, and so arranged that the early broccoli come into the market just as the cauliflower is going out of season, and the late broccoli just before the cauliflower is coming in. The heads should be white, firm, compact, and young. It stands the frosts better than cauliflower. The earliest heads come from Cornwall and the Channel Isles, and are sold by the tally of five dozen heads at the market. They are in season from October to March.

BROILERS are young, plump chickens, weighing when dressed from $\frac{3}{4}$ lb. to 2 lbs.

BRONCHI.—The name given to the air-passages which pass from the wind-pipe and are distributed to the whole of the lungs.

BRONCHIAL STRONGYLES.—The following are the chief kinds :

Strongylus filaria, a white threadworm chiefly found in sheep, goat, and deer.

S. rufescens, a reddish-brown worm, chiefly found in sheep and goat.

S. micrurus, a white, thin, tapering worm found in the calf.

S. pulmonalis, found in the calf ; not very common.

S. armfieldi, a threadlike worm.

S. paradoxus, a white or brown worm, found in the pig.

S. pucillus, found in the cat.

S. commutatus, found in wild rabbits and hares.

BRONCHITIS.—This is inflammation of the lining membranes of the bronchial tubes. It is often associated with catarrh, pneumonia, pleuro-pneumonia, and young stock are very liable to it.

BROWN BREAD.—This bread is made in a similar manner to white bread, but the flour contains bran. It is considered very wholesome.

BRUISES.—These are contused wounds where the skin has not been ruptured.

BRUSSELS SPROUTS.—This is another variety of cabbage ; the sprouts grow around and up the stem. The sprouts are gathered about October, but they are more tender after they have been exposed to the influence of a hard frost. They are usually sent to the market packed in bushel and half-bushel baskets, and are in season from October to March.

BUCELLAS HOCK.—A white wine made from a special kind of grape grown in Portugal.

BUCKSHORN, OR HARTSHORN PLAIN-TAIN.—The young leaves are used for mixing in salads ; it grows wild, and is seldom cultivated.

BUCKWHEAT.—A species of knot-grass from which cakes are made. The grain is much used for feeding fowls, etc.

BUDDEIZED MILK.—This is milk preserved by Dr. Budde's method, which consists of treating the milk with hydrogen peroxide.

BULGARIAN SOUR MILK.—This is supposed to be very valuable in digestive troubles. It is prepared by first killing all the germs in the milk and then adding cultures of the Bulgarian bacillus to it.

BULL.—An uncastrated male more than a year old.

BULLACES.—A kind of wild damson, which is greenish-yellow in colour and about the size of a cherry, which grows in this country. They are in season from September to November.

BULL BEEF.—May be known by its dark colour, close, tough fibre, and the bad odour of the fat. It is the coarsest and most rank in flavour.

BULLOCK.—A term used to denote a castrated male animal that has never served a cow, also used to describe a male animal up to a year old.

BULLOCK'S HEART.—Another name for custard apple.

BUNCH.—A term used by greengrocers and applied to certain vegetables, herbs, etc. The size of the bunch and quantity vary according to the season. Turnips, 20 to 25; carrots, 36 to 40; horse-radish, 20 to 25, etc. A bunch of herbs consists of a handful of the particular herb stems to be sold.

BUNDLE.—A term used by greengrocers. Its contents vary according to the article and season—*i.e.*, broccoli, celery, etc., contain 6 to 20 heads, sea-kale 12 to 18, rhubarb 20 to 30 stems, asparagus from 100 to 125 sticks, and so on.

BUNGS.—This is a term used to denote the large intestines of cattle; they are about 4 feet in length.

BUNS.—A form of light, spongy bread made into small round shapes and called various names—Bath, hot-cross, lemon, etc.

BURGUNDY.—Wine other than that made in the province of Burgundy cannot be described as Burgundy was the result of a recent decision in the Courts. The wines are divided into two classes, red and white, and seem to be innumerable. Among the chief are: Red—Chambertin, Musigny, Le Corton, Les Bonnes Mares, etc. White—Montrachet, Combettes, Charlemagne, etc.

BURGUNDY CHEESE.—This is made in the district of that name in France. It is soft, white, loaf-shaped, and weighs about 4 lbs.

BURMAH RICE.—Forms the bulk of the rice consumed in this country. Several varieties are named after the districts in which they are grown, as Rangoon, Bassein, Moulmein, Arracan rices. Each of these varieties presents distinct differences in appearance and other characters, which render them easy of distinction by those accustomed to deal in them.

BURNET, OR SALAD BURNET.—This plant is grown in this country for the young and tender leaves. It is used for flavouring soups, sauces, etc. It is supposed to possess a flavour and odour similar to a cucumber, for which reason it is largely used in salads.

BURNT ALMONDS.—A sweetmeat made by roasting the kernels of sweet almonds and coating with a sugar paste, etc.

BUSHEL SIEVE.—A measure used in the fruit trade; it has a capacity of $10\frac{1}{2}$ imperial gallons.

Bushel of Flour.—Weighs 56 lbs.

Bushel of Salt.—Weighs 56 lbs.

BUTTER.—Butter consists of the fatty portion of milk, with some of the non-fatty solids and water. Although large quantities of butter are made in this country, yet we import large supplies from Denmark, Russia, France, Australia, Holland, Sweden, and Canada.

Good butter is judged by its flavour, odour, texture of grain, body, solidity, keeping quality, and colour.

It is usual to test butter by taking out a core, smelling, and tasting. It may have an unpleasant smell and rancid taste. Rancidity appears to be caused by bacteria, exposure to light, and warmth.

The chief adulterations are excess of water above 16 per cent. This may be caused through careless working or else fraudulently added. Water may be manipulated into butter until it amounts to 40 per cent. Heavily watered butter is brittle, whereas good butter is tough. Butter is also mixed with foreign fats, such as tallow, lard, palm oil, cocoanut oil, and margarine as a substitute for milk fat. The use of excessive quantities of preservatives is also considered an adulteration.

Some Simple Tests for Adulteration.—For margarine, take a piece of butter the size of a nut, place in a test-tube, and cover with ammonia. Heat and boil for a few seconds, add an equal quantity of ammonia again, and shake well. If froth is produced, margarine is present.

If a lump of pure butter is dropped into boiling water, melted, and well stirred up, it will mix well with the water; but if margarine, it will not.

Some provision dealers roughly test for margarine by twisting several cotton threads together; these are drawn through the sample. They next set the threads on fire for a few seconds,

then blow out the flames and smell the fumes. If heavily adulterated, it is said to smell more or less like tallow.

Margarine fat has a lower specific gravity than butter fat, and the turbidity point of margarine fat is much higher than butter fat. It must be clearly understood that these are at the best only rough tests, and the only reliable guide is chemical analysis, and even then small adulteration may pass. Margarine is now so worked up and coloured that in appearance it is almost impossible to distinguish it from butter; for this reason the food inspector spends a large amount of time in taking samples for analysis.

Butter or margarine prepared for sale or consignment must not contain more than 16 per cent. of water. Milk-blended butter must not contain more than 24 per cent. of water.

Mouldy Butter.—This most common defect is caused by the development of a number of different varieties of moulds. The trouble appears most frequently in packed butter on the outside of the mass of butter in contact with the tub.

Putrid Butter.—Butter affected by this disease rapidly acquires a putrid flavour and odour, and is completely ruined for table use. It is often found in Danish butter. It has been found to be due to several putrefactive bacteria.

Number of Samples per Year.—The Board of Agriculture advise that three samples per 1,000 inhabitants be taken per year.

Butter Sampling—Recommendations by the Board of Agriculture.—1. The quantity to be purchased should not be less than 1 lb., except that it may be expedient to purchase only $\frac{1}{2}$ lb. in cases where there is reason to believe that the object of the purchase would be defeated if a greater quantity were demanded.

2. The division of the sample into three parts should be made as equally as possible, so that the portion reserved by the purchaser may be not less than one-third of the whole. It is desirable that each portion should consist of one piece only.

3. The portions should not be wrapped in paper, but should be placed, without pressure, in dry and clean screw-capped bottles in such a manner that the water present may be retained in the butter.

4. The screw-capped bottle should be provided with a cork-lined metallic lid. The mouth should be as nearly as possible the full width of the bottle, and the cork lining of the lid should be firmly screwed down against the edge of the bottle.

5. The bottle, labelled with the necessary particulars, should be closed in an envelope of stout paper, which should be secured with the official seal.

6. The reserved portion should be kept in a cool, dark place pending its production in court in the event of proceedings being taken, and if directed by the Court to be referred to the Commissioners of Inland Revenue, it should be carefully packed in order to insure its safe transmission to the Government Laboratory.

BUTTER BEANS.—These resemble small haricots, but they are finer and of better quality.

BUTTER FAT.—The mixture of fats found in milk which in the process of butter-making is converted into butter.

BUTTERINE.—Purified animal fats, mixed and coloured so as to resemble butter.

BUTTERMILK.—The liquid which remains in the churn after the butter has been made. It contains all the ingredients of milk except fat, which has been removed as butter.

BUTTER NUTS.—These come from South America ; they are large in size and full of oil.

BUTTER RATIO.—This expression means the ratio of butter produced to the milk used, but is generally understood by dairymen as the amount of milk it takes to make 1 lb. of butter. More butter is obtained by the use of the separator than by setting the milk in shallow pans.

BUTT OF CURRANTS.—Weighs 15 to 20 cwts.

BYRE.—A Scotch name for cowhouse.

C.

CABBAGE.—This is one of the oldest and most useful vegetables sold. It is always in demand, and some variety is always in season. It contains many properties valuable in scorbutic cases and contains a large percentage of potash. Heads of cabbage should be carefully handled, so as not to bruise or in any way injure them. Bruises are the starting-point of decay, and practically all the rotting commences at the damaged parts. The cabbages should have good firm hearts. They are usually sent to the market in light crates known as "tallies," which hold five dozen heads ; but if near a town the producer sends them in waggons.

CACIO-CAVALLO CHEESE.—This cheese is made from the milk of Italian sheep ; it is said to be very palatable and nutritious, but not much imported into this country.

CÆCUM.—A little sac with one opening formed in the intestine of an animal.

CAERPHILLY CHEESE.—This is a cheese made in Wales and eaten locally by the working classes. It is a flat circular cheese, about 10 inches diameter and about 2 inches thick.

CAFFEINE.—A substance found in coffee, and to which coffee owes its stimulating and refreshing action ; about 1·2 per cent. is the average quantity in most coffees.

CALIFORNIAN OIL.—A good quality of olive oil produced in the State of this name.

CALORIMETER.—An instrument sometimes called “heat measurer” ; it is an apparatus by which the quantity of heat is measured.

CAMBRIDGE CHEESE.—This is a soft cheese ; it is square or oblong, about 7 inches by 5 inches and about 2 inches deep, and weighs about 1 lb. It is made from whole fresh milk. York cheese is made in a similar manner to the above.

CAMBRIDGE SAUSAGE.—This sausage acquired its name from the quality of its ingredients. It was formerly made by mincing two parts of good meat with one part of bread, together with seasonings ; it has, however, deteriorated in quality, probably owing to competition and many imitators.

CAMEMBERT CHEESE.—This is a small, flat, circular cheese, about 1½ inches thick and 4 inches in diameter ; it weighs about 10 or 11 ozs. It is pale yellow in colour, with a dark rind, and is made from whole or partly skimmed or separated milk. It has a fine, sweet, and delicate flavour, but is very soft and soon perishes. It is made in and around the village of Camembert in France, and is largely imported into this country.

CANADIAN CHEDDAR CHEESE.—This is a similar cheese to the English-made Cheddar, except that it is sometimes made from skim milk.

CANCER IN FISH.—Considering the enormous quantity of fish caught, cancer is a rare disease in fish. The symptoms are said to be a swelling underneath the lower jaw ; frequently the gill rays are affected, and covered with small nodules of various sizes. In its later stages the growth invades the floor of the mouth

and the various structures of the head and neck. There is no reason to believe that cancer is likely to be communicated to the consumer.

CANDIED PEEL (LEMON, CITRON, ORANGE, etc.).—The fruit is cut in half, and the juice and pulp pressed or picked out by hand. The peels are next thrown into salt water and soaked from seven to ten days. The soaked peels are then taken out and boiled till tender. They are next washed in clean, cold water, drained and placed in a vessel, where syrup is poured over them, and they are allowed to stand for two or three days. This process is repeated several times, the sugar syrup being stronger and thicker at each treatment. The finished peels are then stood on wire sieves, the open side upwards, and dried; they are then ready for market.

CANDY.—A sweet which is simply crystallized sugar. Several kinds are on the market, such as sugar candy, white, pink, yellow, and brown candies. Owing to their nature they may become very dirty and within the scope of the food inspector. Usually, before they get to this dirty state, they are brushed over with a wet brush and dried; this freshens the crystals up again.

CANNING METHODS.—After the goods have been prepared, they undergo the following processes :

1. *Filling.*—This is done by hand and machine, the former being the most costly; but the goods are more carefully selected. When the machine method is used, the goods are not packed so well, and the weights of cans vary.

2. *Exhausting.*—The filled cans are exhausted by heat, steam, etc.

3. *Processing.*—By this is meant the sterilizing or cooking of the foods contained in the hermetically sealed cans. Sterilization-point is generally about 170° F. One of the following is generally used: (1) Open bath method; (2) calcium process; (3) closed retort; (4) water and steam process.

CANQUILLOTE.—A skim milk cheese made in France.

CANTAL CHEESE.—Is a common cheese not used very much in this country. It is made in the hilly districts of Auvergne in France. It is made from cow's milk, sometimes skimmed. The cheeses weigh from 40 to 120 lbs.

CANVAS BACK DUCK.—A wild duck, which is imported frozen into this country from America, China, etc. It is said to be

the most delicious of all wild ducks, and the flavour of its flesh (in the American) is thought to be due largely to its feeding on the wild celery. It owes its name to the wavy lines and speckles on its white feathers.

CAPE BRANDY.—A spirit distilled from grapes, aromatic herbs, and spices in Cape Colony, and much used for fortifying inferior wines and cheap champagnes.

CAPE GOOSEBERRIES.—This fruit is known to most people in this country through the bunches of stalks which are often seen in ornaments as a decoration for table and house. The fruit, which resembles a cherry, is enclosed in a heart-shaped outer covering, and is grown in gardens, but it is not much eaten in this country. However, it has the reputation of possessing a delicious flavour, and it is also preserved.

CAPERCAILZIE, OR WOOD GROUSE.—This bird is found in Scotland, but the large majority of the imported birds come from Norway, Sweden, and Russia during the winter months.

The male bird has a dark plumage of iron grey, while the breast is a brown-black with a green gloss. It has a large, strong bill of pale yellow colour. It weighs from 8 to 12 lbs.

The hen bird is much smaller, the bill not so strong, and the tail is not forked. It weighs from 4 to 7 lbs. Both the sexes have the characteristic scarlet patches of naked skin above the eyes, which enable them to be distinguished from other similar game. The feet are also feathered to the tips of the toes.

The young capercailzie are also recognized from the red grouse, which they closely resemble, by their larger feet, longer legs, and bills.

Capercailzies are delicious eating, and are in season from August to November.

CAPERS.—These are the flower buds of the caper-tree, a wall plant of South Europe. The buds are usually picked every morning as they near maturity, and are passed through sieves of different meshes to sort them. They are prepared by pickling in vinegar and salt; to make them appear very green sometimes copper is added. The best capers are exported from Toulon, but Italy, Spain, Sicily, and the South of France also send quantities to this country.

The French capers are considered the best for flavour and keeping qualities. See also Mock Capers.

CAPER TEA.—This is dust from several kinds of tea. It is made up into hard grains by mixing with gum water.

CAPILLAIRE.—A clarified syrup in which sugar is boiled till it nearly reaches candying-point. It is used as a flavouring for various beverages.

CAPILLARIES.—These are very small bloodvessels. They carry the blood to all parts of the body.

CAPON.—This is a castrated male chicken, and is caponized in order that it may have a more peaceful disposition. It never crows like the cockerel, and develops much more quickly, attains a greater size and weight, and is ready for killing at about seven to ten months of age.

The capon bears the same relation to a cockerel as a steer does to a bull, a wether to a ram, a hog to a boar.

CAPSICUMS.—These are known as Chili peppers. In their green state they are used in salads, in pickles, and for making Chili vinegar, chutneys, curries, etc. When ripe they are dried and ground, and the resulting powder is known as "cayenne pepper," or "red pepper."

CARAMEL.—This is a brown substance produced by the action of heat upon sugar or glucose. It is frequently called "burnt sugar." Its chief use is that of a colouring agent in beers, vinegars, spirits, gravies, etc.

CARAMELS.—These are sweetmeats made from sugar, glucose, etc., with the addition of condensed milk, butter, cream, and some distinctive flavouring, as chocolate, vanilla, etc. The sweetmeats are usually sold moulded or cut into squares or oblongs.

CARAWAY CHEESE.—A sour milk cheese flavoured with caraway seeds. It is chiefly eaten in Germany and some Continental countries. In some kinds the caraway flavouring is so prominent that it disguises the taste of the cheese.

CARAWAY SEEDS.—These are the seeds of a plant grown largely on the Continent, and in some parts of England. They are largely used by confectioners for flavouring, but in some Continental countries they are used in cheese, as in Germany and Holland. A valuable oil is also distilled from them. The seeds are generally sold in the market in bags containing three bushels.

CARBOHYDRATE.—A heat, energy, and fat-forming constituent of food.

CARBONATING.—A term used in the bottling of beers, wines, ciders, etc., with carbonic acid gas.

CHIEF POINTS OF DIFFERENCE IN THE CARCASSES OF—

	Bull.	Bullock, Ox, or Steer.	Cow.	Heifer.
<i>Hind-Quarter:</i>				
Erector muscle	Well developed.	Weakly developed.	Absent.	Absent.
Penis ..	If left in, is largely developed, usually removed or split, but groove showing.	Much thinner.	Absent.	Absent.
Pelvic bone	Large and massive; generally sawn through.	Moderate in size; mostly cut through with knife, and shows bluish gristle when young.	Thinner than in bull or ox.	Similar to ox, but more bluish-white gristle.
Bones generally	Massive except in young animals.	Less massive than bull.	Small and light.	Small and light.
Scrotum or cod fat	Scanty and irregular in shape.	Plentiful and regular in shape.	Evidence of udder removal.	Small fatty udder left in carcass.
Muscular development	Very marked development of muscles.	Less marked than buli.	Poorly developed.	Similar to ox if in good condition, but lighter.
Abdominal cavity	Less fat than ox.	Large deposit of fat, especially kidney fat.	Rather scanty, except in specially fattened cows.	Usually plentiful.
Ribs ..	Heavy, and strongly developed, more circular in section.	Not so heavy.	Ribs flatter and wider, with bleached appearance. Vertebrae lighter.	Same as cow, only ribs pinker in colour.

CHIEF POINTS OF DIFFERENCE IN THE CARCASSES OF—

	Bull.	Bullock, Ox, or Steer.	Cow.	Heifer.
<i>Hind-Quarter:</i> Vertebrae ..	Strong and heavy.	Not so heavy as bull.	Lighter than bull or ox.	Same as cow, only ribs pinker in colour.
Pelvic cavity	Narrow, but not much fat.	Narrow, and contains plenty of fat.	Large, and contains little fat.	Not developed as in cow.
<i>Fore-Quarter:</i> Neck or crest	Strongly developed; muscles prominent, and little fat.	Less developed than bull; plentiful covering of fat, and cross section shows it well marked with layers of fat.	Development not so pronounced as in bull or ox, and not so much fat as shown in the ox.	Similar to cow.
Brisket ..	Hard, dark and coarse.	Not so much as bull.	Generally light and narrow.	Similar to young ox.
Lean ..	Coarse, stringy, and dark in colour; less juicy than ox.	Brownish-red in colour, moist silky feel, and well marbled with layers of fat.	Darker in colour than ox beef; fibres finer, and softer feel.	Flesh lighter in colour than bull, ox, or cow, and fibres softer and more silky.
Fat ..	Fat generally white; less fat in proportion to muscle than ox; external coating scanty.	Yellowish-white; smells sweet; external coating plentiful.	More yellow, and not so abundant.	Similar to young ox.
Odour ..	Characteristic bull odour.	Rather pleasant.	Slight milk odour.	Same as ox.

CARLSBAD WATER.—This natural mineral water is obtained from wells and springs at the town of this name in Bohemia. It contains small amounts of sulphates of soda and potash, carbonates of lime and soda, and other minerals. It is recommended for habitual constipation, gout, diabetes, etc.

CAROB BEANS.—See Locust Beans.

CAROTEL OF CURRANTS.—Weighs 5 to 9 cwt.

CARP.—A pond-fish which has rather a muddy taste. It is best during the winter months.

CARROTS.—They are grown in this country in many varieties, and vary greatly in colour, size, flavour, etc. When young they are very wholesome, being short, pale colour, medium size, tender, and of delicate flavour. The old carrots, being more fully developed, tend to be woody and tough, and of rather strong flavour. They are much more nutritious than turnips, owing to their richness in sugar. Storing carrots is very difficult and while they may show a very slight mould one week, before several have passed they may be all rotten and pulpy. Carrots are also much attacked by wire-worms. Unless they are badly affected, they cannot be condemned as injurious to health.

CARTILAGE, OR GRISTLE.—This is a pale bluish-white, firm and elastic substance. It is found adhering to the ends of bones, which it covers, forming a smooth surface to, and assisting the easy movements of, joints. This form is called "articular cartilage." It is also found in other parts of the body, such as the ear and trachea, and in this case it is known as "non-articular cartilage." In animals it assists the butcher, inspector, etc., in forming an idea of their age. In a young animal the joints will be comparatively large, and furnished with bluish-white cartilage while in old animals it will be scanty and yellow.

Dealers in poultry tell an old goose by squeezing the windpipe. If old, it is tough; while if young and tender, it easily yields.

CARTON OF PLUMS.—Weighs 9 lbs.

CASE.—A measure used by greengrocers; it contains about $\frac{3}{4}$ bushel.

Case of Mace.—Weighs $1\frac{1}{2}$ cwt.

CASEIN.—The principal proteid of flesh-forming substance found in milk. The curd of milk from which cheese is made.

CASHEW NUTS.—Are the fruit of the cashew-tree, and belong to the same family as the pistachio nut. They seem to be a cross

between a bean and a nut. They are natives of the West Indies, and are largely exported from Jamaica ready roasted. They are considered one of the most delicious nuts grown, are largely used for dessert, and are only edible when roasted. They are kidney-shaped, and about an inch long.

CASHMERE CHUTNEY.—An Indian condiment or sauce made of chopped fruits, spices, etc. It is sour and very hot. Imitations of the genuine are now made in this country.

CASK OF COCOA.—Usually weighs $1\frac{1}{4}$ cwt.

Cask of Malaga Raisins.—Weighs 1 cwt.

Mustard.—Weighs (small) 9 to 18 lbs; (large) 18 to 36 lbs.

Nutmegs.—Weighs 200 lbs.

Rice, American.—Weighs 6 cwt.

Turkey Raisins.—Weighs $2\frac{1}{2}$ cwt.

CASSAREEP, OR CASSARIPE.—A thick black liquid obtained by boiling down the juice of the tapioca plant. It is used as an ingredient for sauces in a similar way to soy.

CASSAVA BREAD.—This is made from a coarse flour obtained from the roots of the cassava.

CASSIA.—Is the bark of a Chinese species of cinnamon. It is thicker than cinnamon, and has a slightly different smell. The sources of supply are India, China, Mauritius, Singapore, etc.

CASSIA BUDS.—These are the unripe dried fruit of the above tree. They have a flavour of cinnamon.

CASSIA POWDER.—This powder should consist of ground cassia. It is often a mixture of inferior ground bark, cassia buds, etc.

CASTOR OIL.—This is obtained from the seeds of the castor-oil plant, which is grown largely in India. The oil is expressed by the hot and cold processes, the latter giving the better qualities. Other sources of supply are France, Italy, America. It is colourless or slightly pale green, and is used in medicine, and the commoner kinds for soap, lubricating, etc. It is adulterated by the addition of cheap oils, such as resin, cotton-seed, linseed, colza, etc.

CAT v. RABBIT.—The question of the difference between a cat and a rabbit is often being asked either in the written or oral part of the examination for the certificate of inspector of meat and other foods. It will be useful, therefore, to consider the question.

No dealer would be so foolish as to offer for sale the carcass of a cat with head, claws, and tail intact, as they present great differences from the rabbit's. When, therefore, examining a rabbit, notice if the tail has been cut out, as it would be if a cat; in the rabbit the short stump is left on. Next notice the kidneys. In the rabbit one kidney is nearer the head than the other, and the colour is a dark chocolate-brown; while in the cat the kidneys are both the same distance from the head. They are also a pinkish-brown in colour, and have veins on the surface, the latter being absent in the rabbit.

The cat's ribs number thirteen pairs, while the rabbit has only twelve. The cat's ribs are more barrel-shaped than the rabbit's, which are slightly pointed under the stomach. The rabbit is also thinner at the loins than the cat.

CATFISH, OR WOLFFISH.—The name appears to have been given to it by the fishermen owing to the supposed resemblance of the head to a cat's, and also to fanglike teeth. It is a fish rarely seen on the fishmonger's slab in its natural condition, but large quantities are to be seen at the wholesale market and quays. Its colour is a bluish-grey, with dark vertical bands on the sides. The skin is smooth. Its striking peculiarity is its canine teeth, or fangs, and powerful jaws. In its natural state it is very repulsive in appearance, and consequently the fishmonger beheads and skins it, and palms it on to the public under the high-sounding title of "rock salmon." The flavour of the flesh is very much a matter of opinion. To some it is unpalatable. It is, however, used in large quantities by the poorer classes, owing to its cheapness, and by the fried-fish vendors, with whom it has a good sale in some localities. The fish is regarded very favourably by the fishmongers, because it will keep for a considerable time; and after being kept in ice for weeks, will be in a sound condition. The smaller fish are fried in large quantities, and sold by the unprincipled fried-fish vendors as hake, haddock, rock salmon, etc. It is also sold filleted. As far as my experience as an inspector goes, I have never heard of its being sold to the consumer by the fishmonger under its proper name. It grows to a length of 6 feet, but the general market size is about 3 feet. It is very plentiful, and is entirely confined to the northern regions and the north of the North Sea.

CAUL.—A term used for the membrane which covers the intestines. It is also called the "omentum."

CAULIFLOWER.—This is a very delicious and popular vegetable. It is grown for the creamy white head, and is considered the best of the cabbage family. It does not stand the frost so well as broccoli, but large quantities of early cauliflowers arrive from February to April from the Channel Isles, France, and Italy in light crates and baskets, but the early ones are rather poor in quality. In the English market they are sold by the tally of five dozen heads.

The best have close, white, compact heads of medium size. Whiteness is a sign of freshness, while a yellow or greenish tinge indicates inferiority. Decomposition is known by dark soft spots, and the inspector should be suspicious if these have been cut off. They are in season from June to October.

CAVERNOUS ANGIOMA.—An affection of the liver, which is characterized by the presence of black, bloody spots on the surface and throughout the substance. When looked at on the surface the spots show a small dent or cave; they are known to butchers by the terms, "bloody livers," "plum-pudding livers," etc.

CAVIARE.—Is the preserved roe of the sturgeon, and is said to contain twice the nutriment of meat. It is prepared in Russia, Norway, Italy, America, etc., but the Russian is the best. The Norwegian caviare is slightly flavoured with cloves, and is thus easily distinguished. Imitation caviare is made on the Mediterranean shores from the roes of several fishes, such as mullet, shad, etc., but this has not the same taste as the genuine article.

The best is prepared from the roe of the sterlet. The roes are rubbed over a fine sieve, which separates the eggs from the other matter. Salt is added to the eggs, and the brine is afterwards drained off, and the remainder is the caviare. There are several kinds: the grained, solid, or pressed; the dried, red, and the black.

CAYENNE PEPPER.—Is an extremely pungent, aromatic condiment. It came originally from the Island of Cayenne; but it is now grown in most tropical countries, as the West and East Indies, Brazil, etc.

It is prepared from the pods of one or more kinds of capsicum by grinding. The flavour is said to deteriorate by exposure to damp and the sun's rays. Adulteration of it has been recorded by mixing the pepper with brickdust, red-wood dust, red ochre, lead, and iron.

CELERAIC, OR CELERY ROOT.—This is a species of the celery plant, also known as turnip-rooted, knot, or knob celery. The edible portion is the root, and not the stalks. It is eaten as a vegetable, and is also used for flavourings. It is more easily preserved than celery, and when stored away from the frost like turnips, it will keep for months. A large quantity is imported from Germany, but it is being grown more in this country recently. It is in season during the autumn and winter.

CELERY.—The edible portion is both the stalks and root. The heart should be quite white and solid, the heads crisp and not stringy. It is in season from September till April. The majority is grown in this country, very little being imported. Celery is marketed in bundles or rolls of eight to twelve sticks according to the size. Large quantities are also sent loose in trucks and waggons. The sticks are mostly sold retail, washed, and trimmed up. It is rather rare to see any offered for sale in a condition unfit for food.

CENTERBA.—An Italian liqueur made from aromatic herbs.

CENTRIFUGAL FORCE.—The separation of milk is accomplished in the many kinds of separators by this force. Bodies and liquids moving round another body in a curve tend to fly off from the central axis of its motion, and thus cream, which is heavier than milk, is separated.

CEREAL.—This name is given to edible grasses or to the corn plants. The principal cereals are: Wheat, oats, barley, rye, rice, maize, and millet, and they form the principal vegetable foods.

CERVICAL VERTEBRÆ.—The bones which are attached to the skull and form the neck.

CESTODES, OR TAPEWORMS IN FISH.—The only parasitic worm which has been proved, with any certainty, to be conveyed to man by fish, is one known as the *Bothriocephalus latus*, or the broad or pit-headed tapeworm. It is, fortunately, almost limited to Europe, and is common in parts of Russia, Sweden, Switzerland, and Germany. Its life-history is said to be similar to that of the *Cysticercus cellulosæ* of the pig, and it is conveyed to man by eating improperly cooked pike, turbot, etc. The cysts are recognized in the muscles of the fish by the white colour and transparent surrounding tissue.

Dogfish, sharks and skate, are said to harbour a long list of adult cestodes.

Parasitic crustaceans or copepods are often found among the gills of cod, etc. In cases where parasites affect the exterior of the fish, the body is often marked with unsightly blotches, which would readily attract the attention of the inspector and would be quickly condemned.

CEYLON OIL.—A second quality cocoanut oil imported from the Island of Ceylon, and used sometimes as an adulterant of butter, and also in the manufacture of margarine and butter substitutes.

CHABLIS.—A white Burgundy wine made in the district of this name.

CHALONA.—Sun-dried mutton, chiefly used in Brazil and Chili.

CHALYBEATE WATERS.—Contain iron in solution, and may be either carbonated or sulphated.

CHAMPAGNES.—These are sparkling wines made in France from the red and white grapes. The industry is carried on in the Champagne district, and a special form of storage in very deep cellars is necessary, together with several years in an even temperature. A large number of brands are on the market. The principal are—Ayala, Bollinger, Moët and Chandon, Clicquot, Desbordes, Deutz and Gelderman, Giesler, Goulet, Heidsieck, Irroy, Jacquesson Lauson, Louis Chalons, Mumm, Perinet, Perrier Jouet, Pommery, Roederer, Ruinart St. Marceaux, Wacheter, etc.

CHAMPOLÉON CHEESE.—A hard rennet cheese made from skim milk in France.

CHAR.—A fresh-water fish of the salmon family. It is similar in shape to the trout, but is longer and thinner. The colour on the back is dark olive-green, varying to a much lighter shade as it approaches the belly. It has rich pink, fatty flesh, and is delicious when cooked.

CHARACTERISTICS OF GOOD FRESH MEAT:

Beef.—In colour this is a rich brownish-red, well marbled with layers of fat, indicating a well-fed beast. It should be firm and elastic, and have a uniform resistance to a knife thrust. The smell should have a fresh and agreeable odour. On a newly cut section it should have a smooth and silky feel, not too moist. The fat should be of a yellowish-white colour, firm and free from effusions, evenly distributed, present in medium quantity. Good beef does not waste or shrink

much on cooking, or get wet on standing a few days. Meat of a purple colour indicates acute fever, or improper bleeding.

Beef from young cattle from six to sixteen months is light red in colour, and contains little fat.

Beef from bullocks, one to six years of age, shows a rich brownish-red, strongly marbled with fat.

Beef from bulls, one to four years of age, is a dark red in colour, coarse in grain, poor in fat, and tough and stringy, with a peculiar odour.

Lamb.—This is paler in colour than mutton, not so firm, but fat softer.

Mutton.—Is light red in colour, moderately firm, fine grained, and has a silky feel; well marbled with layers of white, hard fat. It should smell sweet, be moist, but not wet.

Pork.—The flesh is a pale red or pink colour, some of the muscles being nearly white. It is fairly firm and elastic, is moist, and smells fresh. The fat is white and clear, very greasy, and plentiful. If the flesh is from old boars and sows, it is very dark, firm, poor in fat, and has a strong smell of urine.

Veal.—This is pale red in colour, nearly white. It is finely grained, fairly firm, and elastic when touched. It smells fresh, and is moist, but not wet. The fat is white in colour, softer than beef fat, and should be free from blood-stains.

CHARBON.—The French name for anthrax.

CHARTREUSE.—This is a liqueur made chiefly near Tarragona. Its composition is a secret, but thought to be made from a kind of turpentine, angelica, balm, hyssop, sugar, etc. It is sold in three qualities—white, yellow, and green, the former being the mildest, and the latter the strongest. Several factitious kinds of Chartreuse are on the market. They are made up of silent spirit, and flavoured with various chemical flavourings.

CHATS.—This name is used for several purposes in food-supply. Young haddocks are known in the fish trade as "chats," when whittings are dear and scarce. They are skinned and curled up and sold as silver whittings.

Potatoes that are under seed size are also known as "small" or "chats," while a species of small bird of the thrush family are also known as "chats." The wheatear is one; for its description see heading Wheatear. Very small cokernuts are also known as "chats."

CHEDDAR CHEESE.—Is a cheese made from a mixture of morning and evening milk artificially coloured. It was originally made at Cheddar in Somersetshire, but it is now made in all parts of the country. It is made in two varieties, pale and coloured. It is fine flavoured, and of a porous nature ; weighs on an average 60 lbs. In shape it is cylindrical, about 10 inches deep and 14 inches in diameter.

CHEESE.—This word is derived from the Saxon "cyze." As an article of food it is very valuable. Broadly speaking, it is made by the addition of rennet to whole milk, skimmed milk, and milk to which cream has been added in varying proportions. The action of the rennet is to separate the curd from the milk. The curd thus obtained is washed and pressed, and subjected to the different processes which constitute the varieties, the number of which seem endless. Generally speaking, the process of cheese making may be divided into the following :

1. Ripening the milk.
2. Coagulating the casein.
3. Separating the curd from the whey.
4. Ripening the curd.
5. Salting.
6. Moulding.
7. Curing or ripening the cheese.

Soft cheeses are obtained by coagulating the milk with rennet at low temperatures below 86° F. and long period of time.

Hard cheeses are produced by coagulating at higher temperatures, from 86° to 96° F.

Cheese is imported chiefly from Canada, U.S.A., Holland, New Zealand, Belgium, and France.

Soft Cheeses.—The following are a few : York, Caerphilly, Cream, New Forest, Surrey, Victoria, Bondon, Brie, Camembert, Coulommiers, Gervais, Gournay, Livarot, Neufchâtel, Pont l'Évêque, Stracchins, etc.

Hard Cheeses.—Cheddar, Cheshire, Derby, Dunlop, Cotherstone, Cottenham, Gloucester, Leicester, Somerset, Stilton, Wensleydale, Caciocavallo, Gisler, Edam, Glarner, Gorgonzola, Gouda, Gruyère, Parmesan, Port du Salut, Roquefort, Schabzieger, etc.

Adulteration of cheese is carried out by using skimmed milk which will give low percentage of fat, substitutions of foreign fat for milk fat, etc.

Characteristics of Good Cheese—I. *Quality and Richness.*—

This depends upon the proper proportion of fat in the

milk, and the proper method of manufacture. If a small portion of the cheese is taken and rubbed between the finger and thumb, a poor quality will be recognized by the dry and resisting feel, while a rich cheese will give a soft, creamy feel.

ANALYSES OF CHEESE.

Variety.	Authority.	Water.	Fat.	Proteids.	Milk Sugar and Lactic Acid.	Total Ash.	Salt in Ash.
Bondon ..	Chattaway ..	39.50	24.40	9.40	—	0.70	—
Brie ..	Blyth ..	51.90	24.80	18.10	—	5.00	—
Caciocavallo	Spica ..	23.68	25.49	29.25	—	7.63	3.39
Caerphilly ..	Chattaway ..	24.80	30.40	37.20	—	3.40	—
Cambridge ..	Chattaway ..	32.10	47.10	24.60	—	4.40	—
Camembert	Arnold ..	50.41	20.55	25.49	—	3.52	—
Cheddar—							
American..	Clark ..	31.97	27.72	34.62	—	3.54	—
Canadian..	Clark ..	34.07	22.54	40.02	—	3.45	—
English ..	Blyth ..	35.00	29.02	27.72	—	3.12	—
Cheshire ..	Chattaway ..	31.60	35.30	26.50	—	4.40	—
Cotherstone	Griffiths ..	38.20	30.25	23.82	3.81	3.92	—
Coulommiers	Balland ..	50.40	20.45	17.41	4.80	6.94	—
Derbyshire ..	Sheldon ..	31.60	35.20	24.50	4.38	4.24	—
Dorset ..	Griffiths ..	41.44	27.56	22.25	4.24	4.51	—
Edam ..	Balland ..	38.50	24.29	25.34	9.07	2.80	—
Gervais ..	Balland ..	51.58	31.98	11.30	4.29	0.60	—
Gloucester ..	Blyth ..	21.40	25.40	48.10	—	4.10	—
Gorgonzola ..	Bell ..	31.85	27.88	34.34	1.35	4.58	2.11
Gouda ..	Arnold ..	21.90	24.81	46.95	—	6.32	—
Gruyère ..	Balland ..	29.99	28.19	33.03	4.82	3.96	—
Leicestershire	Griffiths ..	34.77	28.00	27.86	5.21	4.16	—
Livarot ..	Balland ..	33.80	21.95	31.76	8.05	4.44	—
Mont-d'Or ..	Balland ..	43.20	23.97	20.10	8.84	3.89	—
Neufchâtel ..	Blyth ..	37.90	41.30	23.10	—	3.40	—
Parmesan ..	Chattaway ..	32.50	17.10	43.60	—	6.20	—
Pont l'Évêque	Balland ..	46.40	25.00	20.32	6.68	1.60	—
Port du Salot	Balland ..	27.70	35.10	31.16	2.04	4.00	—
Roquefort ..	Balland ..	28.90	38.30	25.16	3.00	4.64	—
Stilton ..	Hassall ..	31.37	36.58	27.66	—	4.39	—
Wensleydale	Chattaway ..	28.30	33.30	27.20	—	3.70	—
Wiltshire ..	Griffiths ..	37.23	27.82	26.52	3.88	4.55	—

2. *Digestibility.*—The various processes of making cheese have some effect on the digestibility. In some cheeses the fermenting process makes them more digestible; but the state of the person eating them is no small consideration.

3. *Freedom from Objectionable Substances.*—This includes ptomaines, etc.

4. *Flavour.*—This should be pleasant and natural, but depends upon the taste of the individual.

5. *Odour.*—This is again a matter of opinion and taste. Some varieties have a very strong and objectionable odour.

6. *Keeping Quality.*—This is largely dependent upon the milk, class of cheese, manufacture, and storage.

7. *Firmness and Texture.*—Dryness and hardness are undesirable, also crumbliness and chippiness, while toughness and soapiness should be avoided.

8. *Size and Shape.*—Inferior cheeses show a bulging, bad shape.

CHEESE CURD.—This is a mixture of casein and butter, carefully freed from milk and water by gentle pressure, and the addition of a little salt.

CHEESE HOPPERS, OR JUMPERS.—These are the larvæ of a two-winged fly which infest dairies and cheese-stores. To prevent these and preserve the cheese, it should be frequently brushed. Cleanliness, dryness, and ventilation are necessary.

CHERRIES.—The cherry belongs to the plum tribe. At the present time there are about 300 varieties known. The Bigarreau, White Hearts, Black Hearts, Kentish, and Morello are well-known varieties. The principal cherry orchards are in Kent and Herts, but considerable quantities of cherries are sent from France in June, and from other parts of Europe.

Cherry brandy and several liqueurs, including maraschino, kirschwasser, ratafia, are made from cherries. They are also preserved, crystallized, etc.

CHERRY BRANDY.—Is made from the juice of cherries, with brandy and sugar. Several imitations are on the market, and they probably consist of cherry juice, burnt sugar, and ginger essence.

CHERVIL.—This plant is cultivated for the leaves, which are used when young for salads, and to flavour soups, etc. There are two kinds the common or plain, and the curled chervil. The leaves are gathered when about 2 inches long, and tied into small bunches, and are in season from May to January.

CHESHIRE CHEESE.—This is a well-known cheese made in the county which gives it its name. It is made in three varieties:

early ripened, medium and late ripened. Its reddish-yellow colour is due to the curd having annatto added to it. In texture it is flaky and crumbly, and sometimes rather dry. The cheese is similar to cheddar in shape, and weighs from 100 to 200 lbs.

CHESTNUTS.—Are largely imported from France, Spain, and Italy, during October, November, and December. They contain a larger proportion of starchy matter or carbohydrates (about 42 per cent.) than any other nut. They are a cheap and excellent food, but are more digestible when boiled than roasted. The imported nuts are usually dried in kilns to prevent germination. Bad nuts may be told from the fact that they float in water, while the good sink.

CHEST OF CASSIA.—Usually weighs 60 lbs.

Chest of Cloves.—Usually weighs 200 lbs.

CHLANTI.—A well-known Italian wine imported to this country in large quantities. It possesses a fine Burgundy flavour.

CHICORY, OR SUCCORY.—This plant is grown in this country, France, Belgium, Holland, Germany, etc. The leaves, when quite young, are considered a valuable and delicate salad. The young root is also used as a vegetable in a similar manner to parsnips. It is, however, grown chiefly for the roots, which are white and fleshy, and these are largely used in the roasted and ground state for mixture with coffee. The roots, after being dug up, are washed, sliced, and dried in kilns, afterwards being roasted and ground.

The indoor chicory is in season during autumn and winter, and the outdoor during spring and summer.

CHILLED MEAT.—This is the name given to meat which has been stored at a temperature of 28° to 30° F. It is usually distinguished by the bruised shanks, fat and gristle being pink, owing to the juices staining it. The outside is cold, stiff, moist, and of a dull appearance; pizzle always removed; vertebræ are chopped; dressing untidy. It is tested by pushing in a clean skewer or meat-trier near the bones, withdrawing and smelling.

CHILLIES.—Is the name given to the dried fruit of a small variety of the capsicum plant, which grows in the West Indies and the East Coast of Africa. In this country they are largely used as a spice for pickling.

CHINE FELON.—A term used to denote rheumatism.

CHINE OF PORK.—When cut from a small pig, this consists of two undivided loins similar to a saddle of mutton. In a large bacon pig this name is used to indicate the back-bone and the meat attached.

CHINESE CINNAMON.—This is made from cassia bark.

CHITTERLINGS.—This name is given to the cleansed and cooked intestines and stomach of the pig. It is essential if a good-looking article is required that the intestines should be emptied and cleansed as soon after removal from the carcass as possible. The smaller intestines are usually plaited together, while the larger are tied up in knots according to local custom.

CHIVES, OR CIVES.—Is a species of green onion or leek. The leaves are used for flavouring soups and salads, being milder than onions. They are preferred by some people. The shoots are cut off close to the crown of the plant and sent to market tied up into bunches. They are in season from May to August.

CHOCOLATE.—This is a mixture of pure cocoa and sugar, sometimes flavoured with vanilla, etc. If intended for drinking purposes, the cocoa nibs are ground with a suitable proportion of sugar and flavouring. None of the natural fat is extracted, therefore a richer beverage is the result.

Characteristics of Good Chocolate.—Good chocolate possesses the fresh odour of cocoa, and has an unctuous quality. The grains are compact, slightly yellowish, and of crystalline appearance. When mixed with water and milk, it thickens but slightly, and presents a medium consistence.

If adulterated or of poor quality, it may have an irregular appearance, is porous, looks slightly bleached, and possesses an odour of flour. When mixed with water and milk, it becomes thick. It soon becomes rancid.

Common adulterations are potatoes, extraction of cocoa butter, addition of mutton and veal suet, pulverized husk of cocoa, gum, corn, barley, farina, etc.

CHOKED MEAT.—In appearance the carcass is repulsive, and smells offensively. The flesh is a dirty red colour, is soft, watery, and flabby, especially the hind-quarters. It often smells of turnip, or the substance which has caused the choking.

The flesh has to be considered on its merits; usually, however, the hind-quarters are condemned.

CHOW-CHOW PICKLES.—The genuine are made in the East Indies with mixed pickles, mustard, spices, etc. The imitation pickle made in this country is very similar to piccalilli.

CHUMP CHOPS.—These are cut from near the tail of the sheep.

CIDER.—This is made from several kinds of special apples. These are reduced to a pulp; the juice, or "must," is then put into casks to ferment. When fermentation has ceased, the clear liquid is run off into fresh casks, isinglass finings added, and it is then bunged up till the following spring, when it is bottled as prime cider.

CINNAMON.—This is the inner bark of the cinnamon-tree, which is grown largely in the East and West Indies. The bark is gathered twice a year, the best and largest crop being the June one. Good cinnamon is of a light yellow colour, thin, smooth, and pliable, but not brittle. The cassia bark is sometimes substituted for this article, being much cheaper, but of inferior quality. It is recognized by being thicker, coarser, and its flavour being hot. The best quality comes from Ceylon, but quantities are also sent from Java, Borneo, Sumatra, Jamaica, and Brazil.

CINNAMON CHIPS.—These are small pieces of bark of good quality, usually.

CITRATE OF MAGNESIA.—An effervescing mixture of salts sold by grocers, etc., in tinted bottles. It usually contains bicarbonate of soda, citric and tartaric acids, a small proportion of Epsom salts, the whole being sweetened with sugar. It is mostly sold in a granulated state.

CITRIC ACID.—This is a colourless compound obtained from several citrus fruits, the lemon notably. It is used in drinks, etc., and is usually obtained from the chemist in the form of a white powder. Messina manufactures and exports large quantities.

CITRON.—This fruit belongs to the same class as the orange and lemon; in appearance it resembles a very large lemon, but has a much thicker rind. The best are imported from Corsica, but Naples and Sicily supply considerable quantities. Very little of the raw fruit is imported into this country, except a special kind used by the Jews at the Feast of Tabernacles. The chief form in which it arrives is candied peel.

The manufacture of citron candied peel is similar to lemon candied peel, which see.

CLARET WINES.—Is the name given to the red wines produced in the Gironde district of France. They are divided into four groups, and these are subdivided again. The four main groups are the Paysan, Artisan, Bourgeois, and Fine Growths. The latter is again subdivided into first, second, third, fourth, and fifth growths. Large quantities of this wine are exported to this country.

CLARIFICATION.—This is a term used chiefly in the manufacture of mineral waters, wines, etc. It means the clearing of liquids by the addition of finings, isinglass, albumin, gelatine, blood, lime, plaster of Paris, heat, etc. When finings are used, clarification is effected by their collecting all the floating matters, and settling to the bottom with them. See Finings.

CLARY.—This plant is cultivated for the sake of the leaves, which are used for flavouring soups, etc.; the flowers are used for making clary wine.

CLASSIFICATION OF WINES.—

Austrian.—Voslaner, Glodeck, Steinberg.

English.—Grave, Raisin, Currant, Ginger, Gooseberry.

French.—Champagne, Burgundy, Hermitage, Rousillon, Frontignac, Claret, Latour, Vin de Grave, Sauterne, Borsac.

German.—Rhine, Moselle, Hock.

Hungarian.—Tokay.

Italian.—Lachrymae, Christi, Marsala, Lissa, Syracuse.

Persian.—Shiraz.

Portuguese.—Port, Bucellas, Lisbon, Calcavella, Colares.

Spanish.—Sherry, Tent, Malaga, Alicante.

CLINGSTONES FRUITS.—A form of plum, peach, apricot, etc., the stone of which clings to the pulp or flesh when ripe, and is not easily separated from it without considerable waste. They are the opposite to freestones. See Apricot.

CLOVE.—A weight used in the cheese and butter trade = 8 lbs.

CLOVES.—These are the dried, unopened buds of an evergreen tree, a kind of myrtle. They are aromatic spices, and are used for flavouring cordials, puddings, pickles, etc. They vary in colour from brown to almost black. Adulteration is effected by adding stalks of cloves which have been used in the extraction of oil of cloves. This can easily be seen; the latter is detected by the appearance of the cloves, which will be shrunken, much

lighter in colour, and a number of the cloves not being complete.

Our chief supplies come from Zanzibar and district—but most tropical countries grow them—and small quantities come from the West Indies, Brazil, Guiana, etc.

Essence of Cloves.—This is used for household purposes, such as flavouring in pastry. It is a solution of oil of cloves in alcohol.

Oil of Cloves.—This is manufactured by distilling cloves in water, and is used for flavouring wines, liqueurs, cordials, etc.

CLOTTED, OR SCALDED CREAM.—The manufacture of clotted cream is now carried out in most countries, but its reputation was gained in Devonshire. It is very rich, containing from 50 to over 60 per cent. of fat, and this fat is of a more digestible kind than any other. It is prepared by placing the whole milk in shallow settling-pans for twelve to twenty-four hours, according to season, for the cream to rise. The pans are then removed and the milk heated up to about 175° F., or until a wrinkled appearance develops over the surface of the cream. When the milk and cream have cooled down, the clotted cream is removed with a skimmer, and generally sold by the pound.

CLUE BOUND.—A farmer's term used to describe the impaction of the third stomach.

CLYERS.—A butcher's term for enlarged glands, especially those affected with tuberculosis.

The same term is also used to indicate wens, or tumours found near a cow's jaw.

COAGULATION.—The act of curdling. Milk is coagulated by the addition of rennet, lemon juice, etc.

COALFISH, OR SAITHE.—This fish closely resembles cod in shape. In colour, however, it is very different, being a dark slate-blue, but in some fish it is almost black on the back. It has a white lateral line, and the belly is silvery white. The fish has a variety of local names, some of which are not very flattering. It is caught up to about 30 lbs. weight. The flesh has a peculiar flavour, said to be imparted to it by the skin. In the opinion of many people it is very insipid in taste and inferior in quality. However, if caught fairly young it is not bad eating, but after a year old the flesh becomes coarse. The fish is plentiful on the east and northern coasts of Scotland, but a

large quantity which comes to the market is taken in waters off Iceland, Faroe Isles, North Sea, and West Scotland. The fish is in its best condition from September to February.

COATHE.—See Fluke.

COB NUT.—The largest variety of the filbert hazel nut, grown extensively in Kent.

COBURGS.—Round loaves of bread, with two deep cuts in the form of a cross on the top. When baked, the loaves open at these cuts and form a crown with four points.

COCCIDIUM OVIFORME.—This is a parasite which affects the liver of rabbits, and causes what is known as "liver rot." The disease is often found affecting young rabbits during the summer, and sometimes causes great loss amongst both wild and tame rabbits.

The disease has been mistaken for tuberculosis, which it closely resembles. It should be remembered, however, that tuberculosis is extremely rare in the wild rabbit, but not so rare in the tame rabbit. The liver, both on its surface and throughout its substance, is studded with yellowish nodules about the size of a pea, containing a thick creamy fluid. In the early stages the disease has very little effect on the carcass, but in the advanced stage the carcass would be emaciated, dropsical, and condemnable. It is the usual practice to destroy the affected organ, and pass the rest of the carcass if in good condition.

It also affects calves, lambs, young pigs, etc.

COCCUS.—A round organism occurring either singly or in pairs, in fours, in chains, or in bunches.

COCHIN OIL.—A good quality of cocoa-nut oil prepared in Cochin and Malabar, used sometimes for adulterating butter, and also in the manufacture of margarine and butter substitutes.

COCHINEAL.—This is a liquid colouring substance. It is obtained from the female insects of a species known as *Coccus cacti*. The insects are collected and dried in a hot oven; the colouring matter is then extracted from them by a chemical process. It is estimated that about 7,000 insects are necessary to produce 1 lb. of dye. Solutions of brazil, sepan, and peachwoods are sometimes sold as cochineal. The chief use of cochineal is for colouring all kinds of foodstuffs.

COCKLES.—Cockles are in season all the year round, but they are in their best condition during the months from June to

December. They are on an average about $1\frac{1}{4}$ to $1\frac{1}{2}$ inches across and about $\frac{3}{4}$ inch deep, and reach this size when about three years of age. Large quantities of cockles are taken from the Wash, but the London market is supplied largely from Leigh-on-Sea. Very little cockle in shell comes in London, owing to the quantity of steamed cockles sent from Leigh. Inspectors of the Fishmongers' Company have certificates from the fishermen that the cockles sent to the market by them have been gathered from shores known to be free from pollution.

Inspection.—In inspecting cockles in the shell, a handful should be taken up and smelt. The shell may remain closed even though bad. However, if opened with a knife, they may be found thin and dry, or decomposing. Cockles also gape when alive, but on being touched they soon close their shells. A really bad cockle will give the inspector no trouble, as the smell alone will condemn it.

COCOA.—This is made from the seeds of the cocoa plant, of which there are a large number of varieties. The seeds are first of all thoroughly sifted by means of a rotary cleaner; this frees them from foreign substances. After this they pass into a hopper, and from thence to the roasting machines. When properly roasted, the beans are broken, and the kernels are then roughly crushed into irregular pieces, which are called "nibs." At the same time the outer skin, husk, or shell is cracked off and blown away. The nibs are then passed to the grinding-mills, and the immense friction of the grinding process makes the cocoa issue in a semi-fluid mass. A considerable quantity of fat is extracted by the application of high-pressure, and is run into moulds. The remaining mass of cocoa is formed into a firm, dry cake. This is allowed to get cold, and eventually ground to the fineness of flour. It is then ready for use.

The beans are exported from the West Indies, Guiana, Venezuela, Brazil, etc.

The common adulterants are sugar, starches, arrowroot, sago, potato starch, and various colouring matters.

COCOA ESSENCE.—This consists of pure cocoa deprived of about 60 per cent. of its fat.

COCOA EXTRACT.—Similar to Cocoa Essence.

COCOA NIBS.—The bruised roasted seeds deprived of their coverings.

COCOANUT, DESICCATED.—This is prepared by taking the white portion of the nut, slicing, grinding, and evaporating all moisture. It is exported in quantities from the United States and Ceylon. The quality depends to a large extent upon the whiteness of the finished product.

COCOANUT OIL OR COCOANUT BUTTER.—This oil is obtained from the crushed kernels of the common cocoanut. There are several qualities imported into this country as Cochin, Ceylon, Mauritius, English Pressed Oil, etc. The oil is used sometimes as an adulterant of butter, and in the manufacture of butter substitutes and margarine, vegetable butter, etc.

COCOA (OR COKER) NUTS.—Are the fruit of a palm-tree. They are somewhat indigestible, and, if eaten uncooked, should be carefully masticated. They contain only about 6 per cent. of proteid, but about 50 per cent. of fat. The palm bears both flowers and fruit at the same time, a good tree yielding from 80 to 100 nuts a year. These nuts are imported from the West Indies, Ceylon, and Africa, with the outer husk on; but those coming from Costa Rica are simply the plain nuts, being sent over in bags containing from 75 to 100 nuts. They are graded in the trade into large, milky, middles, smalls, milky growers, and chats. The Trinidad nuts are generally supposed to be the best for flavour and sweetness. Large quantities of desiccated cocoanut are used in this country for cakes and confectionery.

COCOATINA.—Similar to Cocoa Essence.

COD.—This is one of the best-known and most nourishing and wholesome fishes we have on our markets. It is chiefly found in the cold seas, and is very plentiful in the northern parts of the North Sea, large quantities being taken at the Faroe Isles, Iceland, and on the great Fisher and Dogger Banks. It is in its best condition from October to February, or two or three months previous to spawning, which varies.

Its distinguishing features are—the fin rays are all soft and flexible, eyes large, pelvic fins are in front of the pectoral, the body more or less elongated. The colour of the fish is greenish-yellow, with small spots. It has a white, lateral line, which shows up very plainly on the fishmonger's slab. They are sold in the market by the box.

CODLING.—A fisherman's and market term given to the young of cod; they are yellow in colour, and more spotted. A codling is reckoned up to 20 inches long and less than 10 lbs. in weight.

COD-LIVER OIL.—This oil is extracted from the livers of the common codfish. It is obtained by means of several processes, and various qualities of oil are obtained. Pale or clear cod-liver oil is the best, and is used medicinally; it has a slight fishy odour and taste. Light brown oil is a second quality, while brown or dark brown oil is a very poor quality, and is used by tanners, and for fattening cattle.

Other oils sold as cod-liver oil are really extracted from haddock, ling, saithe, turbot, etc., but these are deficient in the nutritive qualities of pure cod-liver oil.

COD ROES, CURED.—The roes are first washed in clean water, and are then placed in a barrel, layers of salt being placed between the layers of roes. The roes remain in brine made by the salt for several days; they are then taken out, well washed, and treated in a similar manner to dried cod.

COD ROES, SMOKED.—The process is the same as for cured roes, except that they are afterwards placed in a smoke-hole till the required colour is attained.

COD SOUNDS.—These are the silvery tubes or air bladders found in cod; they are generally removed as soon as the fish are caught, and are brought to market salted and packed in barrels. They are considered a great delicacy, and are usually parboiled after washing, and then cooked in milk, etc.

COENURUS.—The name given to a little bladder or cyst which is sometimes found in the brain of sheep. It causes symptoms known as sturdy, gid, turnsick, goggles, vertigo, etc. For further information see Sturdy.

COFFEE.—The coffee seeds, beans, or berries, are obtained from the coffee-tree, now grown in most tropical countries. The chief countries now growing coffee are Ceylon, Java, West Indies, Central America, Brazil, Venezuela, Abyssinia, Arabia, etc. The berries are gathered and prepared for market by two methods—the wet and the dry.

In the wet method the processes are—(1) pulping, (2) fermentation and washing, (3) drying, (4) decortication and polishing, (5) sifting and sizing. Dry methods: the process consists of—(1) drying, (2) decortication and polishing, (3) sifting.

The quality of the coffee seems to depend on the elevation and the district in which it is grown.

Adulteration is effected by mixing with chicory, ground roots, beans, peas, date-stones, acorns, malt, rye, burnt sugar, spent coffee grains, etc.

Tests for Adulteration in Coffee.—Ground coffee is easily distinguished under the microscope; the grains having a distinctive appearance, adulteration can readily be detected.

The following are a few practical tests: Pour cold water over some of the coffee; if chicory is present, it will colour the water deeply, while coffee only does so slightly.

If some of the coffee is sprinkled on the surface of water, the chicory, if present, will sink to the bottom of the water, while the coffee floats for some time. The water also becomes discoloured if chicory is present.

If chicory is moistened, it can be moulded into any form; but with pure coffee this is not the case. Also chicory will cake when pressed between the fingers, but coffee will not.

An infusion of coffee is bright and transparent; it has a rich aroma and taste. This is not the case with chicory, which has little or no perfume, is thick, dark, and sticky, and it also has a sweetish taste.

Roasted coffee contains a considerable amount of fat, about 12 per cent., while chicory contains only about 1 per cent.

Roasted coffee contains about 20 per cent. of sugar, but chicory has hardly any sugar at all. The coffee grains are hard and not easily broken, but with chicory they are soft and easily broken.

Coffee contains caffeine, but chicory does not.

Coffee berries are now manufactured in America from wheat flour and sugar, made up into a paste and pressed into moulds, afterwards being roasted. These berries are then either mixed with the genuine article, or sold alone. If the latter, they are usually so expertly made that their appearance will deceive the ordinary public.

COFFEE EXTRACT OR ESSENCE.—This is made by infusing coffee and chicory and evaporating to a proper degree of thickness, and colouring with burnt sugar. Often in the poorer and cheaper kinds it is very inferior, containing little or no coffee.

COFFEE FININGS.—See Black Jack.

COFFEE SUGAR.—This is an especially pure and refined sugar.

COFFINS.—Long wooden cases used by French market-gardeners and fruit-growers for exporting their fruit.

COGNAC BRANDY.—When genuine, this is the finest brandy, and is supposed to come from the district of this name in France. See Brandy.

COLD STORAGE.—Like the canning industry, cold storage has augmented our food-supply to an enormous extent, and has proved more effective than any known preservatives. Cold-stored goods are sent from all parts of the world to feed the masses in this country. It is also a means of regulating the supplies at home in times of plenty and over-supply.

Speaking generally, cold storage rooms or chambers are kept at a temperature near 30° F.

Rooms or chambers for chilling, 30° F.

Freezing-chambers at anything between 0° F. and 10° F.

The following is extracted from Mr. Cooper's book on cold storage. The temperatures given opposite the various goods named below may fairly be stated to give the average of the best present practice.

The following list of products and temperatures should be considered as a guide only to meet varying conditions under which goods are stored.

Products.	° F.	Products.	° F.
Apples	30	Lard	40
Asparagus	33	Lemons	50
Bananas	45	Livers	20
Beans (dried)	45	Meat (fresh ten to thirty days)	30
Beer (bottled)	45	Meat (fresh few days only) ..	35
Berries (fresh for a few days only)	40	Nuts in shell	40
Butter	14	Oatmeal	42
Cabbage	33	Onions	32
Canned fruits	40	Oranges (long time)	34
Canned meats	40	Oranges (short time)	50
Carrots	33	Ox-tails	30
Caviare	36	Oysters in shell	43
Celery	32	Parsnips	32
Cheese	35	Peaches	50
Chestnuts	34	Pears	33
Cider	32	Plums	32
Cranberries	33	Poultry (after frozen)	10
Cucumbers	38	Poultry (short time)	28
Dates	55	Raisins	55
Dried beef	40	Sardines (canned)	40
Dried fish	40	Sauerkraut	38
Dried fruit	40	Sausage casings	20
Eggs	30	Honey	45
Figs	55	Sugar	45
Fish (not frozen)	28	Tomatoes (ripe)	42
Frog's legs	18	Water-melons	40
Game (after frozen)	10	Wheatflour	42
Game	28	Wines	50
Grapes	36		

COLEWORT OR COLLARED GREENS.—This is a variety of dwarf cabbage, very sweet in flavour. It makes an agreeable change

to ordinary cabbage. It has a large full heart, and is often sent to market when half grown. They are in season during the winter months, and are marketed in bags and baskets.

COLLAR LOAVES.—A plain flat loaf of an elliptical shape, but pointed at the ends, and with a narrow plait stretched lengthways along the top.

COLLARED BEEF, ETC.—The process of collaring salted beef, mutton, etc., consists in boning out the meat, afterwards rolling and binding round with string, boiling, pressing, and glazing. Seasoning in the form of herbs is sometimes placed in the meat before it is rolled.

COLLARED GREENS.—See Colewort.

COLON.—In cattle this is the second portion of the large intestine ; it is narrow and without furrows or bands, and is arranged in irregular coils, and finally ends in the rectum.

COLONY.—A term applied to a number of organisms growing together.

COLOSTRUM, OR BEASTINGS.—Is the first milk coming from cows just after calving. It is thick, of a distinct yellow colour, has a peculiar odour, and coagulates on the application of heat. It is said to be the frequent cause of diarrhœa in infants, and it is recommended by some authorities that milk from newly calved cows should not be sold to the public till fourteen days after calving.

COLWICK, OR SLIPCOTE CHEESE.—This is made near Nottingham ; the cheeses are circular in shape and about $1\frac{1}{2}$ lbs. in weight. The cheese is made from whole milk, and is sold fresh and ripened.

COMMISSION CHEESE.—This cheese is made in Holland, and resembles Edam cheese in its manufacture, though different in shape. It is usually made from whole cow's milk.

COMMON SOLE.—This fish is often called the "sea-partridge." The name "sole" appears to have been given to it owing to the shape of the fish having some resemblance to the sole of the foot. The common sole is distinguished from others by the following points: Pectoral fins on both sides of considerable size, that of the upper side with a black spot at its outer end, nostrils on the two sides similar. Colour brown, or greenish, or greenish-brown, with rows of darker blotches along the centre

of the upper side and along basis of the fins. The fish is in season all the year round, but it is in very good condition during the autumn and winter months. Some people prefer it when it is half-roed, for it is inclined to be insipid when full-roed. It is caught in the English Channel and on the south-west coasts, as well as in the southern parts of the North Sea, but it is becoming scarce in English waters. Large numbers are being caught off the coast of Morocco. The fish is sold in the wholesale market by the pound; it is to be obtained in three sizes—small, or slips, medium, and large. The small and large are usually sold a little cheaper than the medium. The best fish has flesh firm and thick. The skin is difficult to remove when very fresh and has a grey look. This fish does not keep fresh and sweet long, and should be eaten as soon as possible. When it is soft and sticky, and presents a jelly-like appearance, it is unfit for food.

COMPRESSED, OR DRIED VEGETABLES.—Vegetables are now placed on the market dried; these have several advantages over tinned or preserved vegetables. Good quality vegetables are gathered, washed, cut up, then subjected to artificial heat in drying-rooms till the required dryness is reached. They are then pressed between iron plates and cut into suitable squares and sizes, and carefully wrapped in damp-proof paper.

COMPRESSED SOUP SQUARES, OR TABLETS.—A large variety of these are on the market at the present time. No standard exists, and consequently a number of these soup squares are made up of inferior substances, often bearing no resemblance in the raw state to the substance which in the condensed form it is supposed to be. Some beef, chicken, and other meat tablets often only contain gelatine, coloured, seasoned, and flavoured to resemble the meat, but not made from meat of any kind; other tablets are made from calves' and sheep's feet, gelatinous cuttings, etc. The particular point to be noted by inspectors in the examination of these tablets is that they readily absorb moisture, and quickly turn mouldy and become unfit for food.

The following are a few of the varieties now on the market: Beef, chicken, Julienne, panir flour, rice flour, barley flour, potato flour, green cornflour, groats, and flaked greencorn, pea flour, egg vermicelli, egg macaroni, carrot, gravy, green pea, haricot, onion, mulligatawny, pea, tomato, and a large number of mixtures.

CONDENSED MILK.—Several kinds of condensed milk are now on the market. The principal are—Condensed whole milk, unsweetened condensed whole milk, sweetened condensed machine-skimmed milk, unsweetened condensed machine milk. Generally speaking, it is made by first warming the milk, adding about one-eighth of its weight of sugar (cane), well mixed, and then evaporated in vacuum pans until reduced to one-third or one-fourth of its original volume. It is then filled into the cans while warm, and soldered up, and is ready for use without further process. The unsweetened milk is varied slightly in the method of its manufacture.

CONDENSED, OR EVAPORATED CREAM.—A cream which consists of one-quarter cream and three-quarters other ingredients of milk, the whole milk having been evaporated.

CONDIMENTS.—These are substances employed to season food and render it more palatable and wholesome. They make food more digestible, and are thought to stimulate the stomach and salivary glands to greater activity.

The principal ingredients are—Pepper, mustard, horse-radish, parsley, mint, onions, garlic, peppermint, caraway, aniseed, dill.

CONDITION OF ANIMALS.—When buying animals for slaughter, the butcher tells their condition or suitability for slaughter by the following points :

Calves.—Similar to Cattle ; also feel behind and below the ears.

Cattle.—Examine and handle the brisket, flank for thickness, rump for fatness between the buttocks, root of the tail, scrotum, loins, false ribs, to muscles behind the shoulder-blade for amount of flesh.

Pigs.—Butcher feels the windpipe, ribs, sternum, angle of haunch, root of tail.

Sheep.—Feel around the buttocks. The butchers say a fat sheep has a fat stump, dock, or tail ; also feel loins by the kidneys, legs, and shoulders—these should be well covered with flesh.

CONGER EEL.—Is distinguished from the common eel by the fact that the upper jaw is longer than the lower. It has no scales, and the dorsal fin is closer to the head. The colour varies from a uniform dirty grey to a very dark or almost black colour. It attains a weight of over 120 lbs. and a length of 8 feet, though a 60-lb. fish is thought large now. The fish is most seasonable from March to October, and is found round the coasts of the

British Isles. The majority of conger comes from the Bristol and English Channels, Irish Sea, and South of Ireland. In the wholesale markets they are usually sold by the barrel. This is the fish which, it is reputed, is more used in the manufacture of turtle soup than the original reptile.

CONGESTION.—This is an accumulation or fulness of blood in an organ or part of the body.

CONTAGIOUS FOOT-ROT.—Is primarily a disease affecting the soft structures of the foot. Any diseased condition of the horn itself is secondary, and is brought about by the separation of the soft from the horny structures through the agency of micro-organisms and the fluids exuded. The disease spreads from sheep to sheep, causing much lameness, loss of flesh, and even death from emaciation. If the disease appears in the flock of in-lamb ewes, it is a still more serious matter, as proper treatment cannot be carried out without danger, owing to the pregnant condition of the ewes. In such instances the disease persists until the lambing season commences, and often spreads rapidly to the new-born lambs.

Symptoms.—Lameness is usually the first symptom observed, and on examination of the affected foot a small, moist, unhealthy-looking, spotlike sore will probably be found between the toes. The part is inflamed, hot, and tender, and when it is manipulated the animal shows signs of pain. There is little or no appreciable swelling of the coronet at this stage. The disease rapidly extends under the horny box, and if a little pressure be brought to bear on the inside of the foot, a slight dirty fœtid discharge will be observed oozing from the edge of the horn around the ulcerated spot. The discharge is never very great, but is always foul smelling—in fact, the fœtid smell is often detected before any gross lesions have been discovered.

The disease progresses from above downwards, between the sensitive structures of the horn and the hoof. When the horn is pared away the diseased parts are found bathed in the fœtid discharge, and the greater portion of the foot may be involved. In some cases the disease extends from the primary seat of the disease to the more important tissues of the foot, injuring the ligaments, tendons, and even the bones.

In protracted or severe cases the foot may be greatly swollen, very tender, and hot. The upper part of the toe is widely separated, and the points turn inwards, giving the appearance of a club. The animal is in great pain when weight is placed on

the affected limb. Abscesses form in the soft tissues of the foot and burst outwardly around the coronet, leaving angry discharging wounds. One foot is usually affected at the outset, but the disease frequently appears in two, three, or even all four feet. In the latter case the animals are unable to move about in search of food. They may be seen feeding on their knees, or lying down feeding on the grass around them. In cases associated with much pain, and where three or four feet are affected, the animals refuse to feed, rapidly lose flesh, and may develop diarrhœa. Such animals become extremely weak. They present a dejected and emaciated appearance, and may die. The various stages of the disease can be seen in one flock. Granulating tissue or proud flesh and new hornlike tissue may grow out from the wounded surfaces. In the early stages of the disease the hoof itself appears normal, but as the condition advances, the horn becomes broken and decayed, and if the feet have not been attended to the whole toe may be cast. During hot weather the condition is aggravated, and deaths are more numerous from the fact that the fœtid discharge attracts flies, and maggots subsequently develop in the wounds. An affected animal may become fly-blown on every part of the fleece which has come in contact with the discharges, and under such conditions it soon succumbs.—*Extract Board of Agriculture Leaflet.*

CONGOU TEA.—The lowest and coarsest quality of tea.

COOKING OF FOODS.—The various processes are—(1) Boiling, (2) stewing, (3) frying, (4) roasting, (5) broiling, (6) baking. The object of cooking certain foods is to render them more digestible, agreeable to the taste, sight, and smell. Heat often has the effect of killing germs, parasites, etc., which may have been present in the food, especially if the heat is sufficient and sustained for any period.

COPRA OIL.—This is cocoanut oil prepared from copra, the dried kernels of the cocoanut.

CORALLINE.—A preparation made from Indian corn. It is free from objectionable oily matters, and is easily digested.

CORIANDER.—This is an aromatic plant, the seeds of which are used for flavouring confectionery. The powdered seeds are used as an ingredient of curry powder, while the young leaves of the plant are used in soups, salads, and for flavouring. The chief use of the seeds appears to be in the manufacture of gin and liqueurs.

CORNERD BEEF.—A number of recipes are now in use for cornerd beef, and they vary slightly. The meat is boned out, and pickled in brine for a few days. It is then washed, and put into a brine containing spices, and pickled for about a week. After this period the beef is slowly cooked for about an hour, chopped into small pieces, and solidly packed into tins. Hot liquor is poured into the tins, which are then sealed up and sterilized.

CORNETS.—These are ice-cream or sugar wafers, shaped like cones. They are largely used by ice-cream vendors to serve their produce in, and are eaten usually with the ice-cream itself.

CORNFLOUR.—This is made by extracting and purifying the starch from Indian corn, or maize and rice, and not by grinding the grains into flour. Cornflour forms a basis for invalid and infant foods, as well as for custard and other similar powders.

CORN SALAD, OR LAMB'S LETTUCE.—This plant is not grown much in this country, but is used largely on the Continent as a salad. It forms a good substitute for lettuce and endive in the winter and early spring, and has an agreeable and pleasant flavour. It is in season from May to February.

CORN SYRUP.—A commercial glucose made from maize, chiefly used in the manufacture of jellies, jams, and in the adulteration of honey, sugar, molasses, etc.

COTHERSTONE CHEESE.—This is a cheese similar in shape, size, appearance, and flavour to Stilton. It is made in Yorkshire.

COTTAGE CHEESE.—A sour-milk cheese made extensively in the United States.

COTTENHAM CHEESE.—This is similar to Stilton in taste and appearance, but it is flatter and broader. It is made from new milk in the district of Cottenham, in Cambridgeshire.

COTTON-SEED OIL.—This oil is derived from the seeds of the various cotton plants. The seeds are separated from the fibre, and then crushed and subjected to a refining process. The oil is really a by-product of the great cotton industry.

COTTON-SEED OIL, COMMON.—Is very crude, and is used among the commoner fish friers. The use of this oil, together with ranges of obsolete patterns and uncleanly habits, causes many complaints and petitions to be presented to the various local councils. It causes inspectors much trouble, and brings the fish-frying business into disrepute. And well it may, for who

has not had his sense of smell offended by the vile fumes given off from the premises where it is used? Its penetrating vapour meets one for many yards before the premises are reached. Some cotton-seed oil now on the markets is adulterated with a soya-bean oil, as well as mineral oils. They often possess a very nasty odour.

COTTON-SEED OIL, REFINED.—Is a pale yellow oil of thick consistency. It has a pleasant taste and smell. It is especially treated for cooking purposes, as it gives off very little vapour if used in a modern fish-frying range which is kept clean.

COTTON-SEED OIL STEARIN.—The solid product made by chilling cotton-seed oil, and separating the solid portion by filtration, with or without pressure.

COTTON-SEED OIL, TREBLE REFINED.—This oil is specially prepared for fish-frying, and should have neither taste nor smell. If this is properly used by the fish-friers, it should cause no nuisance.

COULOMMIERS CHEESE.—This cheese is similar to Camembert in shape and size. It is made in the vicinity of Coulommiers, and is not much sold in this country. The cheeses are small, flat, and circular, about $5\frac{1}{2}$ inches by $2\frac{1}{2}$ inches in thickness, and weigh about 1 lb. They are made from whole milk, and are eaten fresh and ripened.

COURSE END.—Another name for the butcher's joint known as the "fore-end."

COW-HEELS.—These are very nutritious, and are sold in the offal shops, also cold after cooking.

CRAB APPLES.—These vary considerably in size and appearance. They are usually sold mixed as to size and variety under the name of "crabs." In favourable seasons very large quantities are obtainable in the South of Ireland. They are chiefly used in the manufacture of jelly, this being made when the fruit is unripe.

CRABS.—These crustaceans are caught all round the coasts of the British Isles. Some of the celebrated fishing centres are at Cromer, Sheringham, Filey, Selsey, etc. These shellfish are caught in baited pots or round baskets which have a hole in the top, through which the fish crawls, and is unable to return. The baskets are weighted, so that they remain at the sea bottom. The fish are in season all the year round, but are generally sup-

posed to be in their best condition during April, May, and June, when they are most abundant. It is an offence against the Crab and Lobster Act to sell crabs which are recently moulted or have cast their shell. When in this condition they are soft, watery, and unwholesome, and are known as "soft," "white-footed," "casters," "glass crabs," etc. The fish are cooked by plunging them into boiling water for about twenty minutes, and, according to the size, so the length of time varies. It is important that the crabs are killed before boiling, or they will cast their claws, and the fish will be spoiled for sale. The male, or cock, is distinguished by the apron being narrow and close to the body, and the claws being very large. The female, or hen crab, has a much broader apron, which is fringed with hair, and more rounded; it is not so close to the body as in the male. Stale and decomposing crabs are sometimes freshened up by inserting in boiling water for a few minutes. This disguises the odour for a short time. Bad and decomposing crabs can readily be recognized by lifting the apron and smelling. The smell of a really bad crab cannot be described. Other signs of unsoundness are discoloration of the apron, sticky feel of claws at joints, and faded stale appearance. (For further information on this subject, the reader is referred to the book entitled "The Inspection of Fish, Poultry, Game, Fruit, Nuts, and Vegetables," by the author, price 5s. net.)

CRACKLERS.—A butcher's term for old cows which are very emaciated, and contain the minimum amount of flesh and fat.

CRACKNELS.—Biscuits made of paste which have been boiled before baking, this causing the biscuits to curl up.

CRANBERRIES.—This fruit grows on a creeping evergreen shrub of the bilberry or whortleberry order. It is known in some countries as the "mossberry," or "moorberry," and grows on peaty or marshy lands. The berries are about the size of a very small cherry, and of a bright red colour, and are valuable on account of their being in season at a time when fresh fruit is scarce. They are strongly acid, and on this account are often cooked with other sweet fruits, making an agreeable mixture. The berries can be kept in a dry state for a considerable time. They are rather difficult fruits to inspect, but should any doubt exist as to the bad berries, boiling water should be poured on a small quantity. The water swells the good berries, and it is then an easy matter to pick out those decaying. The American berries are probably the largest imported into this country, but the

fresh-gathered Scotch berries are considered the best in flavour. Cranberries are chiefly imported into this country from America and Russia, but we also receive quantities from France, Holland, Norway, and Sweden. They are in season from October to February.

CRATE.—A wickerwork basket used for taking cabbage or broccoli to market. It usually holds five to six dozen heads of these vegetables.

CREAM OF TARTAR.—Is a white, gritty powder, fairly soluble in water; it has a pleasant, acid taste. It is used largely in cooking, and especially in the manufacture of baking powders. Chemically it is known as "potassium bitartrate," or "acid tartrate of potash."

CREAMOMETER.—This instrument is a graduated glass tube into which milk is placed for a certain number of hours. The cream rises to the top of the milk, and the degrees which the cream occupies can then be read off.

It is rather a lengthy test, and is not very reliable, and has consequently been largely replaced by quicker and more up-to-date appliances.

CREAM THICKENER.—See Viscogen.

CRÈME DE MENTHE.—See Peppermint Cordial.

CREUSE CHEESE.—A skim-milk cheese made in the district of this name in France. In time it becomes very hard and dry, and may be stored for a year or longer.

CROAKERS.—A term given to beasts which have died naturally or from accident, and consequently have not been properly bled.

CROOK.—The thick fat lining the abdomen of cattle.

CRUMPET, OR PIKELETS.—A soft, spongy cake baked on an iron plate over the fire. It is about the third of the thickness of a muffin.

CRYSTALLIZATION.—The property which many bodies have of assuming definite solid forms out of a saturated solution.

CRYSTALLIZED FRUIT.—A large variety of fruit is now preserved by treating with sugar. The process varies with the kind of fruit and manufacture, but the reader is referred to Candied Peel for a general idea of the process. Among the fruits, etc., preserved in this manner are the following: Apricots, angelica,

brochettes, cherries, chinasis, figs, greengages, knots, lunettes, Metz fruits, peaches, pears, pineapples, raspberries, strawberries, violets, ginger, lemon, orange.

CRYSTAL SYRUP.—A commercial glucose chiefly used in the manufacture of jellies, jams, and in the adulteration of honey, molasses, sugar, etc.

CUBE SUGAR is that moulded in the form of a cube either by hand or machine.

CUCUMBERS.—Immense quantities of these are now raised in this country, Holland, France, and Germany. They are considered very cooling, and are used very largely as salads. To some people they are very indigestible. They are in season from about May to October, the earlier ones being imported generally.

CULTURE.—The name is applied to the growth of one single species of microbe when artificially cultivated.

CUMIN, OR CUMMIN.—The fruits of this plant contain an essential oil of very strong odour and taste. They are used in the preparation of some spirits and cordials, and form a constituent of some curry powders, sometimes used in soups and pastry.

CURAÇOA.—A liqueur which is now made chiefly in Holland, though formerly in the West Indies. Amsterdam is now the chief town manufacturing it. It is made from the dried peel of the Curaçoa oranges by steeping it in water and spirits, distilling, and flavouring with mace, cloves, or cinnamon, or with sugar and Jamaica rum, according to the fancy of the manufacturer.

CURD.—This is the name given to that part of the milk which is coagulated by the addition of rennet or lemon juice in the manufacture of cheese.

CURRANTS, DRIED.—These are a small, seedless variety of grape, dried in the sun. The name appears to have been given owing to the fact that they were first imported from Corinth. The great majority of currants used in this country come from Greece. When ripe, the berries are black, and are gathered and laid on sheets in the sun to dry. They are turned over from time to time, and when finally cured the stalks and dust are easily separated by shaking in sieves. They are then packed for export. The points to be noted by the inspector are mouldiness and fermentation, caused by long storage and dampness.

CURRY PASTES.—These are made by mixing some curry powder with sugar, raisins, lemon juice, vinegar, red-currant jelly, etc., and pounding and mixing together. The ingredients vary with the particular taste and fancy of the manufacturer.

CURRY POWDER.—This is a condiment of which there are roughly four classes—Indian, Malay, Chinese, and European. It is made from many different recipes. In India there are three separate classes, the Bengal, Madras, and Bombay. These powders contain turmeric, ginger, coriander, cardamoms, caraways, cumin, pepper, cloves, etc. They are generally sold in bottles and tins. The loose powders are often adulterated, gritty, inferior, and stale.

CUSTARD APPLE.—This fruit is a native of Jamaica, where it is known as “bullock’s heart,” owing to its resemblance to that organ. It is like a green fir-cone in appearance, with small black spots. It should be eaten when properly ripe, and is then very delicious and nutritious.

CUSTARD POWDERS.—The composition of these vary according to the makers and the prices charged. The chief ingredients are rice, corn, or sago flour or meal, sweetened with powdered sugar, coloured with saffron, and flavoured with essence of lemon, oil of almonds, etc. Some custard powders are made entirely from skimmed or separated milk powders, with the addition of colouring and flavouring matters. When the powders are mixed with hot milk, they form an imitation of egg custard.

CYGNETS are young swans. They are not eaten so much as formerly, but the flesh is tender, and has the flavour of the gosling. Seldom seen in the market or shops.

CYSTICERCUS PISIFORMIS.—See Diseases of Rabbits.

CYSTICERCUS SERIALIS.—See Diseases of Rabbits.

D.

DAB.—This fish is also known as the “common dab” and “sand dab.” It resembles the plaice, but may be distinguished by the sand-papery feel imparted to the hand when it is drawn over its surface. The spots are smaller than in the plaice, and are a faint brown colour. The lateral line is curved in a distinguishing manner above the pectoral fin.

DAIRY RULES.—*Cowshed.*

1. This should be well lighted, ventilated, paved, channelled, and drained.
2. No musty or dirty litter, and no manure, should remain in the cowshed longer than is necessary.
3. Whitewash the cowshed at least twice a year, oftener if possible.
4. The cows should not be fed with dry, dusty fodders just previous to milking.
5. Keep cowshed and appliances in a cleanly condition.

The Cows.

1. Keep only healthy cows. Remove all suspected animals promptly. Great care should be taken to add no cows unless proved to be free from tuberculosis.
2. Do not excite the cows or expose them to extremes of weather.
3. Feed a good cow with plenty of fresh, palatable feeding-stuffs. If change is necessary, let it be gradual. Have a plentiful supply of pure water.
4. When the cows are housed, they should be groomed regularly. This will get rid of loose hairs and dirt which at the time of milking might fall into the milk-pail.
5. In winter, when cattle are housed, the hair about the hind-quarters should be clipped, so that dirt may not cling to it and become matted.

Milking.

1. The milker should be clean, healthy, and have clean clothes.
2. The udder and flank of the cow should be wiped with a damp cloth or sponge just before milking, in order to remove dust and loose dirt ; if brushing is necessary, it must be done previous to milking.
3. In milking, the hands of the operator should be moist, but not wet ; do not dip the fingers into the milk or wet them from the teats ; it is a most objectionable practice, and leads to putrefaction in the milk, cream, and butter.
4. Milk quietly, quickly, and thoroughly.
5. Do not milk the first few streams of milk from each teat into the can. This milk has a high percentage of water, and tends to lower the standard of the milk.
6. The milker should take care that no dirt falls from the cow or from his own clothing into the milk.
7. Remove the milk promptly from the cowshed into the dairy, where it must immediately be drawn through a fine metal gauze-strainer or a few folds of fine muslin.
8. Aerate and cool the milk as soon as it is strained. The cooler it is, the more souring is retarded.
9. If the milk has to be left in the can, cover with cloths to keep out any dust.
10. Never mix fresh, warm milk with that which has been cooled, nor close a can containing warm milk, nor allow it to freeze.
11. Do not add any preservatives to the milk to prevent it going sour ; cleanliness and cold only are necessary.

Utensils.

All pails, churns, and other utensils used for milk to be cleansed and sterilized with steam or hot water. Boil strainer cloths daily. Keep utensils in pure air and sun, if possible, until wanted for use.

DAMEN CHEESE.—A soft, uncured rennet cheese, made from cow's milk in Hungary, and sold very largely in Vienna.

DAMSON.—This is a small, hardy plum, oval in form, and of black-purple colour. It is named after the city of Damascus, and has a very distinctive and tart flavour. They are in season during September and October.

DAMSON CHEESE.—Is made from the pulp of the damson, with the addition of sugar. It is usually pressed in moulds, and is not offered for sale very frequently.

DANDELION.—This is a wild plant found in the fields and gardens. The young leaves are used raw for salads. They are also cooked and prepared as a vegetable in the same way as spinach. The roots are grown in a similar manner to chicory, and large quantities of the blanched leaves are sold in the markets for this esculent. It is in season from November to February. In the manufacture of dandelion coffee the roots are washed, sliced, dried; then roasted and ground, and mixed with coffee and chicory.

DANDELION WINE.—This wine is commonly sold by herbalists, etc. It is usually composed of a decoction of dandelion, common sherry, essence of ginger, glycerine, and water.

DATES.—Immense quantities of dates are imported into this country annually. They are the fruit of the date-palm, and exist in a very large number of varieties. The best dates are carefully picked before quite ripe. They are then sun-dried and afterwards packed. Some of the chief kinds imported into this country are from Tafilat, Tunis, Egypt, Bassora, and Persia. Immense quantities are also exported from Turkish Arabia, Barbary, etc. White dates are also imported in small quantities from Egypt. They are, however, very small, being about the size of a filbert nut. The commoner and cheaper kinds of dates are fully ripe before they are picked, and these come to us pressed together in a solid mass in boxes, baskets, cases, etc. Some of the poorer quantities are by no means a wholesome article, for often when the dates are being broken apart insects, dirt, and other impurities are to be seen; while they are sometimes affected with a disease known as "date-smut," which gradually turns the inside of the date into a sooty mass, and makes them unfit for food. Dates in cases sometimes go sugary and mouldy, and when this occurs it often happens that the dealer freshens them up by rubbing them over with weak treacle. Dates keep best

when tightly packed away from the air. The best qualities are plump, large, and soft, of a reddish-yellow or yellow colour, of fine flavour, and sweet.

DEAD MILK.—See Lazy Milk.

DECOMPOSITION OF FISH.—This is caused chiefly by micro-organisms, whose growth is largely helped by the conditions under which the fish is caught and stored. When once decomposition has commenced, curing or cold storage will only arrest it for a short period, for once taken out of cold storage it rapidly decomposes. The chief thing to be kept in view in preserving food is to keep it as free as possible from harmful bacteria, and also from the air.

Dr. Anderson, in a report on this subject, considers the following tests as fairly reliable in the detection of decomposition :

1. When rigor mortis has passed off.
2. When there is a reddish discoloration along the backbone.
3. When the smell is becoming tainted and passing on to the putrid stage.
4. When the flesh strips readily and cleanly from the backbone.
5. When the abdominal walls have a soft, pulpy, jelly-like appearance, with commencing discoloration and tainted odour.
6. When the gills have lost their characteristic tint and are becoming grey and slimy.
7. When the eyes are grey and shrunken.

When these conditions are present, undoubtedly the fish can and should be condemned.

DEEPS.—These are wooden cases in which foreign fruit is packed and sent into this country, chiefly used for lemons, oranges, tomatoes.

DEFÆCATION.—This is the act of discharging fæces from the bowels. The same term is also given to the process of removing the sediment and suspended matter from the raw juice in sugar refining by means of heat and lime.

DEFROSTED MEAT.—This is the name given to frozen meat which has been gradually thawed in a dry atmosphere. Special plants are now in use for this thawing-out process, the temperature of the sides of beef being raised to the normal outside temperature in about three days. The thawed beef is left dry and well set, and very nearly resembles the appearance of fresh, home-killed meat. There is practically little staining of the fat.

DEMERARA SUGAR.—This is of a yellow colour, produced in the West Indies, Barbadoes, Trinidad, etc.; the yellow tint is due to a natural colouring matter obtained from the cane during manufacture. Beet-sugar crystals are sometimes dyed and sold as genuine Demerara, but now usually as “yellow crystals.”

DERBYSHIRE CHEESE.—This is a small cheese, weighing about 30 lbs. It is about 16 inches in diameter and 4 inches deep, and of a pale colour, and like soft Cheddar in quality. It has a rich, full flavour.

DESICCATED EGGS.—These dried eggs are now on the market under a variety of names, such as “eggo,” “desiccated eggs,” etc. The fresh eggs are evaporated to powder; they are more economical and cheaper than fresh eggs, have better keeping qualities, are more easily packed for travelling, and when manufactured from really fresh eggs, without colouring matter, form a concentrated food. The yolk and white are also supplied separately or combined.

DESICCATED MILK.—An evaporated milk which is very finely powdered. It is used by confectioners and cooks. It may be made from whole or skimmed milk.

DEWBERRY.—This is a species of blackberry which grows along the ground among the dew. It does not climb, hence its name. The berries are, if anything, slightly larger and more luscious than the blackberry.

DEXTRIN.—An uncrystallized, colourless, tasteless body, capable of being pulverized; it is readily soluble in water.

DEXTRIN-MALTOSE.—An unfermentable substance prepared by the action of acid on starch.

DEXTROSE.—Also called “grape-sugar” and “glucose” (see the latter heading.)

DIAMOND DISEASE, OR URTICARIA.—A disease which affects pigs chiefly. Its name is derived from the fact that red diamond or square-shaped patches are scattered over the skin of the affected animal; the patches are superficial. The disease is thought to be contracted by the consumption of unsuitable food. It is usual to cut away the affected parts and pass the rest, providing the carcass is otherwise in good condition.

DIAPHRAGM.—This is the chief muscle of respiration; it divides the thoracic and abdominal cavities. It consists of a centre composed of stout muscular and strong tendinous tissue, and

an outer ring of thinner muscular tissue where it joins the pleura and peritoneum. It is perforated in several places, so as to allow the passage of the œsophagus and various vessels, nerves, etc. During inspiration it descends, so as to increase the thoracic cavity and to give the lungs room to expand, while it ascends during expiration.

As applied to the meat industry, it is called by butchers "thin" and "thick skirt." It may be attacked by tuberculosis, *Cysticercus cellulosæ*, *C. bovis*, etc.

DIASTASE.—An organized ferment, found in most plants, which is capable of turning starch into sugar.

DIGBY CHICKS.—These were formerly exported from the seaport of Digby, in Nova Scotia. They are now cured and smoked pilchards, caught off the south-west coasts, and are usually sold in bundles of half a dozen.

DILL.—This plant is a native of Portugal and Spain. The leaves are used for flavouring soups, sauces, and as a condiment, or for pickling with gherkins, etc. It is also used for making dill-water. It is only grown in this country to a very limited extent.

DISEASES AND PESTS AFFECTING FRUIT.—Fruit is affected by a large number of diseases and pests, which do much damage to the fruit and trees.

Apple Scab.—This attacks apples and pears, and is very widely distributed. It appears in the form of blackish blotches or scabs dotted over the surface of the fruit. The apples are very much depreciated in value, and are sometimes unsaleable by their appearance, although the fruit is not materially injured. Numerous other pests and fungi affect the apple-trees and leaves.

Bitter Rot, or Ripe Rot, is one of the most serious diseases of apples. It is due to a fungus, and it attacks ripening apples during July and August, and is most virulent during moist, hot summers. Affected apples show brown depressed spots. These rapidly increase in size, and invade the inner tissues of the apples and render them useless.

Brown Rot also affects apples. Unlike the former, this attacks the trees as well as the fruit. The signs of the disease on the fruit are brownish scattered patches on the skin, followed by greyish tufts. Fruit attacked by this disease does not rot or decay, but becomes dry and mummified, often remaining hanging on the tree till the next season.

Codling Moth.—This is a very destructive pest. The female deposits her eggs singly in the open end of the fruit, and fastens the egg by some gummy matter. On hatching, the larvæ pierce the apple, and eventually eat the pips and core, thus spoiling the fruit.

Cherry Pests.—The two chief diseases of cherries are caused by—
(1) The cherry moth: the female lays its eggs, which in time hatch out and bore into the cherries and feed thereon, causing the fruit to drop to the ground; (2) a fungus known as *Gnomonia erythrostoma*. This renders the fruit quite unsaleable.

Currant Pests.—A number of pests affect this fruit, but the chief are the caterpillars of the currant shoot moth. These feed on the seeds of the fruit, making them quite useless.

American gooseberry mildew has also attacked red currants.

Gooseberry Pests.—A number of animal pests infest the gooseberry plant and somewhat affect the fruit, but perhaps the chief is the one known as "American gooseberry mildew," which the Board of Agriculture has made notifiable. It first appears in the form of glistening frostlike spots on the fruit, and is easily recognized. It makes the fruit quite unfit for food.

Another mildew is known as the "European gooseberry mildew." It does not attack the fruit so badly as the former, and then only at the tip.

Pear Scab is a similar disease to the apple scab. The scabby, blotched appearance is the same as in apples, but in the case of the pear the surface of the fruit is a series of cracks as well.

Plum Pests.—Plums are not attacked so much as apples and pears, but some of the worst pests are grubs of various kinds. These infest the young fruit, and cause them to fall before ripe, while others feed on the inside. A fungus which attacks plums gives them the appearance of a bladder, and eventually makes them useless.

Strawberries are attacked by slugs, mice, eelworms, etc., this depreciating their market value.

In some of the above diseases the inspector would be justified in condemning fruit affected, but in the majority of cases diseased fruit would not be marketed in such quantities as to warrant seizure, and the inspector would very largely

have to use his own judgment in seizing such and taking it before his medical officer or the magistrate.

Wasps are also a source of loss to the fruit-grower, as they feed on the ripening fruit, if unprotected. Various other insect and fungi pests affect the fruit and trees, but these come more in the province of the grower than the inspector.

DISEASES OF FISH.—Fish are subject to disease, just the same as cattle, poultry, etc. ; but, considering the quantity caught and consumed yearly, it is not much to be feared. In common with other animals, fish are attacked by a large variety of parasites, more particularly when they are in a poor condition. It is confidently asserted by various authorities that the large majority of cysts and parasites, even if they are swallowed uncooked, would not develop in man or in any warm-blooded animal. Fish may, however, contain parasites, some of which are injurious to man ; but as fish is largely eaten in a cooked condition, it is generally considered that the heat to which they are subjected while being cooked is enough to destroy them. Fish are attacked by threadworms, tapeworms, parasitic crustaceans, etc.

DISEASES OF FOWLS.—

Favus, or White Comb.—This disease is due to a parasitic fungus. It attacks the comb and wattles of birds, and spreads from the naked parts of the head to the parts covered with feathers. As this disease may spread to man, care is necessary. It is very destructive and highly contagious in poultry-yards.

The first signs of an attack of favus are small, pale, irregular, cuplike spots on the comb or wattles, generally appearing on the comb first. When the feathered parts are attacked, the feathers become dry and fall off, and the breast sometimes, and the rump especially, may be denuded by this fungus, which, when present on the feathered parts, may end fatally, unless properly treated. The feathers become erect, dry, and somewhat brittle, and fall off, leaving the naked skin covered with dull yellowish-grey crusts. The affected birds exhale a mouldy odour. Care must be taken in inspecting diseased birds, as the disease can be transmitted to man, especially through cuts, scratches, etc.

Fowl Cholera.—This is a highly infectious disease which causes great loss when it breaks out—happily, very rare in this

country. The disease also affects geese, ducks, pigeons, pheasants, and some wild birds. It is caused by a microbe, which is found in the excreta of infected birds. The infection is spread by the droppings of the diseased birds polluting the food and water of the healthy birds.

Symptoms.—The affected birds become depressed, huddle together, and hide their heads under their wings. The feathers become ruffled, the wings and tail droop, and the birds sway from side to side, or stagger. The appetite is lessened, while thirst is greatly increased. There is a discharge from the eyes, nose, and beak, and the comb and wattles turn bluish-red. The most marked symptom, however, is diarrhœa. The evacuations are frequent and watery, being white or yellow at first, and becoming greenish and fœtid as the disease progresses, while the feathers round the hind-parts become matted together. The birds usually die in a state of stupor or convulsions.

Post-Mortem Appearances.—In ordinary cases the only marks visible to the naked eye after death will be found in the intestinal tract, the contents of which are watery, frothy, and sometimes blood-stained. In the intestinal wall, and particularly in the mucous membrane, are formed patches of clotted blood, and areas of congestion ranging in colour from red to purple and black. The liver and spleen are usually enlarged, while in some cases the lungs are consolidated. It must be remembered, however, that there are other poultry diseases with which it can easily be confused by the inexpert, and that in certain cases a microscopical examination is necessary.

It is unlikely that the food inspector will meet this disease, as the flesh is unmarketable.

Gapes.—This disease is caused by a round-worm, which is found in the windpipe and bronchial tubes. It affects fowls, turkeys, pheasants, partridges, and other birds. The worms take up their abode in the air passages, attaching themselves by their circular mouths, sucking the blood, irritating the lining membrane, and causing inflammation and death. It is chiefly in young birds that the greatest loss is experienced.

Symptoms.—The affected bird has a listless gaping of the mouth, a wheezing cough and stretching forward of the neck, a ruffling of feathers, and a drooping of the wings; while there is frequently an appearance of frothy saliva in the mouth, and sometimes in the nostrils.

Tuberculosis.—This is one of the common diseases of fowls, turkeys, pheasants, and other birds.

Symptoms.—The affected fowls become anæmic, thin, emaciated, and they lose weight. Their appetite is impaired, and erratic feeding is noticeable. The comb and wattles and mucous membranes become pale, and there is usually persistent diarrhœa. As a result of extreme emaciation, which is the most noticeable symptom, the bones become very prominent.

Post-Mortem Appearances.—The flesh is scanty and the muscles pallid. The liver is dotted all over with small spots, or larger patches of a white, grey, or yellow colour. The spleen is usually enlarged and beset with small or large tubercles. The intestines and the lymphatic glands of the mesenteries may be also the seats of tubercular deposits. Tubercles may likewise occur on the skin. There are very rarely small tubercles in the lungs.

The Board of Agriculture and Fisheries now publish leaflets on these diseases, and they may be obtained post free on application.

Other diseases of poultry which may affect their condition, but yet not make them unfit for food, are—

Apoplexy.—The bird falls down suddenly, and does not move. It is probably caused by high feeding and want of exercise, or by great heat.

Comb Disease.—In this case the fowl becomes weak and emaciated, and the comb of the fowl turns black.

Diarrhœa.—This may be caused by a sudden change of food or weather, and, unless the fowl is looked after, it becomes very emaciated.

Diphtheria.—This usually takes the form of a cold, but the characteristic symptoms are the patches of cheesy growth seen in the throat and mouth. Sometimes ulcers are seen on the head.

Insects and Lice.—Loss of condition in fowls is often caused by insects and lice, of which there seems a variety. These pests weaken the constitution, and predispose to other maladies. There are seven or eight different species of lice, and these constantly worry the bird and tend to a general weakened condition.

Roup.—This is a most contagious disease. It takes the form of a cold, which develops till a thick offensive discharge

issues from the eyes and nostrils, and may form a cheesy mass. There is swelling round the eyes, purpling of the wattles, and ruffled plumage.

DISEASES OF GAME BIRDS.—Game birds are liable to several forms of disease ; perhaps the commonest form is the parasitic.

In pheasants and partridges one of the chief diseases is gapes. It is caused by the presence of a worm in the trachea, and which causes death by suffocation and swelling of the membranes. It is very destructive to bird life. There are, however, other forms of parasitic diseases. Another common disease is known as "cramps." It commences in the legs and causes lameness, and is highly infectious. It is thought to be caused by the presence of bacilli. Tuberculosis is also common in pheasants. The chief seats of the disease are in the throat, liver, lungs, and head.

Fowl enteritis is another disease of pheasants, and does considerable damage amongst the birds.

In grouse in some seasons the loss of life is enormous. In many cases it is caused by the presence of parasites, both cestodes and nematodes. The grouse disease is now regarded as an infectious fever. It was thought to be caused by parasitic worms, but numerous inquiries have proved that the presence of the tapeworm was accidental. The signs of disease in the living bird are loss of feather on the leg, general emaciation, darker colour of feathers on the back and wings ; while the post-mortem shows redness in patches in the intestines and on the serous membranes. The liver is said to be congested with blood, as are both lungs.

DISEASES, PARASITES, ETC., AFFECTING FLOUR.—

1. **Smut.**—This is a fungus disease of wheat. It is fairly common, the grains being filled and destroyed by black dusty spores. It has no smell, but if the diseased wheat is largely used, it alters the colour of the flour considerably.
2. **Stinking Rust, or Bunt**, as it is sometimes called, attacks the grains of wheat, and is characterized by the grains being filled by a black mass of fungus spores. When smashed and rubbed between the thumb and finger, the powder feels greasy, and gives off a disgusting odour. For the latter reason it is not used in large quantities in flour ; besides which, the flour is a bad colour. Very little seems to be known as to the effect of consuming flour affected with bunt

and smut, but there is grave reason to believe the former causes diarrhœa.

Flour may become poorer in quality by the wheat grains sprouting, also by the attacks of moulds, yeasts, bacteria, etc.

As a rule, mould does not attack flour till it becomes damp.

Insects, parasites, etc., frequently attack both the wheat and flour. The following are the commonest :

1. **Ear-Cockle, or Peppercorn**, as it is sometimes called, is caused by a small round-worm. The affected flour has often a very offensive smell and taste, and should not be used.
2. **Flour Beetle** is dark in colour ; it varies from black to brown. Flour affected can easily be separated by sifting. It is necessary to cleanse affected utensils by scalding them out before putting in a fresh supply of flour.
3. **Flour Mite**.—This is a small, egg-shaped body, whitish in colour. The flour infested with this usually smells musty, and has a brownish tinge and speckled appearance.

DISEASES OF RABBITS.—The chief diseases of rabbits, which unfit them for human food, are caused by parasites, of which the following are the most important :

Cysticercus Pisiformis.—The cysts vary in size, but they are generally about the size of a pea. They are found chiefly attached to the omentum. The affected rabbits are sometimes emaciated and unfit for food, but a large quantity are in good condition. In the latter case the cysts are removed and destroyed, and the rest passed.

Cysticercus Serialis.—In this case the cysts are found under the skin and between the muscles of the neck, back, and loins. The cysts vary in size from a small hazel nut to walnut, and are easily seen when the rabbit is skinned. It is the practice to condemn rabbits affected with these cysts, and the muscles will often be found pale and flabby.

DISEASES, PARASITES, ETC., AFFECTING VEGETABLES.—

Asparagus Beetle does harm by eating and disfiguring the heads as they are formed ; also, at a later date, it attacks the stem.

Asparagus Fly attacks the young shoots ; the larvæ hatch out, and feed in a downward course. The affected shoots become brownish or yellow in colour, and are stunted and decomposed, rotting finally below the ground.

Bean-Pod Canker attacks the scarlet-runner beans in the form of dark-coloured, irregularly shaped patches sunken below the level of the pod.

Black Rot in Turnips is of bacterial origin, and causes the plant to rot and form a pulpy, fœtid mass.

Cabbage Diseases.—The *Cabbage Flea* and larvæ do much damage to the leaves.

The Cabbage Moth.—The caterpillars do much damage to the leaves and plant, and devour the young plants.

White Rust of Cabbages attacks the leaves. The fungus forms snow-white polished blotches. When the stem is attacked, it causes distortion and swelling.

Black Rot of Cabbages causes the plant to rot and form a pulpy, fœtid mass. This also attacks brussels sprouts, cauliflowers, etc.

Carrot Fly.—The maggots of this fly bore into and feed upon the roots, causing them to become brown or "rusty," and finally rotten. Carrots badly attacked by this insect sometimes have deep cracks in the roots, in which the larvæ are found. These frequently extend to the centre of the roots, and cause them to rot.

Caterpillars of the various moths, especially the cabbage moth, attack and destroy turnips, radishes, broccoli, cauliflower, lettuce, etc.

Celery Fly attacks parsnips as well as celery, and consequently makes the roots small and disfigured.

Heart Rot of the Beetroot and Swede first attacks the stalks and leaves, afterwards passing to the root. The entire root is finally reduced to a blackish decayed mass.

Mushroom Disease attacks cultivated mushrooms. The fungus invades the stem, which becomes an irregularly shaped, monstrous, soft mass. The diseased mushroom decays, forming a putrid mass, with a disagreeable smell.

Onion Fly.—The attacked plants appear first yellow, afterwards becoming whitish and decaying. The affected bulbs decay, become slimy, and give off an offensive odour.

Onion Mildew attacks the leaves, and has the appearance of hoar-frost. As the disease progresses, all growth of the bulb is arrested.

Tomato Diseases.—*Bacterial Disease* appears when the tomato is about the size of a marble. A minute blackish patch shows. This gradually increases in size, retaining a circular outline, until the whole fruit is reduced to a blackish, soft, decayed mass.

The *Black Stripe of Tomatoes* is sometimes known as "black rot." The tomato attacked shows discoloured patches, which become slightly sunken, owing to collapse of the tissues. Such patches soon become covered with a delicate, velvety pipe of a blackish-olive colour. The fungus sometimes forms long blackish stripes on the stems.

Another disease is similar to leaf-spot on apples and pears. It is a new disease in this country. The plants attacked show small blackish-green spots on the leaves, and these finally appear on the fruit.

Root-Knot Disease attacks and finally destroys the plant.

Turnip Fly or Flea eats off the young shoots and leaves as they appear; consequently the roots are affected.

Turnip Mud Beetle eats the young leaves and attacks the crown of the tuber, causing it to rot or die off.

White Rust of Cabbage fungus also attacks radishes and horse-radish, while the **Black Rot** also assails radishes.

DISTILLERS' YEAST.—This is obtained from the fermenting wort used in the manufacture of spirits. It is sold under various names in a compressed form.

DISTOMA HEPATICUM.—See Flukes.

DISTOMATOSIS, OR FLUKE DISEASE.—This disease is commonly called "liver rot." For further particulars see Flukes.

DOCK-LEAVES.—When young and very tender, the leaves are gathered in the spring, washed, and cooked in a similar way to cabbage.

DOGFISH.—This is also called "flake" and "white flake," and is also cured, but generally for local use, and is not much seen in the large towns.

DOG FLESH.—This may be distinguished from the flesh of the calf and lamb by the bones being more completely ossified, and the pronounced doggy odour.

DORSET CHEESE.—This is also called "blue veiny," so named because of its blue-veined appearance. It is made from skimmed milk, and is a mellow cheese ripened with blue mould.

DOUBLE CREAM.—Is cream that has been twenty-four hours on milk instead of twelve. The name is also given to cream which has been obtained by means of a separator.

DOUBLE CREAM CHEESE.—That produced from double or very rich, thick cream.

DRAINED SUGAR.—This is the sugar from which molasses have been drained in hogsheads.

DRAPE.—A term used to denote a dry milch cow.

DRESSED WEIGHT.—The weight of the blood lost in slaughtering, internal organs, offal, etc., is deducted, and the carcass is called the dressed weight.

DRIED EGGS.—See Desiccated Eggs.

DRIED VEGETABLES.—See Compressed Vegetables.

DRIPPING.—This is the fat derived from roasted meat. The fat is collected from butchers' shops, marine stores, hotels, hospitals, and other public institutions, and conveyed to the fat-melters. There it is rendered down and refined into two qualities for frying, the best being white in colour, and the second being of a brown colour. In some cases the fish-friers use a mixture of half dripping and cotton-seed oil. Dripping is adulterated by the addition of water. The common adulterant, however, is cotton-seed oil.

DRIVEN PORK.—When pigs are driven to town for slaughter, the quality of the meat is depreciated, and in the case of bacon pigs does not cure so well. For this reason they are often killed where fed.

DROPSICAL MEAT.—Is pale in colour, wet and flabby to the touch. As a rule, the carcass is emaciated, and contains sloppy jelly between the muscles.

DROPSY.—This is a term which is applied to an accumulation or effusion of fluid under the skin or in a cavity of the body. Dropsy occurs in diseases of the heart, liver, lungs, kidneys, etc.

DRUGS IN MEAT.—It sometimes happens that an animal has been doctored with drugs before slaughtering—in fact, it may have been killed "to save its life" or from dying a natural death. In these circumstances the flesh may be soft and watery, caused by severe purgation, and the carcass and organs may require careful inspection to find out the cause of the trouble. The usual method of testing meat for drugs is to push into the mass a clean wooden skewer, withdraw rapidly and smell; the drugs

may be aloes, turpentine, camphor, castor oil, etc. Whenever the skewer method of testing is adopted, care should be taken to close up the hole made. This prevents the flies from making the hole maggoty.

DRUM OF RAISINS (VALENCIA).—Weighs 24 lbs.

DRUPES.—A stone fruit containing a kernel, such as apricots, peaches, nectarines, plums.

DRY-CURED COD.—The fish are first beheaded, then gutted and split. All blood is removed by washing and scrubbing; the black lining of the stomach is also removed in a similar manner. They are next rubbed with salt, and put into salt for several days. Afterwards they are taken out and exposed to the sun and air, and evenly dried.

DRY WINE.—A wine in which the fermentation of the sugars is practically complete.

DUBLIN BAY PRAWN.—See Norway Lobster.

DUCKS.—Probably the most popular duck in this country is the Aylesbury. They are reared extensively because of their rapid growth. They are large white ducks, broad, long, and low. They carry a quantity of flesh, and ducklings can be procured ready for killing from seven to nine weeks of age, weighing 4 and 5 lbs. each. Adult drakes weigh about 9 lbs., and ducks 8 lbs.

The Rouen duck takes longer to mature, but when full grown the flesh is excellent, very full flavoured, and abundant. It is much darker than the Aylesbury, but much richer, and, when full grown, drakes weigh 10 lbs., ducks 9 lbs. These birds are usually kept for the autumn trade.

The Pekin, Indian Runner duck, Muscovy, and Caynga are other species reared in this country. After ducklings are nine weeks old they are regarded as ducks, and undergo a change of feather, and are not so valuable. Most dealers prefer ducklings that have light skins. They choose those which have hard, plump breasts. They test the fatness by feeling the flesh on the back just behind the thighs and pinching the sides of the breast. To deceive the public dishonest dealers slightly gum the breasts and dust over with down. This gives them the appearance of youth.

Age.—The legs of old ducks are harder, drier, and have a reddish tinge. The wings are fully fledged, and the inside is covered with small feathers. Generally, the blunter the tips of

the quills are, the older the ducks. The feathers are harder and stiffer in the quill, and the breast-bone is unbendable, in old ducks.

Youth.—In young ducks the cartilage at the end of the breast-bone may be easily bent. The plumage is not fully developed, the tips of the quills are pointed, the quills themselves are soft and pliable, the inside of the wings are downy, and the feet are smooth and more pliable and yellow. Some people squeeze the windpipe, for flexibility of the windpipe is said to be a mark of youth.

Freshness.—The legs and feet are pliant and moist, the eyes are bright and prominent, and the flesh fairly firm and bright-looking.

Staleness.—Stale ducks have stiff and dry feet and legs, sunken and dull eyes, flabby flesh, discoloured necks, and a greenish tinge round vent and over abdomen.

Killing.—When sufficiently fattened, the birds are starved for twenty-four hours, and killed by dislocating the neck. Plucking takes place while the body is warm. The ducks are then placed under boards and weighted, to compress the body and force the meat on to the breast, during which time they are allowed to cool thoroughly. They are then packed in baskets and hampers in paper and straw, and sent to market.

AVERAGE COMPOSITION OF DUCKS, ETC., BY H. W. ATWATER—
PERCENTAGES.

	Refuse.	Water.	Protein.	Fat.	Ash.
<i>Duck :</i>					
As purchased	15·9	51·4	15·4	16·0	1·1
Edible portion	—	61·1	18·3	19·0	1·3
Meat, not including breast or giblets	—	55·5	17·4	26·1	1·0
Breast	—	73·9	22·3	2·3	1·3
Giblets	—	73·2	17·9	5·0	1·8
<i>Duckling :</i>					
As purchased	16·2	43·3	12·0	28·0	0·7
Edible portion	—	51·7	14·3	33·4	0·9
Meat, not including giblets Giblets	—	48·3	13·5	37·9	0·7
	—	70·2	18·9	8·1	1·6

DUCT.—A tube for conveying liquid, such as a bile duct, etc.

DULSE.—This is an edible seaweed found around the British Isles. That found and eaten in the West of England is a different plant

from that eaten in Scotland, where it is known as "dellish," "dellisk," "duileisg," "water-leaf," etc. It is used also for flavouring soups, etc., as well as for food.

It is said to be a great antiscorbutic, and to those who have much fish diet, especially salt fish, it is a wholesome and excellent corrective.

DUNLOP CHEESE.—Is a Scotch cheese made chiefly in Ayrshire, and called after a village of this name. It is a whole-milk cheese, rather mild, rich, and creamy white in colour. In shape it is round, being about 16 inches in diameter and 9 inches deep, while it weighs from 30 to 60 lbs.

DUST BRAND.—A disease affecting barley, oats, etc. See Smut.

DUTCH CHEESE.—The best known of these cheeses are Edam, Gouda, and Schapekase. As a rule they are made from thrice-skimmed milk, and are small, hard, and rather salty.

E.

EAR COCKLE, PEPPERCORN, OR PURPLES.—This is a disease of wheatflour, etc.; it is caused by a nematode or eel worm. The affected flour has often a very offensive smell and taste, and should never be used for food, but condemned.

EARTH NUTS.—See American Pea Nut.

EARTHY WATERS.—Contain sulphate and carbonate of lime.

ECHINOCOCCUS.—This is the larval stage in the life-history of the tapeworm, *Tænia echinococcus*, when it is destitute of sex.

ECHINORHYNCHUS GIGAS.—This worm inhabits the alimentary canal of the pig. It is cylindrical in shape, and is often seen in this country.

EDAM CHEESE.—Is a popular kind of Dutch cheese. It is made from thrice-skimmed milk, spherical in shape, and of various weights. The outsides of the cheeses are coloured yellow, red, and blue.

EDIBLE BIRDS'-NESTS.—These are chiefly imported from Java, Borneo, and the Sulu Islands. They are eaten more in China than in this country. They are the nests of a species of swift. The nest itself is made of seaweed, but it is really the support for the nest that is eaten, and this consists almost exclusively of the salivary secretion of the bird. The best nests are taken

during July and August. Being white, they are generally eaten dissolved in soups, etc., but are very expensive.

Some authorities state that the nests are built of a glutinous substance which the birds find on the shore.

EDIBLE BOLETUS.—This is a large edible fungus ; it differs from the common mushroom in not having gills on the under-surface. In appearance it is said to closely resemble a penny bun, both in size and colour. The flesh is white when broken.

EDIBLE BURDOCK, OR GOBO.—A plant which grows wild, and is also cultivated to a small extent for the roots, which grow from 12 to 16 inches long. They are boiled and eaten as a vegetable.

EDIBLE SNAILS.—These are a different species to our ordinary garden snail, both in colour and size. They have a shell, which is about 2 inches in diameter, and they are especially fattened for table in France and China, where they are considered a great delicacy. They are not much eaten in this country.

EEL.—This fish, on account of its rich, delicate flesh, forms one of our most important food fishes, and is in great demand among poor people. It is always in season, although it is least so during the winter months, and is found round all the coasts of the British Isles. It is stated that no fish is so tenacious of life as the eel, nor can live so long out of water. It may be distinguished from the conger eel of the same size by the fact that the eyes are smaller, little scales are embedded in the skin, the dorsal fin is farther away from the head, and the colour is dark olive on the back. Eels also come to our markets from Holland and Denmark.

No mistake can be made about freshness when the eels are sold alive. When unsound the eels lose their smooth and slippery feel ; they go dry and rough, and gases inflate their bellies. They are sold in the wholesale market by the draught, or 21 lbs.

EFFUSION.—This is the pouring or oozing out of the serum of the blood into a cavity or cellular tissue of the body. It results in the formation of swellings or watery tumours.

EGGS.—The uses of eggs are varied ; as a food they are unexcelled. The invalid and the strong use the egg without question as to its high nutritive qualities, and, furthermore, it has never yet been successfully substituted or adulterated. Those from the domestic fowl are the most important, as they form a convenient

and concentrated article of food. But the eggs of other birds are also used for cooking and eating, and these include ducks, plovers, penguins, guinea-fowl, etc.

Fowls' eggs average 2.27 inches in length, 1.72 inches in diameter at the broadest point, and a weight of 2 ozs.

The shell occupies 10 per cent., white 60 per cent., and yolk 30 per cent. by weight.

The demand for eggs seems practically unlimited in spite of the huge quantities imported into this country. The sources of supply beside our native eggs are—Russia, Denmark, Germany, Belgium, France, Canada. Large supplies are also sent through some of the above countries from Austria, South Russia, Italy.

Large quantities of eggs are also sent from Ireland, and when in good condition these are supposed to be the finest sold anywhere. Several dealers and retailers have been prosecuted by the Board of Agriculture for selling other eggs for Irish. Eggs are sold by the great hundred, or 120, the foreign eggs generally arriving in cases of 1,440, or twelve hundreds.

The finest eggs are produced in April and May and early June, and at this time they are low in price.

The flavour of eggs deteriorates with keeping, even if there is no indication of spoiling; perfectly fresh eggs have, therefore, the finest flavour. The character of the food, however, has a considerable influence on the flavour of eggs, even if perfectly fresh; this has been conclusively proved by numerous experiments with laying hens. The nests of hens should be clean, or the eggs will lack in keeping quality. The germs of decomposition enter the egg through the shell, and for this reason eggs laid in dirty nests will deteriorate in quality more quickly than those in clean ones. Eggs have also a tendency to absorb any strong odours, so that some care is necessary in selecting their storage place. New-laid eggs may be absolutely offensive and even injurious if the fowls are permitted to partake of improper food, such as decomposed flesh. Fish food is liable to give eggs a musty smell and taste.

A number of methods of testing eggs are in use, but perhaps the commonest is that of candling them. By this method the eggs are looked at in a box. Behind the egg is a powerful light, so that the tester can see if the egg is unclouded, showing a rose-coloured tint, without spots, as in a fresh one; or if dark coloured, cloudy, spotty, etc., as they appear in a bad one. Another method given in most hygiene books is that of placing the egg in salt water (2 ozs. of salt to 1 pint of water); the good eggs

AVERAGE COMPOSITION OF EGGS AND EGG PRODUCTS, BY
LANGWORTHY—PERCENTAGES.

	Refuse.	Water.	Protein.	Fat.	Carbo- hydrates.	Ash.
<i>Hen :</i>						
Whole egg as pur- chased	11.2	65.5	11.9	9.3	—	0.9
Edible portion ..	—	73.7	13.4	10.5	—	1.0
White	—	86.2	12.3	0.2	—	0.6
Yolk	—	49.5	15.7	33.3	—	1.1
<i>Duck :</i>						
Whole egg as pur- chased	13.7	60.8	12.1	12.5	—	0.8
Edible portion ..	—	70.5	13.3	14.5	—	1.0
White	—	87.0	11.1	0.03	—	0.8
Yolk	—	45.8	16.8	36.2	—	1.2
<i>Goose :</i>						
Whole egg as pur- chased	14.2	59.7	12.9	12.3	—	0.9
Edible portion ..	—	69.5	13.8	14.4	—	1.0
White	—	86.3	11.6	0.02	—	0.8
Yolk	—	44.1	17.3	36.2	—	1.3
<i>Turkey :</i>						
Whole egg as pur- chased	13.8	63.5	12.2	9.7	—	0.8
Edible portion ..	—	73.7	13.4	11.2	—	0.9
White	—	86.7	11.5	0.03	—	0.8
Yolk	—	48.3	17.4	32.9	—	1.2
<i>Guinea-fowl :</i>						
Whole egg as pur- chased	16.9	60.5	11.9	9.9	—	0.8
Edible portion ..	—	72.8	13.5	12.0	—	0.9
<i>Plover :</i>						
Whole egg as pur- chased	9.6	67.3	9.7	10.6	—	0.9
Edible portion ..	—	74.4	10.7	11.7	—	1.0
<i>Evaporated hen's egg :</i>						
Whole egg	—	6.4	46.9	36.0	7.1	3.6
White	—	11.7	73.2	0.3	8.6	6.2
Yolk	—	5.9	33.3	51.6	5.7	3.5
Egg substitute ..	—	11.4	73.9	0.3	5.3	9.1

sink, and the unsound ones float. It will be noticed that the air-space at one end of an egg is small in the newly laid. As the age of the egg increases, so this air-space becomes larger as the evaporation of the egg's contents goes on; and if the egg is shaken, the contents rattle and wobble, and thus give an indication of staleness. The "spots" often seen on candling are said to be due to fungi.

Eggs are now preserved in various ways. The Board of Agriculture issue a leaflet (No. 83) dealing with this subject, and three methods are described—(1) Lime water; (2) water-glass; (3) cold storage. The first method is, perhaps, the oldest, and consists in immersing the eggs in a pickle composed of lime, salt, and water. The eggs are placed in barrels, etc., and the prepared solution run in to cover the eggs entirely. These eggs are easily recognized by the roughness of the shell.

In the waterglass or silicate of soda method, the chemical is obtained from the chemist and prepared according to the directions given. The eggs are dipped in the solution and dried off, leaving a film on the shell, and then stored upon shelves, or they may be kept in the liquid until sold or used.

Cold storage of eggs is very suitable for preservation on a large scale. The eggs are never stored near any strong-smelling eatables, as they so readily absorb the flavour of these. Other methods of preserving eggs are by coating with oil, fat, or gums; these preserved eggs should be sold as "preserved" eggs, and not as "new-laid," "breakfast," or "fresh" eggs.

EGGS IN COLD STORAGE.—When stored for a year, eggs show a loss in weight equivalent to 10 per cent. of the total weight, which loss is largely water from the whites.

Eggs after storage for sixteen and a half months lose their power of cohesion, and emit a characteristic musty odour a few hours after opening.

EGG PLUM.—There are two kinds of egg plums: one is yellow and the other red. When ripe they are very fleshy and wholesome, firm, juicy, and of good flavour. A large number of varieties exist.

EGG POWDERS.—These powders are used as substitutes for eggs; they usually consist of powdered tartaric acid, bicarbonate of soda, ground rice, cornflour, or similar substance, and some colouring matter.

EGG SUBSTITUTES.—These are chiefly egg and custard powders; they often consist of skim-milk powder, coloured yellow.

ELBING CHEESE.—A hard cheese made from whole cow's milk, and sometimes from skimmed milk. It is from 10 to 20 inches in diameter, and from 3 to 4 inches thick. It is chiefly made in West Prussia.

ELDERBERRIES.—Are small black berries, the fruit of the common elder-tree. The berries are used for making a wine, which is taken hot for the prevention of colds. The wine has also been used as an adulterant of port wine. The young buds have also been pickled, and the flowers used for making a finely flavoured wine.

ELEME FIGS.—A good quality of figs which are chiefly exported from Smyrna.

ELVAS PLUMS.—A variety of dried prunes from Elvas in Portugal; they are used as a dessert fruit.

EMACIATION.—This in an animal is due to some pathological cause, such as fever, tuberculosis, anæmia, etc. It differs from poorness, which may exist in perfectly healthy animals. It is the custom to condemn emaciated carcasses, but this, of course, depends upon the extent of the emaciation, and must be left to the judgment of the individual inspector. The signs are an absolute loss of fat, with smaller organs and less flesh. The muscles have a soft and flabby feel, and a greyish-red appearance.

EMBALMED BEEF.—A term which is used to describe tinned beef of doubtful origin. The term comes from America, where formerly diseased carcasses were often thought to have been converted into canned goods.

EMMENTHALER CHEESE.—Another name for Gruyère cheese.

EMPHYSEMA.—A term applied to bubbles of air under the skin, and a dilated state of the air cells in the lungs.

EMS WATER.—A natural mineral water obtained from springs near Coblenz. It is alkaline, and its chief ingredient is carbonate of soda.

ENDEMIC.—Diseases which are peculiar to localities. Diseases may be endemic and epidemic at the same time.

ENDIVE.—Is a plant largely cultivated, and is similar to lettuce in appearance. It is in season during the winter months, considerable quantities coming from Holland and France. It is blanched by putting an inverted pot over each plant and

covering it with leaves or straw, and also by simply tying it up. It is used very largely as winter salad, and sometimes as a vegetable.

ENDOCARDITIS.—This is inflammation of the serous membrane lining the chambers of the heart and covering the valves.

Endocarditis occurs in cattle and pigs, and is often associated with rheumatic conditions in cattle.

ENGLISH ARROWROOT.—See Farina.

ENGLISH BAMBOO.—The young shoots of the elder-tree, when pickled in vinegar, have been given this name.

ENGLISH ORTOLAN.—See Wheatear.

ENGLISH SOY.—This is a mixture of treacle, salt, and water ; it is used in the manufacture of cheap sauces.

ENTERITIS.—Inflammation of the bowels.

ENTOZOA.—Animals or lower organisms which live in the natural cavities and tissues of other animals, either in an immature or adult condition, in a free or encysted state.

ENZOÖTIC.—This refers to diseases confined to certain localities.

EPIGLOTTIS.—This name is given to the valvelike membrane which fits over the glottis or upper part of the air passages, so as to prevent any food going down that way.

EPIZOÖTIC FEVER.—See Foot and Mouth Disease.

ERVY CHEESE.—A soft whole-milk cheese made in France. It is about 7 inches in diameter, $2\frac{1}{2}$ inches thick, and weighs about 4 lbs.

ESCUTCHEON.—The escutcheon consists of the patch of hairs growing the reverse way which lies on the back part of the udder between the legs, and extends up to the anus ; it is also called the "milk mirror," on the supposition that the area it covers and its shape give a good indication of the quality and quantity of milk likely to be given by the cow.

ESSENCES.—These are usually prepared by dissolving essential oils, or by digesting bruised spices or dried herbs in rectified spirits.

ESSEX CHEESE.—Is cheese very similar to Suffolk cheese in manufacture. It is made from thrice-skimmed milk, and is consequently poor in quality.

ETIOLOGY.—The science of the cause of diseases, external, internal, mechanical, climatic, predisposing, etc.

EUCASIN.—A soluble compound of casein in the form of a powder.

EWE.—A female sheep that has borne lambs.

EWE LAMB.—A female sheep before it is a year old is known by this name.

EXHAUSTING.—A term used in the canning trade. It consists of raising the temperature of the filled can from 120° to 180° F. (usually after the tins have been capped). This expands the liquid contents of the tin or can, and drives out a portion of the air, when the cans are sealed up.

EXOSTOSIS.—A tumour connected with a bone, and composed of true bony substance.

EXTRAVASATION.—Is the escape of a fluid from the vessels which naturally contain it into the surrounding tissues.

EXUDATION.—By this is meant the oozing out of certain matter.

F.

FACTITIOUS.—This term is often used in speaking of foods. It denotes something produced by artificial means against that produced by nature.

FAGGOTS, SAVOURY DUCKS, SPICE BALLS, ETC.—A preparation of pig's liver, lungs, scraps of meat, fat, chopped finely, mixed with breadcrumbs, onions, herbs, etc., and baked. They are made into balls, or the mass is divided into squares in a shallow tin, and usually covered with pig's caul. Unfortunately, the ingredients sometimes used by wholesale manufacturers are of a doubtful character, and the premises of such manufacturers should be inspected at times when they are in course of preparation for the detection of diseased, stale, and decomposing meat.

FALLIN.—See Black Quarter.

FELLON.—See Black Quarter.

FALSE TUBERCLE.—Sheep are sometimes stripped when very much affected by the parasite *Strongylus rufescens*. When affected in this way they are said to have false tubercle.

FARDEL BOUND.—A term for impaction of the third stomach.

FARINA, OR ENGLISH ARROWROOT.—This term is generally used to denote a starchy flour obtained from any tuberous root, but chiefly from potatoes. It is sometimes called "potato starch." It is white in colour, has a crispy feel, and is used chiefly in sausage-making, because of its absorbing and binding properties. Sausage made with it has a firmer appearance and cuts better.

FARINACEOUS FOODS.—These consist of cereals, and especially wheat, oats, rye, etc.; also maize and starchy foods, like sago, etc.

FARMHOUSE BREAD.—See Home-made Bread.

FASCIOLA HEPATICA.—This is the scientific name for the liver fluke.

FAT.—

Calves.—When first born, the fat is greyish-red in colour, but as the calf increases in age this becomes white. In health it should be plentiful, firm, and free from bloodstains.

Cattle.—Generally speaking, this is yellowish-white in colour, sets firm, smells fresh, is greasy to touch. The colour is said to be dependent on the character of the food; in grass-fed animals the fat is often a yellow colour. It may also be found in old cows, but in this case the fat is softer.

Dogs.—This is white in colour, oily, and has a characteristic doggy odour.

Goats.—Similar to sheep.

Horse.—This is yellow in colour, very oily, never sets, has a sickly smell and taste.

Pigs.—This is white in colour, soft, and very greasy. The consistency of the fat and the colour vary with the pig's food and the breed.

Sheep.—This fat is pure white, has no smell, sets very firm, and is brittle it is plentiful around the kidneys.

The chief indication of disease in fat is a soft, jelly-like condition of the fat. This, with a very pale colour, points to a dropsical condition. If very red, it may be due to disease, or death by accident. A deep yellow colour associated with yellowness of the other tissues may be due to disease or jaundice.

Absence of fat from a carcass may be a sign of age, of extreme youth, or poverty of condition. It may be due to disease. Entire male breeding animals often show little fat, though in

good health and condition. Cows slaughtered when in milk, or shortly after milking has stopped, also show little fat compared with what they would if fed properly.

FAT ENDS.—A term used by butchers, sausage-makers, etc., to signify the fatty terminal part of the small intestine of the pig. They are used for sausage casings.

FATTY DEGENERATION OF LIVER.—The liver is of a yellowish-brown colour, breaks down easily on pressure of the fingers, and is easily torn. It is very soft and greasy, and small in size. If in an advanced state it is condemned.

FATTY INFILTRATION.—The appearance of the liver is very similar to that in fatty degeneration. The organ is enlarged, is not so soft, and the distribution of the fat is irregular.

FAVUS, OR WHITE COMB IN POULTRY (*Lophophyton gallinæ*).—While many fungi cause disease in plants, some give rise to disease in animals. Ringworm and favus are two such diseases, the disease-causing fungi consisting of extremely delicate threads, which prey on the live tissues of the host.

The disease favus in the fowl is due to a parasitic fungus, *Lophophyton gallinæ*, which is distinctly different from that causing favus in mammals. This fungus attacks the comb and wattles of birds, and spreads from the naked parts of the head to parts covered by feathers—*e.g.*, the neck and the parts in the neighbourhood of the cloaca. Sometimes one side only of the neck may be affected, becoming quite deplumed, whilst the other shows no sign of invasion; but as a rule it is the comb that suffers first and most from the attack. Favus may spread to man, rabbits, and mice, but dogs and cats are unaffected when inoculated. The disease is rarer in Great Britain on man than it used to be, and is almost exclusively confined to the poorer classes, where conditions have been dirty and insanitary.

Favus is very destructive in poultry yards, and, being highly contagious, often spreads with great rapidity. A single diseased cock soon contaminates the whole run, and several outbreaks have been traced to a new male bird from an affected yard.

Nearly all breeds are equally susceptible, but the disease does not appear to have occurred in Indian Game. It is said that fowls of Cochin China descent are most liable to it.

Symptoms.—The first signs of an attack of favus are small, pale, irregular, cuplike spots on the comb or wattles, generally appearing on the comb first. These spots grow together, and

sooner or later form a confluent covering of a dirty yellowish-grey substance, which is often arranged in concentric layers. These crusts grow thicker. When they are present on the comb or wattles, there may be a complete and rapid disappearance of the malady ; but when the feathered areas become invaded, the disease is more persistent. The feathers become erect, dry, and somewhat brittle, and fall off ; the breast sometimes, and the rump especially, may be denuded by the fungus, which when present on the feathered parts may end fatally unless treatment is resorted to. On the feathers falling off the naked skin is left covered with dull yellowish-grey crusts, showing here and there somewhat funnel-shaped depressions from which the feathers have fallen. The affected birds exhale a mouldy odour. The fungus may easily be observed by scraping the diseased surface or the skin under the crusts, and examining the scraping under a microscope. It will then be seen to consist of a number of fine threads (the mycelium). To examine the fungus, the scraping from the skin and crusts should be put on a slide, and then moistened with distilled water and a little acetic acid.

Care should be taken in handling patients, as the disease can be transmitted to man. The fungus has powers of penetration, but far the greatest risk of infection is run if the skin or surface is abraded or wounded.—*Extract, Board of Agriculture Leaflet.*

FECULA.—A term loosely applied to any starch or starchy substances.

FENNEL.—This plant is grown for the leaves and seeds. The leaves are used blanched and chopped in fish sauces ; the stalks are eaten in salads, and closely resemble celery, but have a more delicate odour and sweeter taste. The seeds are used for flavouring liqueurs and in confectionery.

FENUGREEK.—The seeds of this plant are one of the ingredients of curry powder, but are not much used in this country at the present time.

FERMENTATION.—Is a process of change that is brought about by organized or unorganized ferments in organic materials, which results in the production of new substances.

FERMENTED MILK.—See Koumiss, Kephir, Galazyme, etc.

FIBRIN.—Is found in the flesh of all animals ; it supplies flesh-forming materials for the body.

FIELDFARE.—A species of thrush which is caught in this country during the winter months. They are rarely sold under their own name, but are generally mixed with larks.

FIGS.—This is one of the oldest fruits, and is grown largely in the southern and semitropical countries. Large quantities come from the Mediterranean countries, notably Greece, Turkey, Asia Minor, while considerable supplies come from Malaga and Valencia in Spain.

The figs are either hand-picked or shaken from the tree into sheets. They are then sun-dried, flattened, and packed into boxes. A large number of varieties exist, some being green, white, yellow, brown, and black. The Grecian figs are smaller than some varieties, and are dried much harder than the majority. They are imported into this country packed in barrels, baskets, and threaded on rushes. The best figs imported are the Eleme, which come from Smyrna about August, while some of the commonest are known as "naturals," being left in their natural shape. Figs are attacked by a grub which is very destructive. To protect the figs from these, leaves are often packed amongst the figs; while a kind of smut reduces the fruit to a sooty mass in a similar manner to that attacking the date.

The green figs are the fresh figs, and do not necessarily mean they are green in colour, but differ according to the variety. See Green Figs.

FILARIA.—A large genus of threadworms found in various animals and birds.

FILLET STEAK, TENDERLOIN, OR UNDERCUT.—This is cut from the under-part of the sirloin; it is very tender and juicy.

FININGS.—These are preparations used in clarifying liquids. Their action is to cause the suspended matters in a liquid to settle. A common fining is isinglass.

FINNAN HADDOCKS.—The modern cure of these is the same as cured haddocks, except that they are smoked over a peat or soft wood fire, which produces much more smoke, and which gives the fish a richer colour. They may hang in the smoke from four to seven hours, afterwards, when cool, being packed in boxes and barrels. See Cured Haddocks.

FIRKIN.—This is a name given to a small barrel used for butter and lard; also as a beer measure of 9 gallons.

A weight used in the cheese and butter trade equal to 56 lbs.

FIRKIN OF PORK (IRISH).—Weighs 100 lbs.

FISHERY SALT.—A coarse granular salt used for the preservation and curing of fish.

FISH FILLETS.—The fish to be filleted are beheaded, gutted, and cleansed. They are next split and skinned. The fillets are next dyed by dipping into a weakened wash of annatto, and then put into a brine for about half an hour or so, according to the size. The fish are hung to dry, and afterwards smoked in a kiln in a similar manner to Finnan haddocks for about two hours.

When first cured, they were sold as filleted haddock. Unfortunately for the fish trade generally, some dishonest curers filleted catfish, saithe, codling, etc., and this brought them into bad odour with the public. Now, however, they are sold as fish fillets, and this term covers all classes of fish, and no grievance is felt against the fishmonger if the fillets are not haddocks.

FISSION, OR SPLITTING.—Is the characteristic mode of multiplication of bacteria, for which reason they are sometimes termed “fission fungi.”

FLAGEOLETS.—These are the young, tender seeds of the haricot bean, gathered and shelled before turning white; they are imported chiefly from France.

FLAKE.—This is also called “flare,” “flear.” It is the fat which surrounds the kidneys in pigs, and is of the first quality.

FLAKE COCOA.—Is made from the whole seed, the nib and husk being ground up together in a particular form of mill, giving it a flakelike appearance.

FLAP.—Another name for the belly-piece in mutton or beef joints.

FLASKET.—This is a basket which contains half a load. See Load.

FLATS.—These are baskets used by market gardeners and fruit-growers for packing cucumbers, fruit, and grapes for conveyance to markets.

FLOATING CURD.—A term used in cheese-making to describe curd which floats instead of sinks. It is due to the gas contained in the curd, and is caused by fermentation.

FLORENCE OIL.—One of the best varieties of olive oil, produced in Italy.

FLOUNDER.—This fish resembles the plaice, but may be distinguished from that fish by the fact that the characteristic red spots are absent. The colour of the top side is a dark brown.

FLOUR.—The characteristics of good flour are—It should be of a pale cream colour and evenly dressed, smooth to the touch, not gritty, lumpy, or greasy. If a handful is compressed, it should bind slightly, taking the form given it. It should be pleasant to the taste, and not contain more than 15 per cent. of water, and not less than 10 per cent. of good quality gluten. When made into dough, it should stick well together and draw out into long strings. It must produce a good, well-risen loaf of the best household quality.

FLOWER CHEESE.—A cheese so called because it is made with the addition of the petals of all kinds of flowers, such as roses, marigolds, etc. It is made in this country from whole cow's milk.

FLUKE, OR LIVER ROT IN SHEEP.—The disease known as "rot," "liver fluke," "coathe," and "bane" in sheep has existed in Great Britain for very many years, and has caused greater losses in this country than any other disease affecting this particular class of animal.

Life-History of the Liver Fluke.—The common liver fluke (*Distoma hepaticum*) is found in the biliary passages of the liver of the sheep, where it produces many thousands of eggs, which find their way along the bile-duct into the intestines, and are expelled with the dung. Those which fall upon dry soil may remain dormant for months, but how long they may retain their vitality is not known; whilst those which reach the water in pools and dykes are at once hatched, and a free-swimming *ciliated embryo* is produced. This little organism is provided with a small boring prominence, and as it swims about in the water it searches for a certain species of water snail, to the surface of which it fastens itself, and eventually bores its way into its body. It then becomes the *sporocyst*. The sporocyst grows slowly within the snail, and eventually the germ cells which it contains produce other organisms, called *redia*, five to eight in number, which eventually escape from the sporocyst and attach themselves to the liver of the snail. Within each *redia* are formed from twelve to twenty individuals of the next generation, which are known as *cercariæ*. These last-named organisms are somewhat similar to the adult parasites into which they eventually develop, their bodies being flat and oval

in shape, but they are provided with a tail. After leaving the redia, these cercariæ pass out of the body of the snail into the water, where they swim about until they attach themselves to a blade of grass or some other object. Subsequently they lose their tail, become encysted—that is, form a case—and remain quiescent until swallowed by the sheep, in whose stomach the walls of the cyst are destroyed. The liberated parasite ultimately finds its way to the liver of the sheep or other animal, and develops into the adult hermaphrodite fluke.

The fluke parasite runs through three reproductive generations—namely :

1. The sporocyst.
2. The redia.
3. The adult fluke.

There is a gradual increase in the number of the organisms derived from each of these generations. For example, the sporocyst containing germ cells gives rise to several (five to eight) rediæ, and each redia to a larger number of cercariæ (twelve to twenty), while it has been calculated that each adult fluke may produce the enormous number of 45,000 eggs. But for this remarkable fertility there would be comparatively small chance of the entire life-cycle of the fluke parasite being completed.

Symptoms of Rot in Sheep.—In consequence of the extremely slow development of this disease, the fact that the sheep are affected is scarcely ever realized until a long time after they have become infested. The symptoms of the disease progress slowly, and are characterized by a very gradual sequence of changes, which vary in accordance with the different stages of the disease and with the health of the animal. In the primary stage, when the flukes are first developed in the bile-ducts of the sheep, their presence causes such an amount of irritation to the liver as is sufficient to produce an increased secretion of bile, which in itself has a tendency to aid the digestive process, and as a consequence the animal may feed well and for a time put on flesh. Soon after, as the number of the flukes increases, the liver begins to enlarge, and the bile becomes slightly tinged with blood. At this period the animal falls off in condition and displays pallor of the eyes and the gums. The appetite, which was formerly very good, now becomes capricious, and the animal loses strength. As the disease advances the sheep becomes extremely emaciated and weak, dropsical swellings are to be found under the jaws, and the abdomen becomes greatly

enlarged, while the respiration is short. If a post-mortem examination be made at this stage, the bile-ducts within the liver will be seen to be thickened and their walls, when dissected, will frequently be found to be calcareous. The bile has a dirty brown colour, and abounds with mature and immature flukes and multitudes of ova. The organ is paler, harder, and smaller than normal, owing to the contraction of the new tissue. When the disease appears among a flock of ewes, it is a very common thing for many to abort, and the mortality in the flock may be very high.

Should the sheep survive this stage, which is quite unusual, a period of convalescence sets in of a slow and, generally, of an unsatisfactory nature. During its progress the flukes leave the liver and pass out in the droppings, but the pathological changes which their long presence has caused within the liver produce emaciation and debility in the animal. The period of time during which these various changes are in progress may be roughly stated as twelve or more months—*i.e.*, from the time of invasion to the time of disappearance of the flukes.

Distribution of the Fluke.—As a general rule, rot is confined to the lowlands, valleys, and marshes (except salt marshes), but it may occur in the highlands. It is also more frequent in wet than in dry seasons, and is most prevalent after prolonged rains in the late summer and autumn. It is often associated with the presence of "carnation grass" and similar sedges, and many farmers look with suspicion on land that carries these plants.

From the preceding sketch of the life-history of the fluke it will be evident that the conditions necessary for the propagation of the disease in any district are—

1. The presence of fluke eggs.
2. Wet, marshy ground or pools suitable for the hatching of the ova.
3. The special snail (*Limnæa truncatula*) to act as intermediate host.
4. The presence of sheep or other animals to swallow the encysted parasite, and thus become infected.—*Extract, Board of Agriculture Leaflet.*

FCETAL MEAT.—The carcass is very wet and sodden; the hoofs soft and not horny, having never been used for walking; the eyes closed; lungs airless, consequently they sink in water. Other distinguishing signs are—The condition of the umbilical cord, the absence of fat in the kidney region, and the gelatinous condition of the muscles in that position. The muscles generally

are very watery, flabby, and easily torn, of a dull, dead colour, and never set; they smell offensively. The marrow in the tubular bones of unborn animals is red.

FOGSICK.—A term for the impaction of the third stomach.

FOOD ADULTERATION.—This is generally carried out in one of the following ways:—

1. By abstracting some valuable ingredient or ingredients of the product.
2. By the addition of a less valuable ingredient.
3. By mixing, powdering, or grinding a substance to conceal its inferiority.
4. By the addition of an ingredient which, though probably harmless or of no food value, increases the bulk.
5. By colouring an article so that its inferiority is concealed.
6. By the addition of a food or drug product of some harmful or deleterious substance which is not of the proper nature, substance, or quality demanded.

FOOD INSPECTION, OBJECTS OF.—The objects of food inspection are not only to prevent the manufacture, sale, and export of adulterated foods, but also to enforce the proper marking and the sale of deleterious foods.

FOOT ROT.—See Contagious Foot Rot.

FOOT SUGAR.—The name given to a dark brown or black mass, which is only imported in a small degree since the improvement in sugar refining.

FORBIDDEN FRUIT.—This is generally considered to be the grape fruit. It is grown in Ceylon, West Indies, Florida, etc. See Grape Fruit.

FORE MILK.—The first milk drawn from the udders of cows. It is very deficient in fat.

FORMAGELLE CHEESE.—A small, soft, ripened cheese made from cow's milk in North-West Italy.

FORMALIN.—A strong, though non-poisonous, preservative. It consists of a 40 per cent. solution of formic aldehyde.

FORTIFIED WINES.—In these the process of fermentation has been artificially stopped by the addition of alcohol, either as "silent" spirit or in some other spirit.

FOUL.—A term used to denote the formation of abscesses in the feet of cattle.

FOUR ALE.—A term used in public-houses to indicate ale or beer sold at fourpence a quart.

FOWLS.—Some of the best breeds for table purposes are—The Old Sussex, Dorking, Indian Game, Wyandotte, Langshans, Orpingtons, Plymouth Rocks, Old English Game, etc. (different breeders have different fancies) ; while some of the finest table birds are cross-bred, as the following : Indian Game and Dorking, Old English Game and Dorking, Faverolles and Buff Orpington, Indian Game and Buff Orpington.

Chickens increase in value with their weight per pound, for this means extra meat. White flesh, skin, and legs are the chief points to be aimed at.

Age.—An old fowl may be told by the following points : The feet are stiff, horny-looking, with rough legs, strong claws, and long spurs ; the length of the spurs may give some indication of the age, providing they have not been cut or scraped down to resemble a young bird ; the beak is so firm and hard that it cannot be bent ; the comb is rough and thick ; the thighs are dark in colour and hairy ; the breast-bone so hard that it cannot be bent on one side ; the plumage is fully developed, while underneath the wing shows absence of down.

Youth.—In a young fowl the feet are smooth and glistening ; the claws are sharp, pointed, and delicate-looking, and break easily ; they show the beginning of the spurs, and have smooth legs ; the comb is smooth and thin ; the plumage is half developed, has short pin feathers, and is downy underneath the wings ; the beak is fairly soft, and may be bent easily ; while the most reliable test is considered that of bending the breast-bone on one side.

Killing.—The fowls should be starved for twenty-four hours before killing, in order that the crop and intestines may be emptied of food, otherwise the appearance would suffer from unsightly fulness of the crop. The birds keep much longer, are more pleasant in flavour, and less unpleasant for the person who has to draw them. The colour and wholesomeness is affected by the presence of food in the digestive organs. In some cases bleeding of the fowl is done with the idea of improving the appearance and whiteness of the flesh, but the majority of fowls killed in this country appear to have died of dislocation.

The head is dislocated at its junction with the neck ; the skin remains unbroken, and no bruised effect is produced. The fowl is hung head downwards, and consequently all blood drains

into the neck. This method is believed to be the most humane, the quickest, the most cleanly and marketable. Before killing it is necessary that the bird should be in good health. This is shown by the brightness and dryness of the eyes and nostrils; the comb and wattles would be firm and ruddy, and the feathers glossy and elastic.

Plucking is generally done while the body is still warm, as the feathers then come out more easily, and there is less danger of tearing the skin.

In some instances scalding is resorted to; when this is done, the flesh is drawn tight over the body.

Marketing.—A good fowl should show a well-rounded form, with neat, compact legs, and no sharp, bony angles on the breast, the latter indicating a lack of white meat. The skin should be a clear colour, and free from blotches and pin feathers. The flesh should be neither flabby nor stiff, but should give evenly and gently when pressed with the finger. To ascertain the quantity of flesh, the dealers feel the breast. The rump and back should be covered with fat, as should also the breast. In live poultry the quality and condition can be told by feeling the bones at each side of the rump. If there appears to be a soft covering over them, the bird is in good condition, and the amount of this covering indicates the fatness or otherwise of the fowl.

Fowls packed while still warm are the cause of great loss to dealers, etc., for they often arrive at their destination in a green, blackened, or tainted condition, or they turn green in a few hours after unpacking. It should therefore be seen that the fowls are quite cold before being packed. They are usually sent to market packed in clean straw and laid breast downwards. Clean butter-paper is used to wrap the birds in by the best packers, and the birds are packed close together to prevent movement during transit. As a rule the birds are sent undrawn to market.

Freshness.—Fowls when fresh show eyes prominent and bright, feet limp, moist, and pliable; the wings and legs appear stiff. The flesh should neither be flabby nor stiff, but should give evenly and gently when pressed with the finger. The skin should be clean and white; a dark colour may indicate improper bleeding.

Staleness.—When decomposition is commencing, an unpleasant smell is noticeable; the flesh becomes dark and greenish. As decomposition advances, the flesh will be flabby, loose, and

easily detached, while the crop and abdomen will be greenish. The feet will be found to be hard, stiff, and dry, the eyes sunken and dull. Broken wings and legs show a black discoloration. In hot or close, muggy weather there will often show a greenish tinge round the region of the vent, and the neck and crop will be bluish-green in colour, and have an unpleasant odour.

AVERAGE COMPOSITION OF FOWLS, BY H. W. ATWATER—
PERCENTAGES.

Kind of Food.	Refuse.	Water.	Protein.	Fat.	Carbo- hydrates.	Ash.
<i>Chickens, Young :</i>						
As purchased ..	18.8	55.5	17.8	7.2	—	0.9
Edible portion ..	—	68.4	21.9	8.9	—	1.1
Meat, excluding giblets	—	66.9	22.6	10.1	—	1.1
Dark meat	—	70.1	20.8	8.2	—	1.2
Light meat	—	70.3	21.9	7.4	—	1.1
Giblets	—	71.0	19.8	6.4	—	1.3
Visible fat removed	—	74.5	21.8	2.5	—	1.1
Liver	—	69.3	22.4	4.2	2.4	1.7
Heart	—	72.0	20.7	5.5	—	1.4
Gizzard	—	72.5	24.7	1.4	—	1.4
<i>Broiler :</i>						
As purchased ..	29.1	51.2	15.5	3.3	—	0.8
Edible portion ..	—	69.7	20.7	8.3	—	1.1
<i>Capon :</i>						
As purchased ..	17.5	46.8	17.7	17.5	—	1.0
Edible portion ..	—	56.7	21.5	21.2	—	1.2
<i>Other :</i>						
As purchased ..	25.2	47.3	14.4	12.6	—	0.7
Edible portion ..	—	59.5	20.4	19.2	—	1.1

FOWL CHOLERA.—Fowl cholera is a contagious disease of birds due to the bacillus of fowl cholera, which frequently appears on the Continent of Europe and in America, and is by no means rare in Great Britain.

Birds Susceptible.—The disease may attack fowls, turkeys, geese, ducks, guinea-fowl, pigeons, pheasants, partridges, and some of the smaller wild birds. It is also communicable to rabbits by inoculation.

The Microbe.—Fowl cholera is caused by a minute ovoid bacillus, which is found in the blood, organs, and intestinal contents of birds suffering from the disease. The bacillus does

not form spores ; it is easily destroyed by disinfectants, and it gradually loses its virulence on exposure to air.

Methods of Infection.—Birds are infected by eating food-stuffs or drinking water which have been soiled by the excrement of infected birds.

The disease may be brought into a flock by newly purchased birds, by birds returning from poultry shows, by dealers' crates, and by birds which have recently occupied dealers' crates, or by utensils soiled by affected birds, or by wild birds which are susceptible to the disease. The infective excretions may also be carried on the boots of people who have visited affected flocks. There is reason to believe that birds which have recovered from fowl cholera may remain infective to others for a considerable time.

Symptoms.—The disease has a short incubative period (eight hours to three days), and the mortality is high. In the most acute cases the onset of the disease is so sudden that symptoms of illness are often not observed ; the birds are found dead. In less acute cases there is loss of appetite and great thirst, erection of the feathers, drooping of the head, wings, and tail, swaying gait, quick breathing, and great depression. Diarrhœa is a most noticeable symptom. The evacuations are frequent, watery, white or yellow at first, becoming green and fœtid as the disease progresses. The feathers round the anus become matted together. A whitish discharge flows from the eyes, nose, and mouth. The comb and wattles at first are paler than normal, but later they become a livid colour. This form lasts two or three days, when the birds usually die in a state of stupor or in convulsions. The death-rate among affected birds may be from 80 to 90 per cent. Towards the end of an outbreak milder cases occur, and a greater number of recoveries takes place. Birds which recover acquire a certain amount of immunity from this disease, and, if they thrive, are valuable for restocking purpose.

Post-Mortem Appearances.—In acute cases the only lesions visible to the naked eye will be found in the intestinal tract. The intestinal contents are watery, whitish in colour, but sometimes blood-stained. In the intestinal wall, and particularly on the mucous membrane, bloody patches are seen. There are also areas of congestion, ranging in colour from red to purple and black. The mucous membrane is destroyed in places, and patches of yellow exudate may be observed. The liver and spleen are usually engorged, and in some cases the lungs are consolidated.—*Extract, Board of Agriculture Leaflet.*

FRAIL OF (FARO) FIGS.—Weighs 32 lbs.

FRAIL OF (MALAGA) FIGS.—Weighs 56 lbs.

FREESTONE FRUIT.—A form of plum, peach, apricot, etc., in which the stone separates easily from the flesh of the fruit when ripe. See Apricot.

FREIBANK.—A name given to a shop under the control of the authorities at the various German abattoirs. Any suspected or partially diseased meat is taken by the inspectors to the *Freibank*, and cooked in such a manner as to render it innocuous. It is then sold as meat of inferior quality, but wholesome. By this means a large quantity of meat is used for the food of the poor which would have been destroyed if some such institution had not existed.

FRENCH BARLEY.—This is prepared in a similar manner to pearl barley.

FRENCH COFFEE.—Usually a mixture of coffee, chicory, and burnt sugar.

FRIED FISH.—*Fish used by the Fish-Frier.*—The fish used by the frier are usually the smaller and rougher kinds. It depends upon his customers and the locality in which he is situated, the time of the year, market price, etc. Small cod and codling, hake, haddock, halibut, plaice, rough whiting, catfish, coalfish or saithe, monks, roker or skate, conger, witches, meagrims, dabs, etc., are used. A large number of fish-friers have their fish sent direct from the docks at the fishing ports.

Preparation of the Fish.—All fish are first beheaded, and thoroughly washed and cleansed of blood, etc. Most fish, like haddock, codling, hake, etc., are, or should be, boned before being used. The skin must be properly scraped, and, after removing all blood and black skin, thoroughly washed to remove objectionable particles. The fish are then cut up into the sizes suitable for the trade of the frier. These pieces of fish are then dipped into a batter before frying, which is made previously in the following manner:—The flour is put into a clean white enamel bowl or pail, mixed with a small quantity of baking or egg-powder (to make the resulting batter crisp), water added, and then stirred till a paste is formed. Water is again added till the batter is about the same consistency as that used in making Yorkshire puddings. Some fish-friers use egg-powder, and some use baking-powder. This seems to be a matter of

choice, though it is stated that if baking-powder is preferred the batter should be used at once, as it deteriorates quickly. The fish is entirely immersed in this thick batter. Failure to do so allows the oil to have access to the fish, and spoils its flavour and digestibility.

Some fish-friers add a little colouring matter to their batters, but as a rule the colour of the fried fish is regulated by the temperature of the oil in which the fish is cooked. The hotter the oil or fat, the darker the colour of the fish. The temperature of oil is usually between 350° and 380° F. When cooked, the fish are put on wire shelves, and allowed to drain. In the modern fish-frying ranges a fish-box is provided into which the cooked fish is put, and kept warm by steam rising from the frying-pans.

FRIEDRICHSHALL BITTER WATER.—This water comes from near Coburg. It contains sulphate of soda, potash, magnesia, lime, etc. It is an aperient, and keeps for a good length of time.

FROGS.—These are eaten more in France and America than in this country. The edible frog is the green or Gibbon's frog. They are in season during Lent, the hind-legs being considered a great delicacy. They are usually sold in this country preserved in tins.

FROTHY CREAM.—This is thought to be due to the action of bacteria.

FROZEN BEEF.—Is largely imported into this country from the River Plate and U.S.A., but a small quantity also comes from New Zealand and Australia. It may be recognized by the fat being a very white colour, but this gradually becomes a pinkish-red, due to the colouring matter coming out with the moisture from the muscular tissue. It has a tallowy smell and taste. When the hand is placed on the meat it feels cold, and gradually becomes wet. Particles of ice may be seen on cutting into the meat with a saw. The bark is generally torn and chipped. The appearance of the vertebræ of the spine in frozen beef is always white, while in chilled beef they possess the appearance of freshly killed animals.

FROZEN OYSTERS.—Though these are dead, yet they are good to eat until they thaw. They should be consumed at once on thawing, or they will rapidly turn bad.

FROZEN RABBITS.—The trade in frozen rabbits has assumed huge proportions of late years. Practically the whole of these rabbits come from Australia, and are inspected and graded by Government officials.

The rabbits are snared or trapped during the night. The trapper clears his traps of rabbits several times during the night. They are eviscerated, cleansed, hung in crates, and taken to the railway-station, and packed in ventilated louvered cars. They are taken to the port cold-stores, and are examined by the graders in the Government service. These graders only pass the rabbits that are in a good condition and proper weight for export. The rabbits are then packed in crates, which bear the Government stamp, "Approved for Export." This stamp is only used on the crates containing rabbits that have been inspected and passed.

This inspection and grading are done at the request of packers and exporters. They are put up as "First Grade" and "Second Grade." All "First Grade" rabbits are packed in black-branded crates, whilst all of the "Second Grade" are cased in red-branded packages. The "First Grade" are plump and well-conditioned, and subdivided according to weight under the headings "Large" (weighing $2\frac{1}{2}$ lbs. and over), "Young" (weighing 2 lbs. and over), and "Small" ($1\frac{1}{2}$ lbs. and over). The "Second Grade" are not so prime, and are classified under "Size 1" ($2\frac{1}{2}$ lbs.), "Size 2" (2 lbs. and over), and "Size 3" ($1\frac{1}{2}$ lbs. and over). These grades and terms having been standardized for many years, the trade has been materially facilitated.

Some brands of New Zealand rabbits are packed thirty in a crate.

FRUIT FLAVOURINGS, OR JUICES.—These are prepared from the juicy fruits, such as strawberries, raspberries, blackberries, cherries, currants, oranges, lemons, etc., and also from the non-juicy fruits like apples, pears, quinces, plums, apricots, pine-apples, etc. The fruit is inspected, and all stalks, stems, leaves, bruised, and bad fruit picked out. The fruit is next washed in a sieve under a tap of running water, and then reduced to pulp with wooden mashers. It is afterwards heated to near boiling-point, ultimately being turned into a sieve to strain. The juices are collected, filtered, and bottled. To keep the juices from fermenting, they are placed in water, which is brought up to boiling-point, and kept so from fifteen to twenty minutes. This

prevents fermentation and the juices will keep for a considerable time if kept bottled and well sealed.

The non-juicy fruits are prepared in a slightly different way. The fruit, instead of being pulped, is put into boiling pans, and covered with water, the whole being boiled till the fruit is reduced to pulp; then the juices drained and treated as above.

These juices are used as flavourings for beverages, mineral waters, syrups, and various other purposes.

AVERAGE COMPOSITION OF EDIBLE PORTION OF FRUIT, BY LANGWORTHY—PERCENTAGES.

Kind of Fruit.	Refuse.	Water.	Protein.	Ether Extract.	Carbohydrates.		Ash.
					Nitrogen-free Extract.	Fibre.	
Apples ..	25.0	84.6	0.4	0.5	13.0	1.2	0.3
Apricots ..	6.0	85.0	1.1	—	13.4		0.5
Avocado ..	29.0	81.1	1.0	10.2	6.8		0.9
Bananas ..	35.0	75.3	1.3	0.6	21.0	1.0	0.8
Blackberries	—	86.3	1.3	1.0	8.4	2.5	0.5
Cherries ..	5.0	80.9	1.0	0.8	16.5	0.2	0.6
Cranberries ..	—	88.9	0.4	0.6	8.4	1.5	0.2
Currants (black)	—	79.0	0.3	13.1	6.1	1.0	—
Figs	—	79.1	1.5	—	18.8		0.6
Gooseberries	—	85.6	1.0	—	13.1		0.3
Grapes ..	25.0	77.4	1.3	1.6	14.9	4.3	0.5
Guavas ..	—	82.9	1.3	0.7	8.0	6.6	0.5
Lemons ..	30.0	89.3	1.0	0.7	7.4	1.1	0.5
Loquat ..	—	77.9	0.2	—	20.2	0.6	1.1
Medlars ..	—	74.6	0.5	0.3	16.5	7.5	0.6
Nectarines ..	6.6	82.9	0.6	—	15.9		0.6
Oranges ..	27.0	86.9	0.8	0.2	11.6		0.5
Peaches ..	18.0	89.4	0.7	0.1	5.8	3.6	0.4
Pears ..	10.0	80.9	1.0	0.5	15.7	1.5	0.4
Persimmons	25.0	66.1	0.8	0.7	29.7	1.8	0.9
Pineapples ..	40.0	89.3	0.4	0.3	9.3	0.4	0.3
Plums ..	5.0	78.4	1.0	—	20.1		0.5
Pomegranates	30.0	76.8	1.5	1.6	16.8	2.7	0.6
Raspberries ..	—	85.8	1.0	—	9.7	2.9	0.6
Rhubarb ..	40.0	94.4	0.6	0.7	2.5	1.1	0.7
Strawberries	5.0	90.4	1.0	0.6	6.0	1.4	0.6
Water-melons	59.4	92.4	0.4	0.2	6.7		0.3
Whortleberries	—	82.4	0.7	3.0	10.3	3.2	0.4

FRUIT SALTS.—Are generally made by mixing together icing-sugar, Epsom salts, carbonate of soda, cream of tartar, tartaric acid, and citrate of magnesia in certain quantities, usually $\frac{1}{2}$ lb. sugar to 2 ozs. of each of the other substances.

FRUIT SYRUPS.—These are made by dissolving lump sugar in water, adding sufficient of the fruit-flavouring previously described, and colouring the solution to resemble the fruit desired. Small quantities of preservative are added to prevent fermentation, and citric, tartaric, or some similar acid is mixed up with it to give it a slightly acid flavour.

FUCUS.—A seaweed generally known as “wrack,” or “sea-wrack.”

FUNGI.—A class of plants possessing neither root, stem, leaf, nor green colouring matter.

G.

GALANTINE.—A dish of boned white meat which has been prepared in the French style.

GALAZYME.—This is a fermented drink made on the Continent from milk by adding sugar and a special ferment.

GALLIPOLI OIL.—An olive oil of medium quality.

GALLON BASKETS.—These are used by fruit-growers for conveying raspberries and strawberries to market, and hold about 6 lbs.

GALLON OF HONEY.—Weighs 12 lbs.

GALLON OF WATER.—Weighs 10 lbs., of whole milk (average) 10·3 lbs.

GAMBREL, OR SPREADER.—The piece of wood or iron used by butchers when dressing a carcass. It is pushed in the sinews, and the carcass is hoisted by it. It is also spelled “cambrel.”

GAME.—The term “game” signifies all animals and birds taken in the chase. In the legal sense, however, it constitutes hares, partridges, pheasants, grouse, moor-game, black-game, bustards. But snipe, woodcock, plover, quail, landrail, though not game, have close seasons. The open seasons are—Grouse, August 12 to December 10; partridges, September 1 to February 1; pheasants, October 1 to February 1; hares, August 1 to last day in February; wild birds, August 1 to March 1. At the close of the season ten days of grace are allowed for grouse, partridges,

and pheasants, for wild birds fourteen days, during which time these birds may be sold. No days' grace, however, are allowed in the case of hares. Foreign game, however, may be sold at any time by a licensed game-dealer.

It is very rarely that game is sold in this country in a perfectly fresh condition. The custom is to keep the game till it acquires a "gamy" or "high" flavour. The origin of this custom is thought to have arisen from the fact that before the days of railways the journey to town, being a long one, caused the game to become "high." Thus it was cooked in this "high" state, and the taste became general. Now that the game can be procured fresh, it is rarely eaten so. The more probable reason, however, is that game not hung is rather tough, and not so easily digested.

Beside the native game-birds, we get large quantities of game from abroad. Ptarmigan comes chiefly from Norway and Sweden, and northern European countries; grouse from Norway and Sweden; red-legged partridge from Russia, France, and other Continental countries; pheasants from Austria; woodcock from Holland, the Ardennes, Burgundy, and other parts of France; quails from Egypt, Algeria, Messina; black-game, capercaillies, hazel-hens, Siberian partridges, from the northern countries of Europe.

Recently a large consignment of wild-fowl came from China and arrived in our markets in good condition. It consisted of bustards, canvas-back ducks, mallards, and wild ducks, widgeon, teal, wild geese, snipe, grey and black plover, wild pigeons, young pigeons, pheasants, hares, quail, deer, etc.

The worst weather for keeping game is the close, with damp breezes. Game-dealers usually judge the condition of the birds by inspecting the skin near the rump. If it is found to be dark, and easily moved, it is considered to have obtained a "gamy" condition, and ready for cooking. It is doubtful at what stage of decomposition game becomes seizable. However, if putrid or very maggoty, it can be seized, and proceedings taken against the salesman. Some game arrives at the market in a green condition. The flesh is soft, flabby, and absolutely unmarketable. In the majority of cases this is caused by being packed too tightly, together with a fairly high temperature.

GAMMELOST CHEESE.—This is made from skimmed sour milk in Norway. It weighs from 24 to 65 lbs.

GAMMON.—The hindermost quarter of a side of bacon.

GANGRENE.—This indicates death or partial death of tissues. It is moist when the tissues undergo softening, and dry when the circulation is obstructed.

GAPES.—See Nematode, or Round-Worm (Diseases of Poultry).

GARFISH, OR MACKEREL GUARD.—Is an eel-shaped fish, with the jaws in the form of a snipe's beak, the lower projecting beyond the upper. The sides of the fish are silvery-white, but the back is a bluish-green. It is often called "mackerel guard," because it is taken in small numbers in the mackerel nets. The Jews have a special liking for this fish, in spite of the strong smell given off when being cooked, and its green bone, the latter natural feature often giving it the name of "greenbone," instead of the two former names. The flesh is palatable, wholesome, and firm, but slightly dry. It is plentiful on the South Coast, and is found all round the British Isles, and is in season during the autumn and winter months.

GARGET.—A term used by dairymen for any enlargement of the udder. See Mammitis.

GARLIC.—This is a whitish bulb composed of a series of scales. It is the chief of the onion family. It has a very pungent taste; the aroma and flavour are imparted by an oil. It is thought to possess medicinal properties, as it is stimulating and digestive.

GASTRIC JUICE.—A thin acid fluid which flows from the glands of the stomach when digestion is proceeding.

GAUTRAIS CHEESE.—A cylindrical cheese made near Mayenne in France. It closely resembles Port du Salut, and weighs about 5 lbs.

GAVOL CHEESE.—This is made in France from cow's, sheep's, or goat's milk.

GEESE.—The principal breeds of geese for table purposes in this country are the Embden and Toulouse.

The **Embden Goose** has white plumage, flesh-coloured bill, orange legs, a square, deep-set body, and a tall, upstanding carriage. The average weight for an adult gander is 20 lbs., and for a goose 18 lbs., but much greater weights are attained.

The **Toulouse Goose** is a dark grey colour on the upper part, and a lighter shade on the breast, which gradually merges into the white of the under-part. The bill is of a red flesh-colour, and the legs orange-red. The body is full and compact, with

a convex back. The weight is generally greater than that of the Embden.

Other varieties are the Chinese and Canada geese.

Besides the native product, which are largely bred in Norfolk, Suffolk, and Lincolnshire, we receive large quantities of geese from Ireland, Russia, France, Hungary, etc., and also some from the Colonies of Australia and Canada. The best selling size appears to be from 7 to 9 lbs., for, contrary to turkeys, they decrease in value the larger they become above a certain size. What is known as a "green goose" is a young goose in good

AVERAGE COMPOSITION OF GOOSE, ETC., BY H. W. ATWATER—
PERCENTAGES.

	Refuse.	Water.	Protein.	Fat.	Carbo- hydrates.	Ash.
<i>Green Goose :</i>						
As purchased ..	12.2	41.9	13.6	31.6	—	0.8
Edible portion ..	—	48.2	15.1	36.0	—	0.9
Meat, not including giblets	—	46.0	15.0	38.3	—	0.8
Giblets	—	68.7	22.3	7.3	—	1.4
<i>Goose :</i>						
As purchased ..	11.1	48.0	14.8	25.5	—	1.0
Edible portion ..	—	54.0	16.6	28.7	—	1.1
Meat, not including giblets	—	51.8	16.2	31.5	—	1.0
Giblets	—	70.0	20.1	8.2	—	1.7
Gizzard	—	73.8	19.6	5.8	—	1.0
Liver	—	62.6	16.6	15.9	3.7	1.2

condition, killed in the summer when two or three months old. Goslings are marketed in May to Michaelmas; fat geese at Christmas.

Age.—In young geese the feet and bills will be yellow and free from hair, and the claws pliable. Red feet and bill denote age, as do also a strong beak and wing. A good test is to squeeze the windpipe close to the body. If it yields easily to pressure, the goose is young and tender; if it resists, it is old and tough. In young geese the breast-bone will easily bend, while in old birds it cannot be moved.

Freshness.—This is shown by the flesh being of a clear pink colour, the liver pale, the claws pliable.

Staleness.—When stale the feet are stiff, and the flesh dark coloured. Other tests similar to ducks.

Killing.—The birds selected are kept without food for twenty-four hours before killing, in order that the crop and intestines may be emptied. Neglect of this precaution causes a large amount of loss. To kill in a painless manner, the bird is first stunned by hitting on the back of the head with a stick. A sharp-pointed knife is then inserted where the head is joined to the neck. This severs one of the chief arteries, and the goose soon bleeds to death.

GEHEIMRATH CHEESE.—A yellow-coloured cheese made in Holland. Resembles Gouda in quality and manufacture.

GELATINE.—This substance is prepared from the skin, hoofs, clippings, etc., of cattle, sheep, etc. It is similar to glue in composition, but is much more refined, its manufacture being carried out under much better conditions. It is not much adulterated, but the poorer qualities are prepared from inferior substances. It is used largely in the manufacture of jellies, and for giving solidity to liquids.

GELT, OR GILT.—A female pig that has never farrowed.

GENERALIZED TUBERCULOSIS.—This term is used when the disease has spread by the passage of tubercle bacilli into the main blood-stream, or into the thoracic duct, and their conveyance thence to different organs and parts of the body, such as the lungs, liver, spleen, kidneys, bones, and muscular tissue.

GENTIAN.—The dried root of this plant is used in the manufacture of bitters.

GERM BREAD.—This is made from flour containing a large proportion of the "germ" of the wheat grain. It is a very nutritious and easily digested bread. Hovis is a form of germ bread.

GEROME CHEESE.—Is a French cheese not much sold in this country. It is cylindrical in shape, weighs from 4 to 11 lbs., and is flavoured with aniseed.

GERVAIS, OR POMMEL CHEESE.—This is a small soft cheese made from fresh whole milk, which is enriched by the addition of one-third of its volume of cream. The cheeses are made in Normandy, and are small cheeses about $2\frac{1}{4}$ inches in diameter and $1\frac{3}{4}$ inches deep. They are usually eaten fresh, but some prefer them after being kept for a time.

GEX CHEESE.—A hard cheese made from cow's milk. It belongs to the class of blue or marbled cheese. It is largely made in the

town and district of this name in France. The cheeses are ripened in cellars or caves, and, when ready for use, weigh about 14 to 15 lbs.

GHERKINS.—A small hardy kind of prickly cucumber, chiefly used in the various pickles on the market. They are in season for pickling from about the middle of July to the end of August. Large quantities are imported from France and Holland in brine, and in some cases artificial colouring has been found to have been added. Copper salts is the usual greening employed.

GIBLETS.—These are the edible viscera of game and poultry, together with feet, joints of pinions, head and neck. They are sometimes sold separately by the poulterer, and then require careful examination. For composition, see tables under headings Fowls, Geese, Ducks, etc.

GID IN SHEEP. See Sturdy.

GIGOT.—A term used in Scotland to denote a leg of mutton.

GIMMER.—A female sheep which has not borne lambs, and sometimes called a "theave," or "threave."

GIN.—A spirit distilled from grain doubly rectified, and then flavoured by distillation with juniper-berries and other herbs. The flavourings in use include juniper-berries, coriander seeds, orris-root, angelica-root, fennel, cassia-buds, cardamom seeds, etc., according to the fancy of the manufacturer.

Gin is sold as "sweetened" or "unsweetened." The standard for the strength of gin is fixed by Section 6 of the Sale of Food and Drugs Act Amendment Act, 1879. If sold (as gin only) at a lower strength than 35 under proof, it is an offence under this section.

Plymouth, Geneva, and Hollands gin are well-known varieties.

GINGER.—This is the root-stock of a plant grown in most tropical countries. The chief varieties are Jamaica, Cochin, Japan, and the principal supplies come from Jamaica, China, Africa, Bengal, Japan, and the West and East Indies. The root is dug when a year old, and, when withered, separated, scraped, washed, bleached, and dried, it is ready for export. Jamaica and Cochin ginger-roots are considered the best. They are of a pale buff colour, in large pieces, which cut evenly and softly.

Two kinds of the root are imported. These are known as "coated" and "uncoated." In the former kind the roots are washed and dried in the sun, while the latter is prepared by

washing and scraping its outer coat, afterwards drying in the sun. This kind is considered of superior quality.

The inferior ginger is sometimes treated to improve its appearance. Exhausted ginger is also used to adulterate ground ginger. It is also faked up and sold as ordinary ginger. The trade term for this is "spent ginger."

GINGER-BEER POWDERS.—These are sold in packets for making home-made ginger beer. The powders usually consist of powdered tartaric acid, gingerine, and fine white sugar.

GIPS.—The izening bone, or pelvis, which is severed when the carcass is divided into sides.

GISLER CHEESE.—A hard rennet cheese made in Denmark from skimmed cow's milk.

GLANDS.—A term applied to two distinct groups of bodies—lymphatic and secreting glands. The former are small bodies, chiefly ovoid in shape, which are found in all parts of the body. They are liable to enlarge in illness and disease. They are also called "kernels" by the butcher, and form part of the lymphatic system. See Lymphatic Glands.

GLARNER CHEESE.—A sour-milk cheese made chiefly from skim milk, well known in Switzerland, and which has a small sale in this country.

GLAUBER SALTS, OR SULPHATE OF SODA.—Are found in many natural mineral waters, and especially in Friedrichshall, Hunyadi Janos, Pullna, Carlsbad, and Marienbad waters.

GLAZE.—The appearance of various articles is often improved by the application of a glaze. In some instances this is used in a most offensive and putrifying condition. Loaves are glazed by washing over with egg mixed with a little milk, or paste made from cornflour and boiling water. Various joints, tongues, etc., are glazed by pouring over them very strong stock reduced by boiling to the consistency of a jelly. In sorting foreign eggs, the bad and doubtful ones are put on one side, broken up, and mixed with borax, and sold to the confectioners for making pastry and glazing various pastries. Liquid eggs are also imported from China in tins, and are often in a revolting condition. In many cases the smell has been disguised by a large addition of preservative.

GLOBE ARTICHOKE.—This is also called the "green artichoke." It is grown largely in France. The flower-head and receptacle

provides the edible portion, and this is eaten either raw or cooked, only a small portion of the head being eatable. The young flower-heads are in season from July to October. They should be eaten in a fresh state, the young being more tender and of better flavour than the more matured ones.

GLOSSITIS, OR INFLAMMATION OF THE TONGUE.—It may arise from many causes, and, according to the stage, may show the tongue dark red and swollen, and protruding from the mouth, in some cases leading to suffocation.

GLOUCESTER CHEESE.—This cheese is made in two qualities—single Gloucester, or Berkeley, and double Gloucester. The terms "single" and "double" refer to size, and not quality.

GLUCOSE.—This is also called "starch sugar," "grape sugar," "brewer's sugar," etc. It is the solid product or sugar obtained from grapes, fruits of various kinds, honey, starch, etc., or by hydrolizing a starch-containing substance until the greater part of the starch is converted into dextrose. It is largely imported from the United States, but some comes from Germany, Belgium, Holland, and France. It is used in jam for confectionery, brewing, and for adulterating various food products.

GLUMSE CHEESE.—A cheese made in Prussia from sour skimmed milk.

GLUTEN.—Is a sticky nitrogenous substance found in wheatflour, and is the substance to which wheatflour owes its suitability for making bread. It gives the bread its porous and spongy character.

GLYCERINE.—A bright, sweet, syrupy substance, without colour and smell. It is obtained by the decomposition of fats and oils, and is a by-product in the manufacture of soap, candles, etc.

GOAT FLESH.—This may be distinguished from mutton by its being much darker in colour, and the fat is less abundant. When newly dressed, the flesh of the adult goat gives off a distinct goaty odour. The backbone of the goat is more raised and prominent than in the sheep. The body is narrower and deeper, the shank and leg bones are thinner and longer. The dock, or tail, is very thin, and free from fat. The neck, body, and quarters are longer than those of a sheep of the same size. The kidneys are covered with a large quantity of white hard fat, but the fat elsewhere is yellowish.

GOLDEN SYRUP.—This is the result of the higher class of sugar refining. It is much lighter in colour, is purer, and contains more cane sugar. Several grades are marketed, such as common, good, and fine. It is adulterated with glucose, etc.

GOMBO.—A coffee substitute made from small dry fruits.

GOOD KING HENRY.—A plant, the tender leaves of which are used as a vegetable substitute for spinach. The tender shoots of the plant are also used as a substitute for asparagus in April and June.

GOOSEBERRIES.—In this fruit, as in many other kinds, a large number of varieties are now known. Gooseberries, however, may be divided into four classes of fruit—those with (1) red skins, (2) yellow, (3) green, (4) white. The two former are mostly used for dessert, while the latter are used for cooking and preserves.

The fruit can be dealt with at two different seasons—(1) when the fruit is green, and (2) when it is ripe.

May to July is the time for green gooseberries, and July to September for the ripe gooseberries.

GORGONZOLA CHEESE.—This cheese is made chiefly in Lombardy from cow's milk. In flavour it is like ripe Stilton, but it differs in shape and size. The red colour on the outside is due in some cases to the growth of a red fungus, but more frequently to a coating of a mixture containing brick-dust and flour. It takes about five months for the cheese to ripen; the best cheeses are said to ripen slowly. When cut, the cheese shows veins of blue mould. These blue veins are sometimes developed by pushing metal skewers through the cheese, and thus forming air passages. The usual weight is from 21 to 33 lbs., and the size about 12 inches in diameter and 8 inches deep. The chief form of adulteration is the use of thick artificial mineral rinds. In some cases it has been found to amount to 20 per cent. of the total weight of the cheese.

GOUDA, OR PANTEGRAS CHEESE.—This cheese is, perhaps, the best known of all the varieties of Dutch cheese. It is made and sold at Bodegraven, Woerden, and Gouda, in Holland, and is a flat cheese made in several qualities, both red and pale in colour, from whole milk. The time taken to ripen extends over a period of about five weeks, when it is sent to market. In shape it is like Cheddar, with the sharp edges rounded off.

- GOURNAY CHEESE.**—A soft rennet cheese about 3 inches in diameter, and $\frac{3}{4}$ inch thick, made in the village of this name in France.
- GOYA CHEESE.**—A cheese made from whole or partly skimmed milk in the Argentine Republic.
- GRAHAM BREAD.**—This is made from a recipe of an American doctor of that name, no yeast being used.
- GRAIN SICK.**—See Impaction of the Rumen.
- GRANA CHEESE.**—See Parmesan Cheese.
- GRANADILLAS.**—These are the fruit of the passion-flowers. In some tropical countries it grows to a large size, and is much sought after. It has a pleasant flavour if properly ripened, and is much appreciated for dessert.
- GRANILLA.**—An inferior quality of cochineal, mostly imported from the Canary Isles.
- GRANULATED COCOA.**—A mixture of cocoa-nibs, sugar, and arrowroot.
- GRAPE FRUIT.**—This fruit is so called because it grows in clusters like grapes. It resembles a large orange, with a smooth, pale, yellow skin. Large quantities are now sent to this country from Jamaica. It is also grown in Ceylon, Florida, etc. It closely resembles the shaddock, and is also known as the "forbidden fruit," "Adam's apple," etc.
- GRAPE SUGAR.**—See Glucose.
- GRAPES.**—Large quantities of grapes are now grown under glass in this country, especially in the neighbourhood of Worthing. The Channel Isles also send us grapes in great quantity and variety, while from August to November we get tons of white grapes packed in cork-dust from Lisbon and Spain. South Africa in recent years has been sending some very fine grapes in increasing quantities, excellently preserved in the cooling-chambers of the mail-steamers, etc.
- GRAYLING.**—A silver-scaled fish belonging to the salmon family. It resembles the trout, but is thinner and has a smaller head, which is bluish. In colour it is silvery-grey at the sides, with dark stripes. The fins are banded, and spotted with purple. It is found in the rivers of England and Northern Europe. Its flesh is firm and of fine flavour, and in season from October to March.

GREAT PUFFBALL.—This is an edible fungus, which cannot be mistaken for any other species, on account of its large size and pale colour. It is from 5 to 9 inches in diameter, and is only good as long as the flesh remains perfectly white.

GREEN ALMONDS.—The young unripe fruit of the sweet almond, which have been preserved in sugar.

GREEN CHEESE.—A term used to denote cheese which is not properly ripe. It is also used to describe cheese which has been coloured with dried sage, parsley, and other herbs by mixing with the curd.

GREEN FIGS.—These are the fresh figs. The name does not indicate the colour of the fruit, for this varies, some being green, brown, violet, purple, and nearly black, according to the variety. They are sent to market carefully packed in boxes of about twelve.

GREENGAGES.—This is a roundish plum, with firm flesh, and of very delicate flavour and sweetness. Gage was the name of the family which first cultivated the fruit in this country. Large quantities are imported from France, Spain, and Italy, but they are not of such fine flavour as those grown in England. They are in season in August and September.

GREEN SAUCE.—See Sorrel.

GREEN SYRUP.—The syrup which drains from the sugar loaves when in the mould.

GREEN WINE.—A name given to wine during the first year after making.

GREY CHEESE.—A sour milk cheese made in the Tyrol. It has a pleasant taste and a grey appearance.

GREY GURNARD.—This fish is very similar to the red gurnard in appearance, but the colour is grey, with white spots. The fish is very good in flavour. It is found on the coasts of the British Isles, but more north than the red gurnard, being plentiful in the North Sea and on the east coasts.

GREY MULLET.—Is a splendid-looking fish. It is a round fish, silvery-grey in colour, with dark markings along the sides. It is quite a different fish from the red mullet, and is considered a valuable one. It has firm flesh of a delicate flavour. It attains a weight of 10 lbs., but is seldom seen at the fishmonger's much

above 1 lb. in weight. It is in the best condition from July to February, and is most abundant on the south and south-west coasts, especially the coasts of Devon and Cornwall. An extraordinary capture of this fish was reported from Plymouth in March, 1910. A large quantity was found in the Great Western Railway Company's Dock. After the dock had been closed and the water pumped out, $4\frac{1}{2}$ tons of grey mullet were captured.

GRILSE.—A young salmon after its first return from the sea. A young salmon that has never spawned.

GRISKIN.—This joint consists of the spine, chine, or backbone of a pig. It is cut away when preparing the sides for bacon.

GROATS.—The dried grains of oats, wheat, etc., coarsely broken or crushed, of which many qualities are on the market. They are also known as "grits," or "grouts."

GROCERY SUGAR.—Another name for the common moist brown sugar.

GROGGY.—A term used to indicate a staggering animal.

GROUND NUTS.—These are the common pea nuts, also known as "Manilla," "Jur," "earth basket," "monkey," "Mandubin," and "Pindar nuts." For further particulars, see Pea Nuts.

GROUSE.—The common red grouse, the best-known member of this family, is found only in the British Isles. The colour is reddish-brown, speckled with black. It is plentiful on the Scotch moors, but large quantities are imported from Norway and Sweden. The cock bird weighs on the average from 1 to $1\frac{1}{2}$ lbs., while the hen bird weighs about 1 lb.

The age of the bird is told in a similar manner to partridge—by pressing the top of the head—but this is rather a doubtful test, owing to the strength of the fingers differing in individuals. Another method is to closely examine the plumage. In young birds the breast feathers are usually lighter, the quills less developed, and the feathers down the legs are not nearly so pronounced. Besides breaking the head, another sportsman's test is holding the bird up by the lower beak. In young birds it will break, but in old ones it will not. If a bird is young, the flesh under the wing will show a smooth and soft appearance; while in an old bird the skin will show wrinkles, and be coarse, spotty, and rough; besides, there will be long hairs on the body.

GRUNTS.—A term for the impaction of the third stomach.

GRUYÈRE, EMMENTHALER, OR VACHELIN CHEESE.—Is the most celebrated of the Swiss cheeses. It is made in large sizes, is round, flat, and may weigh from 55 to 300 lbs. each. It is an intermediate between a hard and soft cheese. It is made in three qualities: (1) Whole milk; (2) medium, with skimmed or separated evening milk mixed with the whole morning's milk; (3) poor, of skimmed or separated milk wholly. It is firm, dry, and of a pale yellowish colour. It has characteristically large eyes, produced by the action of bacteria.

GUAVAS.—A fine-flavoured fruit that grows in the West Indies and Central America. Two varieties are grown. The fruit is about the size of a large plum, with a thin rind of yellow or light red colour. The pulp is red or flesh coloured, of pleasant and sweet flavour, with quantities of seeds in it. It is usually exported to this country in the form of jellies and preserves.

GUDGEON.—A small fresh-water fish, which is eaten to a small extent. Its flesh is firm, easy to digest, and considered by some people to be very fine flavoured.

GUERNSEY BRANDY.—An inferior kind made from beetroot spirit.

GUINEA CORN.—See Millet.

GUINEA-FOWL.—This is a bird of the turkey species, which is slightly larger than the common fowl. The flesh is thought by some people to be between that of a fowl and a pheasant, while that of young birds of one to two months of age resembles that of partridge or quail, and is very tender. If the birds are allowed to range freely the flesh attains a particularly "gamey" flavour, which is much appreciated, as the guinea-fowl is in season when game is out.

The birds are killed when five to ten months of age, and weigh from 3 to 4 lbs.; but an old bird is very tough and unpalatable.

The birds are imported from Italy and America from November to April, while the English birds are in season January to April, the latter being fatter, larger, and generally in better condition. The birds are killed in a similar manner to fowls. The sex of the birds is told by size and shape of the helmet or horn on the head, the cock bird having a much larger head. The age of the bird is also calculated by the helmet, which develops when two months of age, and attains full size at the

end of twelve months, and being nearly black in colour. From eighteen months and onwards the helmet becomes lighter in colour. This is not by any means a reliable test. The appearance of the flight feathers is another test. In young birds the ends are pointed, while in old birds they are rounded. More reliable tests are the texture of the flesh. This in young birds is smooth; in old ones it has a wrinkled appearance. Sharp claws, tender, soft feet, and a flexible breast-bone are also reliable indications of a young bird.

One particular point is of interest to inspectors. The flesh of these birds is decidedly darker, and a purplish-looking breast, which in fowls would arouse the inspector's suspicions, and probably lead to closer examination and seizure, must in these birds be regarded as natural.

AVERAGE COMPOSITION OF GUINEA-FOWL, BY W. H. ATWATER—
PERCENTAGES.

Kind of Food.	Refuse.	Water.	Protein.	Fat.	Ash.
<i>Guinea-Fowl:</i>					
As purchased	16.4	57.7	19.4	5.4	1.1
Edible portion	—	69.1	23.1	6.5	1.3
Meat, excluding giblets ..	—	68.9	23.4	6.5	1.3
Giblets	—	69.9	20.8	7.1	1.3

GUINEA PEPPER.—Another name for cayenne pepper.

GURNET.—Another name for gurnard.

GUSSING CHEESE.—A skim-milk cheese made in Austria. It weighs from 4 to 8 lbs.

H.

HABERDINE.—A term for dried salted codfish.

HADDOCK.—This fish has indeed earned the title of the "poor man's friend," for it is consumed in large quantities in a variety of ways—cured, smoked, filleted, etc.

The haddock is of a uniform grey and bronze colour, with white belly. Its distinctive marking is the large dark blotch on the shoulder, called the "Apostle's mark," supposed to be caused by the impressions of the thumb and finger of the Apostle St. Peter when he took tribute-money out of the fish's

mouth, as recorded in the Gospel of St. Matthew, chapter xvii., verse 27. This fish has also a strongly marked lateral line, and a small barbel. It seldom grows above 15 lbs. in weight, and from 2 to 3 feet in length, but there are records of haddocks weighing 25 lbs. The general average size varies from 1 lb. to 5 lbs. Young haddocks are known in the trade as "chats." The fish is in season from May to February, but is in the best condition from November to February. It is taken in large quantities from the northern parts of the North Sea, Faroe Isles, and Iceland. The Iceland haddocks are sold in the market by what is known as the "turn" of 10 stones, while other kinds by the "trunk" of about 5 stones. See also Kippered Haddock.

HADDOCK CURING.—The fish are first beheaded, then gutted and cleansed. Great care is taken to remove the black lining which is seen inside the fish's stomach. The fish is next scrubbed inside and out either by hand or machinery; the latter, in large curing establishments, is done by revolving brushes. They are passed to a table, where they are split, and finally well washed to remove all blood, etc. The split fish are next put into pickle for about half an hour, though this varies according to the size of the fish, the time to be kept, and the part of the country to which they are to be sent. After removal from the pickle, the fish are taken and threaded on sticks under the lugs, the flesh being outwards, so that they may smoke properly. The split fish are allowed to drain, and then hung in the smoke-kiln until sufficiently coloured. The time taken is usually about two to four hours; in the latter case the fish would be more highly smoked and coloured. The smoke is produced by smouldering oak sawdust. After the fish have thoroughly cooled, they are packed in boxes of about 40 lbs., or barrels of about 116 lbs.

HÆMOGLOBIN.—The red colouring-matter in meat.

HÆMORRHAGE.—The escape of blood from an artery or a vein, whether as the result of a wound or from some pathological cause.

HAGGIS.—Is a well-known Scotch dish. It is made from the heart, lungs, and liver of sheep finely chopped up, seasoned with onions, etc., the whole being sewn up in the cleansed large stomach of the sheep and boiled for several hours.

HAKE.—This fish is more eel-like in shape than most members of the cod family. It is a coarse-scaled fish. In colour it is a

dark grey along the back, toning down to a dull silvery-grey on the belly. It has a double row of sharp, powerful teeth, and the barbel is absent under the chin ; besides which, it has two fins on the back, while the cod has three. The flesh is white, and firmer than most fish in this family, but leaves the bone very quickly, even when perfectly sound. By some people the flesh is thought to be rather dry and flavourless. In the West it is known by the name of "Devonshire salmon," while in other parts of the country it is called "white salmon." The fish is at its best during the months from June to January. It is very abundant on the south and west coasts, but some of the chief fishing-centres are in the Bay of Biscay, off the coasts of Morocco, the West of Scotland, and the west and south coasts of Ireland. The fish attains a size of about 4 feet in length, and 40 lbs. in weight, but a common market size is 2 to 3 feet in length, and 20 lbs. in weight. The fish is sold in the wholesale markets by the stone.

HALF-QUARTERN LOAF.—Weighs 2 lbs.

HALF SIEVE.—This is a measure used by greengrocers for fruit. It has a capacity of $3\frac{1}{2}$ imperial gallons.

HALIBUT.—Is the longest flat-fish known. It is a common sight to see fish from 4 to 6 feet in length, and up to 200 lbs. in weight. The colour on the upper side is olive-green or dark brown, while on the lower side it is a pure white. The skin is smooth, the mouth large, and teeth on both sides of the jaws. This fish is in season all the year round. It is obtained from nearly all the Northern seas, being plentiful at the Faroe Isles and around Iceland. The fish is in the best condition in the autumn and winter months. The medium-sized fish are considered better eating, being firmer, and not so coarse and woolly as the large fish. The flesh is inferior to turbot and brill, but, like them, sold by the stone in the wholesale markets. Large quantities of small halibut are used in the fried-fish shops.

HAMBURG PARSLEY.—This vegetable is not eaten much in this country, and is rarely seen in the markets or shops. The leaves closely resemble parsley, but are not so curly. The roots are like a small parsnip, and have a peculiar flavour. They are in season from November to April.

HAMPER.—This is a measure used by greengrocers and market-gardeners in some parts of the country. It usually contains produce to the weight of 40 lbs.

HAND.—Is a term used by greengrocers to denote a bunch of radishes which contains from twelve to thirty or more, according to season.

It is also a measure of 4 inches used by horse-dealers to indicate the height of a horse.

HAND CHEESE.—A cheese which derives its name from the fact that it is moulded by hand. It is usually a skimmed-milk cheese, having a sharp, pungent odour and taste. By some people it is thought to be very disagreeable.

HAND OF PORK.—A joint in the fore-quarter of pork. It is the fore-leg, and is called in some localities "hamkins." In the London classification of meat it is the "hand" and "spring," and is cut slightly differently to the provincial joint.

HARDFISH.—A general term for salted, dried, or smoked fish, such as cod, hake, ling, etc.

HARE.—The common hare is found in this and most Continental countries. It is similar to a rabbit in appearance, but much larger, and the fur is more reddish in colour, toning to white under the belly. The flesh is rather dry, with little or no fat. It is dark in colour, and is more often eaten in a high or gamey condition rather than fresh.

Besides the native hare, we have some imported from Russia, China, and Australia. Hares differ from all other rodents by having two small incisor teeth behind the two large front ones in the upper jaw. This is a distinctive feature in hares. The inside of the mouth is hairy, the tongue and nose very thick, while the upper lip is cleft. The young hare is called a "leveret," and the age of the hare to some extent determines its tenderness. Hares are in season from September to March. They are in the best condition during October. Leverets are in season from August to September. A good hare weighs from 7 to 9 lbs.

Age.—The leveret has a small knob under the first joint of the fore-foot. This is the most reliable test for age. Some people pinch the bones to see if they bend, while others try to tear the ears, which are very tender in the young. Other facts that point to a young hare are short and smooth claws, large knee-joints, short stumpy neck, narrow cleft in the lip.

The old hare is known by the firmness of the jaws when squeezed, long blunt claws, tough ears, the absence of the small knob in the fore-feet, and the cleft in the lip widely spread.

Freshness.—With regard to the condition in which hares are sold, custom overrules the ideas of the inspector, and he would be a brave inspector who would seize a hare and take it before the magistrate, for they are sold in all conditions.

HARICOT BEANS.—These are the dried seeds of the white haricot bean. In good condition they are of uniform size, firm, full, and with the skin smooth and white.

HARROGATE WATER.—A natural mineral water, obtained from springs in the town of this name in Yorkshire. The waters are sulphurous and chalybeate, and are recommended for skin affections, gout, dyspepsia, etc.

HARTSHORN PLANTAIN.—See Buckshorn.

HAUNCH.—This is the name given to the leg and loin of mutton, lamb, and venison.

HAUTBOY.—A species of strawberry of very delicate flavour, and white in colour.

HAY CHEESE.—A skim-milk cheese made in France. Its name appears to be derived from the fact that it is ripened on as freshly cut hay as possible. This gives the cheese a characteristic aroma. It is about 10 inches in diameter, and from 2 to 3 inches thick.

HAZEL NUT.—Probably this is the most popular nut in this country. There are about a dozen varieties. The best known are the Kentish cobs and filberts (which are grown in this country), Barcelona, Spanish, and Turkish. The differences between the cob and the filbert are very marked, the cob is oval in shape, and not entirely covered with a husk; while the filbert is smaller, and more pointed in shape, and is entirely covered with a husk. They are most nutritious, and are valuable for the large amount of fat they contain—about 65 per cent.—with about 15 per cent. of proteid. Filberts are superior nuts for dessert.

The Barcelona nut is very extensively cultivated in Spain, large quantities being exported from Tarragona in early November to March. In order to prevent germination and to assist their keeping they are dried in kilns, afterwards being sifted into sizes and packed in bags weighing about 128 lbs.

The Spanish nut is much inferior, and is imported into this country from October to February.

The Turkish nut is exported from the Levant during October,

November, and December, while our Kentish cobs and filberts are gathered in this country from August to November.

The hazel nut is attacked by the nut weevil. In the summer the female bores her way into the nut, and deposits a single egg. This process is repeated till all the eggs are laid. When the larvæ are hatched, they emerge from the nut, fall to the ground, and pass into the chrysalis stage of their history, while all that is left in the nut is a mass of dusty powder. Other enemies are the nut-tree mite and nut sawfly.

HAZEL-NUT OIL.—Is extracted from the hazel nuts. The oil obtained from the Piedmont nut does not go rancid; but the Eastern nuts quickly go rancid. The Spanish nut is also used for the extraction of oil.

HEADINGS.—This is a trade name given to substances which are mixed with various beverages. They cause them to give a head or froth when being pulled or used.

HEART.—In the ox, horse, sheep, and pig the colour of the heart is practically the same, and is a brownish-red. This organ should be smooth and glistening. Other differences are given below:

Horse.—In the horse the heart is rounder, or not so pointed; and it has only two furrows on its surface. The fat is yellow, soft, greasy, and scanty. No bone is present as in the ox heart. It weighs roughly 6 or 7 lbs.

Ox.—The heart is cone-shaped or pointed. It has white suety fat attached, and has three furrows on its surface. In the base of the heart a bone, called the "os cordis," which is T-shaped, will be found. It weighs from 4 to 6 lbs. The meat is rather hard and unpalatable.

Pig.—This is less conical in shape than the sheep's; the fat is greasy and the flesh darker; it weighs about 6 to 8 ozs.

Sheep.—This is more conical in shape than the pig's, much fatter, and the fat more suety; the flesh not so tough as ox, and more palatable, and weighs about 6 to 8 ozs.

HENWARE.—An edible seaweed. See Badderlocks.

HEPATITIS.—This is inflammation of the liver, often caused by parasites in cattle—*i.e.*, flukes.

HERBS.—These are valuable for their stimulating properties as well as their agreeable aroma and pungent flavour; they are used for seasoning and other culinary purposes. The following

is a list: Angelica, aniseed, balm, borage, burnet, camomile, caraway, chervil, chives, cives, coriander, dill, fennel, horehound, hyssop, lavender, liquorice, marigold, marjoram, mint, parsley, pennyroyal, peppermint, purslane, rampion, rosemary, rue, sage, savory, sorrel, southernwood, spearmint, tansy, tarragon, thyme, wormwood. They are gathered from June to the end of August, according to the variety, and are cut from 8 to 12 inches long. Herbs should be dried as quickly as possible, in order to preserve the greenness and freshness of the plant. For a description of each herb, its use, etc., see the separate headings.

HERMAPHRODITE.—An animal, plant, etc., combining both sexes in the same organism.

HERNIA.—A term usually applied to the protrusion of the abdominal viscera.

HERRING.—This fish is so well known that any detailed description is unnecessary. It is one of the most valuable fishes we have, and finds work for many thousands of people. The name is said to be derived from the word *heer*, which means "an army." It is a rich and wholesome fish, and is eaten in a large variety of ways, such as bloatered, kippered, salted, pickled, and smoked; it is also tinned now in various ways and with different substances, such as herrings and tomatoes, etc. The fish is in the market all the year round. The season of herring fishery varies in different parts of the coast. Large quantities of Norwegian herrings are imported during the months from December to May. They are usually sold by the case. The largest known herring weighed 2 lbs. 2 ozs., and was nearly 17 inches long. Taking a herring and sprat of the same size, they are very much alike, but may easily be distinguished by the inspector noting the following: Sprat's belly has a serrated edge; the herring's is smooth. The dorsal fin of the sprat starts nearer the tail than in the herring; in the latter the dorsal fin commences midway between the end of the nose and the commencement of the tail. The eye of the sprat is not so large as that of the herring, and, further, the number of vertebrae in the sprat is forty-eight, while the herring has fifty-six.

If decomposing, the herring gives off a crackling sound when the body is pressed with the fingers.

HERRING ROES.—These are sometimes cured by salting, but they take such large quantities of salt that they often become un-

palatable. They are now sealed up in air-tight tins and kept in this manner, and may often be seen in good-class fishmongers' so exposed for sale.

Soft Herring Roes are put up in tins, and after being salted are hermetically sealed. They are also put into tins and small wooden boxes without the salt.

HERRINGS IN OIL.—Small herrings are also treated in oil like mackerel and sardines. They are also tinned with tomatoes, which is a very popular line now. The herrings are cooked in oil, packed in tins, and covered with thick tomato sauce instead of oil.

HICKORY NUT.—This is produced by a North American tree; it resembles a small walnut. It has not a large sale in this country, but is in great demand in America. It has a very hard shell and a small kernel.

HISTOLOGY.—Is the science of the minute structures of the body.

HOCKS.—These wines are produced in the Rhine district of Germany. Some of the chief hocks are—Grafenberg, Johannisberg, Rauenthaler, Liebraumilck, Niersteiner, etc.

HOG.—A properly castrated male animal, also called "shott."

HOHENHEIM CHEESE.—A soft cheese made from partly skimmed milk. It is cylindrical in shape, is 4 to 6 inches in diameter, and weighs about half a pound.

HOKEY-POKEY.—Ice-cream, which is cut into oblongs or squares, wrapped in thin paper, and refrozen and sold by hawkers.

HOLOTHURIA, OR SEA-SLUG.—A variety of bêche-de-mer.

HOMBURG WATER.—A natural mineral water from the town of this name near Frankfort. It contains a quantity of carbonic acid gas, is saline and chalybeate. It is imported to this country in considerable quantities, and is used in cases of disordered liver and stomach.

HOME-MADE, OR FARMHOUSE BREAD.—This is made, in some cases wholly, and in others partly, from stone-milled flour. The loaf is small and dark compared with ordinary bread.

HOMINY.—Is coarsely ground Indian corn or maize.

HOMŒOPATHIC COCOA.—A term sometimes applied to mixtures of cocoa with other substances, such as arrowroot, etc., and in which sugar is omitted.

HOMOGENIZED MILK.—This is milk which has been put into a homogenizer. This consists of a strong force-pump by which the milk is forced through the pores of a porcelain baffle-plate, and the fat globules are so broken up and uniformly distributed in very minute particles that they do not rise to the surface.

HONEY.—Is the well-known juice extracted from flowers by bees, and stored in combs. It varies in quality and flavour according to the flowers which grow in the district from which the honey is sent. Various kinds are sold, the principal being Flower, Clover, Heather, Virgin, Narbonne.

Honey is imported into this country chiefly from California, Chili, Peru, West Indies, France, Italy, Australia, Germany. The whitest and best honey is sent from California and Peru. The quality of honey is judged by its flavour, consistency, colour, and cleanliness; while comb honey is judged by the regularity of the comb, finish, flavour, colour, and consistency.

Honey may be adulterated in various ways, the chief adulterants being cane sugar, glucose, and invert sugar. Gelatine has been added in order to thicken the thinner adulterants, while cases are on record where the honey has been extracted from the comb and glucose poured over the empty comb, the whole being sold as honey.

HONEYCOMB.—This is a name given by butchers to the smallest of the four stomachs in cattle. It is also known as the "reticulum," and its distinctive feature is the honeycomb-like appearance of its inner surface. It is often seen in the prepared tripe shown in the shop windows.

HONEYWARE.—An edible seaweed. See Badderlocks.

HOOF ROT.—See Foot Rot.

HOOSE.—Another term for pseudo-tuberculosis, husk, strongylosis, etc.

HOREHOUND.—This herb is a native of Great Britain. The leaves are used for seasoning, but perhaps are better known as a remedy for coughs and colds.

HORN OF PLENTY.—Is an edible fungus. It is of a peculiar shape, resembling a penny trumpet, with the mouth-point upwards. The inside is dark brown, and the stem hollow and blackish in colour. It is considered to be one of the best eating of fungi known.

HORSEFLESH.—This may be distinguished by the following: The flesh is dark brownish-red in colour, coarse grained; has a disagreeable characteristic smell and taste. It is without the marbling or layers of fat in the muscles so noticeable in beef. The fat is always of a yellowish colour, oily, and much softer than beef fat, and it never sets, and has an unpleasant, sickly taste. Speaking of the carcass, the bones are in most cases larger. The ribs of the horse are eighteen in number, while the ox has only thirteen. The horse's ribs are more barrel-shaped, narrower, and rounder, and have a fixed union. The ulna bone of the horse is smaller than in the ox, but the patella is much longer. The sternum, or breast-bone, of the horse is keel-shaped, while in the ox it is broad and flattened. In the feet the bones are most distinct, the ox having a cloven hoof and the horse not. The neck-bones in the horse are longer than in the ox. The bones of the horse contain more fatty matter, the marrow being oily, with an unpleasant smell, while in the ox it is firm, and nearly odourless.

HORSERADISH.—This root is being largely superseded by the ground or powdered horseradish. This saves the trouble of preparing the fresh root, which has to be scraped, and the consequent watering of the eyes, owing to particles given off in the scraping process. The roots may be gathered from September to May. They are usually marketed when 10 to 12 inches in length and $1\frac{1}{2}$ to 2 inches in diameter. They are sent to market in bundles of twenty-four roots tied together. Large quantities are also sent from Holland, packed in barrels and crates. The root should be moist, as it soon loses its qualities if it becomes dry.

HOUGH.—Another term for the shin.

HOUSEHOLD LOAVES.—These are moulded in two parts, like cottage loaves, but both parts are of the same size.

HOVEN.—This is also known as "blown" tympanites, etc. It is caused by an over-distension of the rumen with gases, and is of very frequent occurrence. It is liable to occur when cattle are pastured on clover, alfalfa, etc. It seems to be greater when the pastures are wet, or when the food is frozen.

HULLED BARLEY.—This is prepared in a similar manner to pearl barley.

HUMANIZED MILK.—Milk so treated as to resemble human milk ; this is done by adding water, fat, and milk sugar, or by abstracting casein and adding milk sugar.

HUNG BEEF.—This is a term applied to beef which has been boned and hung for a few days till it is tender. Some people afterwards salt it, roll it in a cloth, and hang for several weeks till it becomes dry.

HUSK.—See Pseudo-Tuberculosis.

HYDROMETER.—An instrument for measuring the specific gravity of liquids. It consists of a weighted glass bulb, with a graduated tube above, so that when inserted in the liquid to be tested it floats, and registers the gravity at once.

HYDROTHORAX.—Is water in the chest, and arises sometimes from attacks of pneumonia, pleurisy, kidney and heart disease, bronchitis.

HYPERTROPHY.—This term is applied to excessive development of an organ or structure in animals—*e.g.*, hypertrophy of the heart or kidneys.

HYSSOP.—This is an aromatic evergreen herb, largely grown in the South of France. The leaves are used as a flavouring for salads, while the flowers and tops of the plant are steeped in water in the form of an infusion, and, with the dried flowers, are medicinal.

I.

ICE CREAM.—This is made in various qualities. The superior creams consist of a custard made of cream, eggs, fine icing sugar, and the various flavourings and colourings. The poorer qualities may be composed of eggs, milk, butter, and fine sugar, made up into a custard ; but frequently the eggs are omitted, and the custard is thickened by means of cornflour, farina, gelatine, etc.

ICE-CREAM POWDERS.—These only require the addition of cold milk, which is well stirred in. The mixing together gives it all the appearance of milk custard. They consist usually of powdered starch and white sugar, with essence of almonds, vanilla, etc., and a colouring substance, such as aniline orange.

ICE-CREAM THICKENERS.—Those used are generally composed of gelatine, certain vegetable gums, jellies, and various forms of starch.

ICELAND MOSS, OR LIVERWORT.—This is not really a moss, but a lichen. It is often confused with Irish moss, which is an edible seaweed. It is found in Iceland, the British Isles, and some parts of Europe. The bitter taste is removed by soaking in a weak solution of carbonate of soda. It is very rich in sugar and carbonaceous food, and on account of these properties it is used for delicate people. Its taste has been said to be identical to reindeer's milk. It has also tarric properties.

ICELAND MOSS COCOA.—A variety in which Iceland moss is added to the other ingredients. Contains about 25 per cent. added starch and 30 per cent. of cane sugar.

ICING SUGAR.—A refined sugar, which is very finely ground, used by confectioners for icing cakes, etc.

IMMATURE MEAT.—This is recognized by the pallor of the flesh, softness of the tissue, and the excessive amount of moisture. Condemnation is left to the individual inspector. No standard exists.

IMPACTION OF THE RUMEN.—Is also known as "fardel-bound," "fogsick," "clue-bound," "grunts," "plenalvia," "grain-sickness," etc. It is an over-distension of the stomach with food, and is said to arise from want of exercise and stall-feeding.

INCANESTRATO CHEESE.—A cheese made in Sicily from whole cow's milk, flavoured with spices.

INDIAN CORN COBS.—These are now sold in this country in increasing numbers. The head, or cob, is usually boiled either as a whole or the seeds only. The young corn cobs are gathered, cooked, and served as a vegetable. The heads are also gathered before the flower opens, and when very small they are pickled in vinegar, like gherkins. For the dry seed see Maize.

INDIAN CRESS.—See Nasturtium.

INFLAMMATION.—A change in the tissues of a body, accompanied by heat, pain, redness, and swelling. It is a very common disturbance in the organs of animals.

INFLAMMATION OF THE UDDER.—See Mammitis, Garget, etc.

INTESTINES.—These in health should, on the external surface, be smooth, glistening, and of a blue-grey colour.

Cattle.—The total length is 176 feet; the large intestine is 36 feet long, and is divided into three parts—the calcum,

colon, and rectum. The calcum is oblong in shape and simple in construction, and its blind end is rounded, and without furrows or bands. The small intestine is 140 feet long, and is much smaller in diameter than that of the horse. The weight of the intestines is about 1.4 per cent. of the total weight of the animal.

Horse.—The total length of the intestines is about 97 feet. The large are about 25 feet, and the small 72 feet.

Fig.—The total length is about 72 feet, the small intestine being 56 feet and the large one 16 feet.

Sheep.—The total length in sheep is 108 feet. They are chiefly used for making sausage casings or skins.

INVERT SUGAR.—There are several kinds of invert sugar. One consists of cane sugar which has been converted by boiling with acids in the boiling-down process.

Another kind is largely used in the brewing trade, and is known as "saccharine," etc.

IRIDESCENT FLESH.—See Phosphorescent Flesh.

IRISH PEARL, OR SEA MOSS, OR CARRAGEEN.—Is a seaweed much used as an article of food among the poor inhabitants of the north-west coasts of Ireland. It is largely exported from America, where it is gathered from May to September. The moss grows from 2 to 12 inches long, is cartilaginous, flexible, and reddish-brown in colour. It is bleached in the sun, washed repeatedly in salt water, and dried. It is used in this country in cases of consumption, an excellent jelly being made from it. It is also used for fining beer.

Another carrageen is known in England as "sea-girdle," "tangle" in Scotland, "redware" in the Orkneys.

IRISH PRAWN.—See Norway Lobster.

ISIGNY CHEESE.—An American cheese. It is similar to Camembert in size, shape, and appearance.

ISINGLASS.—A gelatine prepared from the air-bladder of the sturgeon and other fish. It is used in confectionery and for clarifying wines. It is transparent, dry, tasteless, inodorous, and whitish in colour. It is used for making high-class jellies, being easily digested, and containing more nutriment than gelatine.

IZENING BONE.—See Gips.

J.

JACK.—A term used by butchers and others to indicate horse-flesh.

JAGGERY.—A raw brown sugar produced in India by evaporating the saps of various palms.

JAUNDICE, YELLOWS, YELLOW CARCASS, ETC.—A symptom of disease. It produces yellow staining of the tissues of the body and organs with bile through disorder of the liver. The bile-ducts become obstructed, and the bile is absorbed in the circulation. If all the flesh is yellow, it is usual to condemn the carcass; but when partial, the affected parts are cut away and the rest passed.

JAVA RICE.—A high-class rice, which is sent chiefly to this country via Holland.

JELLIES.—These consist of the juices of various fruits with sugar boiled down, with or without gelatine. In commoner and cheaper kinds gelatine is the basis, this being simply flavoured, coloured, and sweetened with sugar or glucose to resemble the particular fruit.

JOCHBERG CHEESE.—A cheese made from a mixture of cow's and goat's milk in the Tyrol. It weighs about 45 lbs., is 20 inches in diameter, and is 4 inches high.

JOHN DORY.—This is a most ugly fish. It has a large mouth and head; its body is deep, short, thin, and compressed; its skin is smooth, and the colour is brownish, with yellow bands. Its name is said to be derived from the French *jaune doree* (gilded yellow).

This fish shares with the haddock the distinctive black spots on its side said to be caused by the Apostle Peter's finger and thumb as he took this fish from the water to obtain the tribute money at the Sea of Gennesaret. Another French legend attributes the marks to the Apostle John, who was sent by Christ to catch a fish, so that the tribute money might be paid to Cæsar. This fish was caught with a coin in its mouth, and was squeezed so tightly by John that he left the impression of his finger and thumb on the fish. It was, therefore, called by Christ "Jean Dore."

The John Dory is in its best condition from January to March, and is most abundant on the coasts of Devon and Corn-

wall. It is also common in the English and Bristol Channels. Though one of the ugliest fishes, it is also one of the most delicious eating, and is none the worse for being kept a few days. The common size is 10 inches to 1 foot in length, and about 4 lbs. in weight, although they grow up to about 18 lbs. weight. Dories are sold by the pound in the market.

JOINT EVIL.—See Navel Ill and Joint Felon.

JOINT FELON, OR JOINT ILL.—Is a septic inflammation of the joints. The knee, hock, and stifle joints are the most affected. They become hot, tender, and swell. The animal is unable to walk. It is usually noticed a few days from birth.

JOINT MURRAIN.—See Black Quarter.

JOINTS.—The methods of cutting up a side or carcass varies very considerably in different districts. It is, therefore, almost impossible to give even the approximate weights of the joints.

Beef Joints.—Buttock, topside or upperlay, silverside or underlay, thick flank, thin flank, loin or sirloin, rump, aitch-bone, fore-ribs, back-ribs or top-ribs and chuck, brisket, shin, clod and sticking, leg.

The loin may be subdivided into chump, middle, and wing end; the brisket into best end, middle, and point end; the back ribs into chuck and leg-of-mutton piece; the fore-ribs into gristle-rib, middle-rib, and wing-ribs.

Mutton.—Leg, loin, breast, shoulder, neck. Two loins, if undivided, are called a "saddle," or "chine." The haunch consists of the leg, aitch-bone, and rump. The neck is sometimes divided into scrag end, middle, and best end. The breast is divided into point end and best end. The legs and shoulders are divided into knuckles and fillets; loin into chump, middle, and best end.

Pork.—Leg, loin, hand and spring, belly, blade-bone piece, and spare-ribs. The leg is sometimes divided into chump end, middle, and best end.

Veal.—Leg, loin, neck, breast, shoulder. Some of these joints are again subdivided. The leg may be divided into knuckle and fillet; loin into best end and chump end; shoulder into knuckle and fillet, or oyster; neck into best end, middle, and scrag end; breast into point end and best end.

Venison.—Haunch, neck, shoulder, breast. These joints are again subdivided in a similar manner to mutton.

JOSEPHINE CHEESE.—A soft cheese made from whole cow's milk in Silesia.

JULIENNE.—This is a noted French mixture of sliced vegetables and herbs, which have been sun-dried. The soup of this name owes its distinctive character to its containing such vegetables.

JUNIPER.—The plant is grown for its fruit-berries in this country and Europe.

The chief use of the berries is in the manufacture of gin, the grain spirit being flavoured with the crushed or ground berries.

JUNK.—A measure used by greengrocers, growers, etc., and which contains two-thirds of a bushel.

JUNKET.—A famous Devonshire dish made by adding rennet to milk at a certain temperature.

K.

KALE, OR BORECOLE.—This is one of the cabbage family that does not make a firm head. It has a delicate flavour, and is very hardy. What is of vast importance to the public is, it will withstand very severe winters, and consequently forms a good winter vegetable. There are several varieties; some produce a large quantity of leaves. It is in season from November to April, and is sent to market in bushel baskets, bags, and crates.

KEFYR.—Is a fermented drink made from cow's milk. It was originally made in the mountains of the Caucasus, but is now made in this country by adding to it a special ferment, which produces fermentation of an alcoholic nature.

KELTS.—Spent salmon are called "kelts," or "slats." They are recognized by their large heads and by their leanness.

KERNEL.—A butcher's term for the lymphatic glands.

KETCHUP.—A sauce made from various substances, such as mushrooms, tomatoes, oysters, walnuts, and certain vegetables.

KID.—The young of the goat. If killed between six weeks to four months old, it is by some people considered a great delicacy. At this age the characteristic goaty odour and taste have not developed.

KIDNEYS.—These vary considerably in size, shape, weight, and colour.

Cattle.—In cattle the kidneys are divided into numerous clearly defined lobes. The right kidney is attached to the spine, and is oval in shape. The left kidney is called the free, or floating kidney, and is taken from the open side. It is more irregular in shape than the right. They weigh about $1\frac{1}{4}$ lbs. each, and are roughly about 8 inches long.

Dogs.—These are simple bean-shaped, and show a network of bluish-red bloodvessels, which exist only on dog's kidneys.

Horse.—In the horse the kidneys are smooth, not lobulated, and differently shaped. The right is heart-shaped, and the left bean-shaped. They weigh about 1 lb. each, and are from 4 to 6 inches in length.

Pigs.—These are bean-shaped, and not lobulated. They are flatter and rather paler in colour than sheep and goat's. They weigh about 4 ozs. each, and are about 4 inches long.

Sheep and Goats.—These are bean-shaped, and not lobulated. They are about 2 ozs. each in weight, and 2 to 3 inches in length.

KING SALMON.—See Quinnot.

KIPPERS.—The modern method of kippering herrings may be briefly described as follows: The herrings are split from head to tail along the back, the gills and viscera removed. The fish are then washed thoroughly, and allowed to drain, when they are ready for pickling. The pickle is made by dissolving salt in clean water until it is strong enough to float a herring or potato. In some curing-yards a salinometer is used, the latter being a more exact method of obtaining the amount of salt in solution. The fish are put into the pickling-trough, and allowed to remain for about half an hour; but this is governed by the nature of the fish, and the markets to which the kippers are finally to be despatched. The fish are next hung on hooks attached to wooden bars, and these, when loaded with fish, are placed in the kiln one above another. When the kiln is full, the smoking is commenced, the smoke being made by smouldering oak sawdust. Great care is necessary in this smoking process. A certain temperature has to be maintained, or the kippers will not acquire a good colour. On the other hand, if the heat is too great, the fish will probably fall off the hooks and be spoilt.

When the fish are properly coloured, they are taken out of

the kiln and laid on racks, and allowed to thoroughly cool. Carelessness in the latter often causes the kippers, when packed in the boxes, to become bad. In the process of packing all broken and defective fish are put on one side, and packed as a second-grade article. The number of kippers in a box greatly depends on the size of the fish, but as a general rule they contain twenty pairs of large-sized, thirty pairs of medium, and forty to fifty pairs of small kippers.

KIPPERED HADDOCKS.—The fish are beheaded, and then split open and cleansed with salt water, afterwards being put into a pickle of salt, saltpetre, and sugar for about six hours. The fish are then taken out, and allowed to drain for several hours, finally being smoked for about twelve hours.

KIPPERED MACKEREL.—The fish are beheaded and perfectly cleansed, soaked in brine, and then dried and thoroughly smoked.

KIPPERED SALMON.—The method of kippering this fish varies in different localities and countries. The fish are first beheaded, then split open down the back, and the entrails, backbone, etc., removed. The fish are next thoroughly washed and cleansed of all blood. They are now put into a brine for about twelve hours, then taken out and allowed to drain for several hours. A seasoned brine of salt and sugar is prepared. Into this the fish remain for about two days, according to size. They are then hung, spread out, and allowed to drain and dry for about a day, and afterwards smoked over an oak sawdust fire for about three days.

KIRSCHWASSER, OR CHERRY WATER.—A liqueur made in Germany from the juice of cherries.

KISSINGEN WATER.—A natural mineral water obtained from the town of this name in Bavaria. It is recommended in cases of gout, indigestion, and kidney troubles.

KLOSTER CHEESE.—A soft ripened cheese made from whole cow's milk. It is a peculiar shape, being 1 by 1 by 4 inches, and weighs about $\frac{1}{4}$ lb.

KOHL-RABI.—A kind of cabbage or turnip-rooted cabbage, chiefly used for feeding cattle. It is also used as a vegetable before it is fully grown, and is young and tender. It has the combined flavour of a cabbage and a turnip.

KOSHER.—This is food prepared or killed by Jews according to their own laws and customs. The word is supposed to mean “pure,” “clean,” and “lawful.”

KOSHER CHEESE.—A cow's-milk rennet cheese made for the Jewish trade.

KOUMISS.—This was originally made in Russia by fermenting mare's milk with yeast. It is now manufactured in this country from cow's milk by adding yeast and cane sugar to it, and bottling it. It is an effervescing fermented drink, with stimulating qualities, and is useful in cases of consumption, etc.

KÜMMEL.—A liqueur made in Germany and Russia. Its characteristic flavour is thought to be obtained by distillation from cumin, fennel, caraway seed, etc.

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LACTIC ACID CHEESE.—See Sour Milk Cheese.

LACTOMETER.—This is an instrument for determining the specific gravity of milk. It is sometimes called a “milk hydrometer.” It is often provided with a thermometer in order that the correct temperature of the milk may be taken. The milk must be at a temperature of 60° F. when tested, or a correction made to the reading by adding 0.0001 for every degree below 60° F.

LACTOSE.—Is also called “milk sugar,” and is found in the milk of mammals. Large quantities of lactose are used in the manufacture of invalid's and children's foods. It is a hard and not readily soluble sugar, which possesses very little sweetness.

LACTROCHROME.—The yellow colouring-matter which is present in the fat of milk.

LAGER BEER.—A beer having a low percentage of alcohol. It may be light or dark in colour, according to the malt used. It has an unusual head when poured out.

Pilsener is a light-coloured beer, while Münchener is a dark one, both being German brewed. A considerable quantity of lager is now brewed in England.

LAGUIOLE CHEESE.—A hard cheese made from either whole or partly skimmed cow's milk in France.

LAMB'S FRY.—This name is given collectively to the heart, liver, lungs, spleen, sweetbread, and omentum of lambs.

LAMB'S LETTUCE.—See Corn Salad.

LAMB'S SWEETBREADS.—These are smaller than the calf's sweetbreads, but may be used in a similar way.

LAMBSTONES.—This name is given to the testicles which are taken from young rams during the operation which converts them into wethers. They are considered a great delicacy by some people, who have them served up in a similar manner to lamb's sweetbreads, and are sometimes substituted for the latter by the butcher. They may be distinguished from the sweetbread proper by their shape and texture.

LAMPREY.—An eel-like fish of several varieties, whose flesh is soft and glutinous. They are in season during March, April, May, and part of June, but are not much eaten now. In some parts of the country they are also called "nine eyes," because of the seven little holes at the side of the head in addition to the eyes.

LANCASHIRE CHEESE.—This is a similar cheese to Derbyshire. Average weight about 40 lbs.

LANDRAIL, OR CORNCRAKE.—This bird is considered delicious eating. It is like a partridge, only smaller in size. It seldom weighs more than 6 ozs. The male is distinguished by the grey about the face and front of neck. The bird arrives in this country in April, and is in season from the end of August. It is not often seen at the ordinary game-dealer's.

LAPLAND CHEESE.—This is made from the milk of the reindeer. Its shape is unusual; a cross section would resemble a dumb-bell with angular instead of round ends.

LARD.—The best is known as "leaf lard," and is derived from the fat which surrounds the kidneys, but all the fat of the pig is used for this purpose. It is rendered down by steam under pressure, or by the open-kettle method.

Pure lard is nearly white in colour, and granular. It has a faint characteristic smell, and a pleasant and slightly sweet taste. It is adulterated by mixing with cheaper fats, such as cotton-seed oil, beef fats, etc. The addition of beef fat gives it a higher melting-point, while the addition of cotton-seed oil lowers the melting-point. Water is added to increase its weight, but the detection of the addition of these adulterants is the work of the analyst.

Artificial lard solidifies in a coarsely crystalline mass with a polished surface, whilst the pure lard is finely crystalline, and has a dull, wrinkled surface.

Lard is liable to turn rancid if exposed to the air for any length of time. Putrefying lard becomes yellow, and has a rancid odour and bad taste.

Compound lard is usually a mixture of lard stearin, beef stearin, and cotton-seed oil. The latter is highly refined. This mixture is sometimes sold as pure lard.

About 93 per cent. of the lard imported into this country comes from the U.S.A.

See Artificial Lard.

LARYNGITIS.—Or inflammation of the larynx, commonly called "sore throat" in the human subject.

LAST.—A measure used in the fish trade for measuring 100 hundreds, or 100 times 132—viz., 13,200 herrings.

LATCHETS, OR TUB GURNARD.—These are the best of the gurnard family. They are very plentiful about July, but are in season from April to December. They are taken in considerable quantities in the North Sea, English Channel, and on the south and west coasts.

LATTICINI CHEESE.—Is made from the milk of buffaloes in the region of Naples in Italy.

LAVER.—This edible seaweed is called "slouk" in Scotland, and "sloke" in Ireland. It is also found on the English coast, and is eaten salted and dressed with vinegar, pepper, and oil. It is in season from October to March.

LAZY, OR DEAD MILK.—This is milk in which cream rises very slowly. It is only found chiefly in milk which has been treated with ice.

LEATHER CHEESE.—This is made from skimmed cow's milk and buttermilk. It has small eyes, is cylindrical in shape, 4 to 6 inches in height, and 10 to 12 inches in diameter, and weighs 15 to 25 lbs.

LEEKs.—Are constantly in demand from September to April. They are blanched by earthing up the stems in a manner similar to celery. They are sent to market made up into flat bunches. The bunches vary in proportion to the size of the plant. The quality depends upon the length to which they are blanched.

LEGUMES, OR LEGUMEN.—Terms applied to such seeds as peas, beans, etc.

LEICESTER CHEESE.—These cheeses are small, circular, and flat, of strong flavour, coloured red, and slightly salted.

LEMONADE POWDERS.—These are generally made by mixing certain quantities of bicarbonate of soda, tartaric acid, and icing of sugar, and flavouring with lemon extracts. Others contain only citric acid, castor sugar, and soluble essence of lemon.

LEMON CURD, OR CHEESE.—This is made from sugar, eggs and butter, lemon juice, and grated rind. These ingredients are blended together, heated, and finally bottled.

It is often made commercially from lemon juice, sugar, glucose, and butter colouring.

LEMON, ESSENCE OF.—Is obtained by mixing rectified spirit with oil of lemon and a little carbonate of magnesia. The most common adulterants are turpentine and the cheaper oils. The poorer qualities of this essence are often distilled from oil of lemons.

LEMON KALI.—A whitish powder, which resembles sherbet, and makes an effervescing, pleasant, cooling drink.

LEMON-PEEL.—See Candied Peel.

LEMON.—This is one of our most valuable fruits, and one that furnishes many by-products. The fruit is now obtainable all the year round, the various seasons being : Malaga, September, October, and November ; Naples, from March to October ; Messina and Palermo, November to August ; and Australia, July to September. The best class of fruit is sent here wrapped up in tissue paper, while the poorer qualities are used for extracts, essences, etc. Great care is necessary in picking and packing the fruit, as it readily bruises, and in this condition will soon decay. They are picked green, and ripened in storage, in order to avoid the rind from becoming too thick, as it does if allowed to ripen on the tree.

The cases may contain as many as 300 to 350 lemons, but the Naples' cases contain about 420 fruits.

LEMON SOLE, OR LEMON DAB.—In shape, this fish is a good oval, with small head and mouth ; in colour, it is a yellow, marked with light and dark spots, which give it a mottled appearance. It resembles the witch, but its scales are smooth and slimy. This fish is most abundant in the northern parts of the North Sea, especially in deep waters near a rocky bottom.

They are in best condition from November to March. They have a fine flavour, but in quality are considered inferior to the common sole. They do not keep in such good condition as some other varieties of the flatfish family. They are sold by the stone in the wholesale markets.

LEMON THYME.—A variety of thyme which obtains its name from the fact that its smell resembles the rind of a lemon.

LENTILS.—These are the seeds of the lentil-plant, and is a valuable and nourishing legume. Three varieties are marketed in this country—the German, Indian, and Egyptian. The German lentils are of a purple-green colour, while the Indian and Egyptian are red in colour, the latter being of better quality, not containing so many impurities, such as stones, weevils, etc.

LETTUCE.—Numerous varieties are now cultivated, and may be obtained practically all the year round. The cabbage-lettuce grows to a considerable size, and some varieties require tying to form solid hearts, while others are self-folding, and do not need this. Some heads weigh as much as 6 lbs. each. Lettuce-heads should be firm, crisp, fresh, and clean, and the hearts solid. If damaged by frost, they go soft and pappy.

LEUCOMAINES.—Another name for ptomaines.

LEVERET.—See Hare.

LICKED BEEF.—See Warble Fly.

LIE TEA.—The sweepings of the tea warehouses are stuck together with rice-water, and made into grains, and given this name. Very little is imported into England.

LIGAMENTS.—These are dense, fibrous, amber-coloured, flexible bands and capsular envelopes, connecting the ends of bones to form articulation.

LIGHTS.—A butcher's term to denote the lungs of cattle, sheep, and pigs.

LIMBURGER CHEESE.—This cheese is made at Herve, near Limburg, in Belgium. It is a soft cheese, and is only sold after it has thoroughly ripened—in fact, it is usually eaten in a putrefying state.

LIME JUICE.—This is obtained by stripping the fruit of its rind, and crushing. The juice is allowed to stand for a time in barrels to settle, and then put up into puncheons for market.

The Board of Trade standard is—Specific gravity, 1030, when de-alcoholized, and with an acidity equivalent to 30 grains of citric acid per ounce.

LIMES.—These are fruits of the same species as the lemon, orange, citron, etc. They resemble lemons, but are much smaller, being only about $1\frac{1}{2}$ inches in diameter, and nearly globular. The skin is smoother and thinner. They are grown in tropical countries in a similar manner to lemons. The chief sources of supply are Montserrat, Jamaica, and Trinidad.

LIMPET.—A shellfish which is used in a small degree for food on some parts of the coast. Small quantities are also tinned in Cornwall for export.

LINCOLN CHEESE.—A cream cheese made from new milk and cream; sold in pieces about 2 inches thick. It only keeps a few weeks.

LING.—This is another member of the cod family. It may be described as a cross between a cod and a conger eel, and the inspector may easily be deceived by this fish. It differs from the conger in that the fin along the back is broken near the tail, while in the conger eel it is continuous. The eye of this fish is oval shaped. Like the cod, it has a barbel on the chin. The colour is a dull grey and white. Its flesh is inferior to that of the cod. Ling has been caught up to 7 feet in length and 120 lbs. weight, but the common market weight is about 40 lbs. The fish is found all round the coasts of the British Isles, but it is most plentiful in the northern parts of the North Sea, off the north-west coasts of Scotland and Ireland, and around the Faroe Isles, Iceland, and Greenland. The fish is in its best condition from about August to September.

LINSEED.—Is the seed of the flax-plant. It is valuable because of the large amount of oil contained in the seeds.

LIPTAU CHEESE.—A cheese made in Austria from sheep's milk. It has a greasy and sharp taste, owing to the condiments which are added in the course of manufacture.

LIQUEURS, OR CORDIALS.—A flavoured spirit, to which a quantity of sugar has been added. They are alcoholic and non-alcoholic. The chief kinds of the former are—Absinthe, Anisette, Benedictine, Capillaire, Cassis, Chartreuse, Curaçoa, Kirsch, Kummel, Maraschino, Ratafia, Rossoles, Vermouth.

LIQUORICE.—This is the root of a plant grown in this country in the vicinity of Pontefract and Mitcham. Large quantities are grown for use by chemists, etc. The ground root is the chief ingredient of liquorice powder. The root is also crushed, boiled, and evaporated, and after some further treatment it is made into the sticks we so often see in the shops, and known as "Spanish juice."

LITCHIS.—Is the dried fruit of the wild and also cultivated tree, which is grown in China. The fruit is sold occasionally in this country, and when fresh they are very luscious. They are also imported from Hong-Kong preserved in tins.

LITMUS.—This is a vegetable compound which is obtained from a species of lichen. It is used to indicate whether substances are acid or alkaline in nature. It becomes red with acids, and blue with alkalis. Litmus-paper is also sometimes used to test meat.

LITTLE WENSLEYDALE CHEESE.—These cheeses are extremely popular in Yorkshire. They are made by mixed morning and evening milk. They weigh about $1\frac{1}{2}$ lbs. Being made on the soft cheese principle, they remain fresh and good for many weeks.

This cheese is sold under various names, such as "Wenslet," "Wensley," "Cheeselet," etc.

LIVAROT CHEESE.—This is a round flat cheese, about 5 inches in diameter and 2 inches thick. It is a plain cheese, made from skimmed or separated milk. It is said to be the strongest flavoured and most smelly of all French cheeses. To some people the flavour amounts to putridity. It is made in the town of Livarot in Normandy.

LIVER.—The characteristics of the livers of various animals are given below :

Cattle.—This consists of two lobes ; it is, however, practically one continuous mass, the second lobe, or "thumb-piece," as it is called, being small. Half of the large lobe is very thick and rounded, while the other is thin and flat. It possesses a gall-bladder, and weighs approximately 12 lbs. Calf's liver is pinkish-brown, weighs about 4 lbs., and is more palatable than ox.

Dog.—This has seven lobes of unequal size. It weighs on an average $\frac{1}{2}$ lb.

Horse.—This consists of four lobes. Three principal lobes are large, of which the left is the largest. A small lobe projects from the upper part of the right lobe. It weighs about 10 to 12 lbs., and has no gall-bladder.

Pig.—This consists of five lobes, which are long and thin. It has a gall-bladder, and the appearance of the surface is mottled. It weighs about 3 lbs.

Rabbit.—This has four lobes, and weighs about 2 ozs.

Sheep.—This closely resembles that of cattle, but is much smaller. It has a gall-bladder, and weighs about $1\frac{1}{2}$ to $2\frac{1}{2}$ lbs. Lamb's liver is smaller, more palatable, and expensive.

LIVER " DISEASE " OF POULTRY.—See Tuberculosis of Poultry.

LIVER ROT.—See Fluke.

LIVERWORT.—Another name for Iceland moss.

LOAD.—A measure used by market gardeners, etc. It consists of an oblong basket, and holds about 3 bushels of kidney beans.

LOAVES.—Different localities have different names for the same loaves. The following are the commonest: " Coburgs," " bricks," " small tops," " sister bricks," " pan cottages," " long loaves," " tins," " twists," " collars," " household," etc.

LOBSTERS.—These crustaceans are caught in a manner similar to that described under Crabs. They are in season all the year, but are considered to be in the best condition during the summer months, when they are most plentiful. They are to be found all round the coasts of the British Isles, but the best are supposed to come from Scotland and Norway. They are cooked by plunging in boiling water alive for about twenty minutes, according to their size. If boiled too long, the flesh may become stringy, and is not supposed to be so digestible.

The sex of the lobster is easily recognized by the cock, or male, being larger, the claws larger in proportion to the body, the flapper being narrow, and the abdomen being five-jointed. The female, or hen, lobster has wide flappers, and the abdomen is seven-jointed, the body generally being smaller. The cock lobster is generally considered the best, but the hen lobster is also valued for its spawn.

When inspecting these fish, the tail should be pulled back,

and when released it should spring back sharply if fresh, as it loses its springiness. Other points to be noted are the same as given under Crabs.

LOCALIZED TUBERCULOSIS.—This term is used when the disease is limited to one organ, or spreads to another organ by contiguity, or by the lymphatic channels.

LOCKJAW.—See Tetanus.

LOCUST BEANS.—These are also known as “carob beans,” “algaroba,” and “St. John’s bread”—the latter because they are the food on which John the Baptist was supposed to have lived in the wilderness. These are not much eaten in this country (except, perhaps, by schoolboys). Really, only the pod is eaten, the seeds or beans being too hard. The pods contain a soft pulp, which is rich in sugar. They become mouldy and unfit for food if kept in any damp place, as they seem to attract moisture readily. Their chief use is for feeding cattle in this country, but the small shopkeepers stock them for the sale to school-children. They are chiefly sent to this country from Italy, Sicily, and South Europe.

LOGWOOD.—This tree grows in the West Indies, when the heart-wood is converted into chips. When this is soaked in water a very dark red dye is the result. A notable use for these chips is the dyeing of the black or blood puddings already referred to.

LONG HUNDRED.—A measure used in the fish trade; equals 132 fish, or 33 warps. Ten long hundreds = 1,320 fish, or a thousand.

LONG PEPPER.—Is the immature fruit or spice of some varieties of pepper. It is chiefly used for making pickling spice and curry powder.

LOO.—This is a term used to denote the formation of abscesses in the feet of cattle, and is the same as “low of the foot,” “foul,” etc.

LOQUAT.—This is also known as the “Japanese medlar,” or “quince.” It is grown in South Africa, Australia, South of France, Japan, etc. The fruit is pear-shaped, about the size of a large walnut; it is of an orange colour, slightly hairy, but juicy, with a slightly acid flavour. The fruit is grown under glass in this country, and is not imported in any quantity.

LORRAINE CHEESE.—A small sour-milk cheese made in Germany. It is an expensive cheese, being regarded as a delicacy. Pistachio-nuts and various seasonings are added to the curd during manufacture.

LOW OF THE FOOT.—This is the same affection as loo and foul.

LUCCA OIL.—A fine variety of Italian olive oil, largely used in this country in salads and medicinally.

LUMP, OR LOAF, SUGAR.—The characteristics of good loaf sugar are—It should feel dry to the touch, be hard to break, close in texture, have a sparkling appearance when broken, and the colour should be slightly bluish.

LUNETTES.—Crystallized fruit so cut and bent as to imitate a pair of spectacles.

LUNGS.—Lungs should be spongy, elastic, and contain little blood. They should be smooth and glistening. The following are the chief characteristics :

Cattle.—Right lung, three or four lobes ; left lung, two or three lobes ; trachea, fifty cartilaginous rings and a prominent ridge the whole length. Lungs rose-red in colour, soft, and flabby.

Horse.—Left lung, two lobes ; right lung, three lobes ; no prominent ridge on trachea. The lungs are hard, firm, and very large.

Sheep.—Right lung divided into four or five lobes ; left lung into two or three. Colour, pale yellowish-red.

Swine.—Right lung, three or four lobes ; left, two or three lobes. Colour varies very much from pale pink to bright pink. Trachea has thirty-two cartilaginous rings.

LYMPHATIC GLANDS.—Act as filters to the lymph which passes through them by arresting the foreign bodies, including germs, which the lymph contains. They vary in shape and size ; some are round, and others ovoid ; some about a pea up to a walnut in size. A healthy gland shows on section a yellowish-white colour, and has a firm and moist feel. If unhealthy, it may show inflamed patches, may contain pus, be hard, gritty, or caseous. Each lymphatic gland filters the lymph from a certain area, and is named after the area which it filters.

Lymphatic glands are of great importance in meat inspection. Their condition gives the inspector an idea of the fitness of the carcass for food and its freedom from disease.

Chief Lymphatic Glands—*Head*.—Pharyngeal, situated in the throat at the end of the pharynx.

Submaxillary, situated at the point of the lower jaw.

Mastoid, just under the ear.

Viscera.—Bronchial, situated on both sides of the trachea, between the upper part of the lungs.

Mediastinal, situated in the lower part of the lungs, between them.

Mesenteric, found in between the folds of the mesentery.

Portal, on the liver in the portal space.

Reed and rumen glands, found on rennet and tripe.

Carcass—*Deep-Seated Glands*.—Popliteal, or "pope's eye," found by cutting into thigh muscles at the back of the stifle-joint. Usually seen in the fat of the silverside.

Precrural, a large gland found in the thick flank near the top of the rump.

Prescapular, found in the mass of fat close to the shoulder-joint. Is one of the largest lymphatic glands in the body.

Deep inguinal, found in the groin on the edge of the pelvis.

Prepectoral, found at the entrance of the chest, on the surface of the first rib.

Internal iliac, situated in thick fat at the upper part of the loin and rump.

Superficial Glands.—Supramammary, found in cows only at the base of the udder.

Superficial inguinal, found at the base of the cod fat.

Dorsal, situated in fat of the spinal column.

Lumbal, found in the loin, close to the vertebræ.

Sternal, found in the muscle of the brisket.

Suprasternal, situated on the surface of the brisket.

Renal, close to the kidney.

LYMPHATICS.—These are vessels distributed throughout the body, generally accompanying bloodvessels.

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MACARONI.—This is a paste prepared from flour, and formed into tubes or pipes. The flour is obtained from the harder varieties of Italian wheat, which are not suitable for bread-making, owing to the large amount of gluten they contain. It is mixed

to a paste with hot water, and pressed through moulds, and dried by the sun or by artificial heat. The Neapolitan is brown, and in long sticks; while the white macaroni is English, made with potato starch, etc.

Macaroni is adulterated by the addition to paste of rice, corn, potato, and other flours. Good macaroni has a hard, smooth, glossy surface of pleasing yellow colour; it breaks with a clear fracture. The curved ends also show flattening, caused by hanging on rods to dry, thus proving it contains sufficient gluten. If it becomes damp, it may become grubby and mouldy. See also Spaghetti, Vermicelli.

MACAROON.—A biscuit of oval shape, made of almonds, sugar, and white of egg.

MACE.—The layer of material next to the nutmeg. When properly dried and cured, it is brownish-yellow in colour. Imported from West Indies, Moluccas, Sumatra, etc. It has a pleasant aromatic smell, and a flavour similar to nutmeg. Often adulterated with the wild and inferior kinds, turmeric, etc.

Good mace is fresh, tough, of a bright colour, and has the rich odour associated with the spice. The smaller pieces are considered the best in quality.

MACKEREL.—This fish is so well known, that it presents no difficulty to the inspector to distinguish. By some people it is called the "pig of the sea." It attains a weight of over 3 lbs., but the ordinary fish seen in the shops scale about 1 lb. They are sold by the box, which usually contains about 120 fish.

There is no fish that spoils so quickly as the mackerel. It is therefore advisable to procure it as fresh as possible, as it may be injurious if eaten stale. It begins to deteriorate directly it is taken from the water, and rapidly loses flavour. In hot weather it goes bad in a few days. When fresh, it is one of the most beautiful fish, as it has a silvery skin, with sparkling hues, and clear eyes. Redness about the head, together with dull appearance, is an indication of staleness.

Mackerel are very plentiful on the south coast. They are in season during the winter and spring months, but some people prefer the fish when they are heavy in roe in May and June.

The Irish mackerel season on the west coast is carried on in the months of April, May, and June, and the south-coast season is from July to December.

MACKEREL GUARD.—See Garfish.

MACKEREL IN OIL.—Small mackerel are chosen for this purpose, and after being beheaded, cleansed, etc., they are fried slowly in oil, and afterwards packed in tins, which are filled with oil, sealed down, and sterilized.

MACONNAIS CHEESE.—A French goat's-milk cheese, about 2 inches square by $1\frac{1}{2}$ inches thick.

MADEIRAS.—These wines are produced in Madeira, Grand Canary, Teneriffe, etc. Some of the chief varieties are Malmsey, Bual, Sercial, Finta, etc.

MAIDEN EWE.—A virgin female sheep. See Gimmer.

MAIKASE CHEESE.—A cheese made in Holland in the early summer. It is similar to Gouda.

MAIZE.—The ripe seed of the Indian corn; the whole ear is called the "cob." It is chiefly used in this country for making corn-flour. About 70 per cent. imported into this country comes from the United States; the rest is from Argentina, Canada, Roumania, Russia, etc. A large number of fancy-named preparations now on the market have ground maize as a basis.

MAIZE OIL.—This is used in the manufacture of artificial lard. It is obtained from the seeds of the maize, and is sometimes called "corn oil."

MAJOCCHINO CHEESE.—A cheese made in Messina from cow's, goat's, and sheep's milk, and olive oil.

MALAKOFF CHEESE.—A form of Neufchâtel cheese, about 2 inches in diameter and $1\frac{1}{2}$ inches in thickness.

MALAY APPLE.—This fruit varies in size from 1 to 3 inches in diameter. It has a yellowish, shiny skin, with a large kernel, the pulp being wholesome and agreeable.

MALIGNANT DISEASES.—A name given to diseases which are very rapid in their course, and which end fatally.

MALIGNANT ŒDEMA.—Is caused by the bacillus of malignant œdema. It is rarely seen in this country. The lesions are those of subcutaneous swelling, with emphysema. The carcass soon becomes repulsive and putrid.

MALLARD, OR WILD DUCK.—Is the best known of all wild ducks, and is the source from which our domesticated ducks

are supposed to have sprung. It weighs a little over 3 lbs., but the female weighs slightly less. They are seasonable from November to February.

MALLIN.—A preparation made from the bacilli of glanders, and largely used in the detection of that disease. It is used in a similar manner to tuberculin.

MALT.—This is one of the chief raw materials in the manufacture of beer—It is prepared by soaking the barley, wheat, maize, rye, etc., in water. The wet grain is allowed to germinate and send out shoots till they attain a certain length; they are then checked by heat in a malt kiln. The amount of heat is responsible for the various kinds of malt, such as pale, amber, brown, and black malt, all used for making the various kinds of beers and ales. Good malt should float on water, should not be too hard, but yet crisp, being easily crushed between fingers and thumb.

MALT EXTRACT.—A preparation made by grinding malt and soaking the resulting coarse malt flour in warm water. The thick syrup thus obtained is concentrated till only a certain percentage of water remains—usually about 25 per cent.

MAMMEE APPLE.—This is also called the "South American apricot." It grows in Africa, West Indies, and Central America. It is something like a russet apple in size, shape, and general appearance. The fleshy edible portion is yellow in colour and delicious in flavour. Chiefly obtained here in preserved state.

MAMMITIS.—This is also called "garget," "inflammation of the udder or mammary gland," "mastitis," etc. This is more prevalent in cows. When acute, the cow shows well-marked disturbances, higher temperature, swelling and pain of the udder, is dull and feverish, and takes little food.

Mammitis may result from internal injury, exposure to cold, or irregular or bad milking.

If slaughtered in this condition, in all probability the flesh will be "fevered" and unfit for food; but in all cases it is usual to remove the udder and destroy the same, and in some judge the rest of the carcass on its merits.

MANDARIN, OR MALTESE ORANGE.—This orange is largely cultivated in Malta and the Azores. The fruit is small, flattened, and has a thin rind. The pulp is very sweet and rich, but does not keep so well as the ordinary orange.

MANGE IN CATTLE—*Definition.*—Mange is a contagious skin disease caused by parasitic mites, or acari, belonging to the family *Acaridæ*—a family which includes the mite causing sheep scab.

Three forms of mange occur in cattle—viz., *sarcoptic*, *psoroptic*, and *symbiotic*. These forms are named after the species of parasite which is the cause of the ailment. Sarcoptic mange in cattle is uncommon. The most prevalent forms are the psoroptic and symbiotic, and these frequently exist together in the same animal. Cows are most often attacked.

Symptoms.—The most common sites of mange are the root of the tail and the neck, especially the former. If treatment is neglected, the psoroptic form may spread all over the body; but usually it does not. The biting of the parasites gives rise to an itchy condition of the skin, which causes the animal to rub itself against fixed objects, with the result that the hair over the affected part gets rubbed off. On examining the skin, a considerable amount of scurf may be seen. Red and yellow blood scabs appear on the surface, and there may even be abrasions if the animal has been rubbing against rough objects. If the psoroptic form should spread over the body, the patient may waste away and become greatly reduced in condition. In cases of this kind, however, it will often be found that the wasting is due to some serious internal trouble, such as tuberculosis, which reduces the animal's natural power of resistance to the less serious disease.

It has not infrequently been observed that cows appear to become cured spontaneously when turned out to grass in the spring. This usually means, however, that under open-air conditions the parasites do not increase at the same rate, and hence the active symptoms are merely less marked. When the animals are again stabled in the autumn, the acari (parasites), which have persisted, resume their activity, and this sometimes leads to an erroneous belief that re-infection has taken place.—*Extract, Board of Agriculture Leaflet.*

MANGO.—The fruit of the mango-tree, which grows in the tropics. It is rarely seen in this country, but is imported in the form of preserve and pickle, the latter being made from the unripe fruit.

MANYPLIES.—A butcher's term for the third stomach in cattle.

MAPLE SUGAR.—This sugar is prepared from the sap of the maple-tree of North America. The sap is evaporated, and the sugar

crystallizes, the residue being called "maple syrup." The sugar has a peculiar taste, and is often adulterated with molasses, common brown sugars, glucose, etc.

MAQUEE CHEESE.—A soft, brick-shaped cheese made from cow's milk in Belgium.

MARAVILLA COCOA.—A cocoa in which sugar and sago flour have been added.

MARCHPANE.—A paste made from the sweet and bitter almonds, with sugar, etc., and used in a similar manner to marzipan.

MARGARINE.—A number of methods are now in use for manufacturing margarine. At one time it was made from beef fat only, but now it appears to be a mixture of both animal and vegetable refined oily substances. These fats are churned up with milk to give it a butter flavour, coloured, salted, and packed up. The proportion of cotton-seed oil does not generally exceed 10 per cent. ; if it does, its characteristic flavour then becomes apparent. Palm oil, cocoanut oil, etc., are also used. The palm oil gives a yellow tint, but the colouring matter usually employed is annatto, and occasionally saffron and turmeric. Glycerine is sometimes added to impart a glossy appearance, and sugar and glucose to sweeten it or improve its texture.

It is unlawful to make, or sell, or expose for sale, margarine that contains more than 10 per cent. of butter fat.

Margarine must not contain more than 16 per cent. of water. See Butter.

MARGARINE, FILLED OR IMITATION CHEESE.—This is made from a mixture of skimmed milk, stale butter, lard, and various fats, usually surrounded by a casing of genuine milk cheese. It is largely made in America and Holland. For the legal definition, see the Sale of Food and Drugs Act, 1889, section 25.

MARIENBAD WATER.—A natural mineral water obtained from springs at the town of this name in Bohemia. They contain sulphate of soda, etc., are laxative, and much used in this country.

MARIGOLD.—The plant is grown for the flowers, which are sometimes used to flavour soups, etc. They are also gathered and dried for winter use, and sometimes they are used to colour butter, soups, etc.

MARJORAM.—This plant is grown for the leaves, which are highly valued as an aromatic for all culinary purposes.

MARMALADE.—The term originated in Portugal, and is now used to indicate a preserve made from any kind of sour fruit, such as orange, lime, lemon, apple, apricot.

MAROILLES CHEESE.—A soft cheese made from whole or partly skimmed cow's milk in France. It is made in various sizes, shapes, and qualities.

MARROW IN BONES.—Marrow is found in considerable quantities in the round bones, especially those in the long bones. It should be of a light reddish-yellow colour, not gelatinous, semi-fluid, but fairly firm, and not blood-stained, except in case of disease of the bones. A very soft condition of the marrow, associated with a very dark brown colour and black spots, may be due to disease or decomposition.

Red marrow is, however, found in all the bones of unborn and new-born animals. It disappears in the tubular bones soon after birth, and is replaced by the yellow marrow. The red marrow, however, is found in bones of the skull, trunk, and spinal column, ribs, sternum, and pelvis.

MARSALA.—A Silician wine very much like sherry.

MARVIS.—This is a food derived from fish. It is a dry preparation of flaked white fish put up into packets. The characteristic flavour of the fresh fish is retained. It is of considerable nutritive value, as the flakes contain 57·3 per cent. of proteid. If kept dry, it preserves well, and is a useful article for soups, etc.

MASTICATION.—The process by which the food when taken into the mouth is chewed into small pieces by the teeth and thoroughly mixed with the saliva.

MASTITIS.—See Mammitis.

MATT OF CLOVES.—Usually weighs 80 lbs.

MATT OF SUGAR.—Weighs 1 to 1½ cwt.

MATTIES.—A term used by herring fishermen and curers to denote a second-sized fish.

MAUND.—A measure used in the fish trade ; it varies with the fish being sold. For example, a maund of gurnard equals eighty fish, or 25 lbs. ; sprats, 56 lbs. ; plaice, thirty fish, or 32 lbs. ; and so on.

MAURITIUS OIL.—A poor quality cocoanut oil, which is chiefly used in the manufacture of margarine and butter substitutes, and for the adulteration of butter.

MAW BOUND.—When the paunch in cattle is overfilled with solid food, and its walls so paralyzed as to lose the power of expelling its contents, it is said to be maw bound. It is also called “impaction of the rumen.”

MAZE.—A measure used in the fish trade—615 herrings.

MEAGRIM.—This is another flatfish which closely resembles the sole. The head, mouth, and eyes are large, and the latter are on the left side. The skin is thin, and the scales, which are large and spinous, easily detach. The colour is light brown, without any distinctive markings. It is called by a large variety of names, and often gets served up as lemon sole to the public, especially if filleted sole is wanted. It is a useful fish, being fairly cheap; but it rapidly deteriorates. They are sold by the stone in the wholesale markets. They are caught from the Bay of Biscay to the north coast of Norway.

MEALIE.—A term used chiefly in South America for maize or Indian corn.

MEASE.—A measure used in the fish trade—600 herrings.

MEASLES.—A term denoting the condition of the flesh of various animals produced by the presence of cysticerci. In pork the infection is due to *Cysticercus cellulosæ*, and in beef *C. bovis*.

MEAT BISCUITS.—A biscuit made by mixing very concentrated meat broth with flour, seasoning, etc., afterwards being baked. They are useful for travellers, etc. Proportion of meat is 1 to 2 of flour.

MEAT INSPECTION POINTS.—A pale, moist muscle indicates a young animal, a deeper hue an older one.

Meat that is dry and almost black is not necessarily bad; it may only be wind-dried.

A greenish colour denotes advanced decomposition, though not necessarily stale. It may be due to varying causes, such as being packed up hot, killed in an over-driven or tired condition, etc.

A purple colour denotes fever or imperfect bleeding of the animal.

The meat of a lean animal is inferior.

A bluish colour denotes poor beef.

In chronic diseases the carcass is more or less emaciated.

Absence of fat may be a sign of age, of extreme youth, or poverty of condition, or it may be due to disease.

AVERAGE COMPOSITION OF MEAT, BY MURRAY—PERCENTAGES.

Part of Carcass.	Refuse.	Water.	Protein (N × 6.25).	Fat.	Ash.
<i>Beef, average medium fat :</i>					
Leg	53.9	31.3	9.6	5.3	0.4
Round	7.2	60.7	19.0	12.8	1.0
Aitchbone	16.0	49.5	15.5	18.0	0.8
Rump	20.7	45.0	13.8	20.2	0.7
Thick flank	10.2	54.0	17.0	19.0	0.7
Thin flank	11.4	42.2	13.8	32.3	0.7
Loin	13.3	52.5	16.1	17.5	0.9
Ribs	20.8	43.8	13.9	21.2	0.7
Chuck	16.3	52.6	15.5	15.0	0.8
Brisket	23.3	41.6	12.0	22.3	0.6
Clod and shoulder	18.8	59.4	16.4	4.4	0.9
Shin	36.9	42.9	12.8	7.3	0.6
Neck	27.6	45.9	14.5	11.3	0.7
<i>Beef organs :</i>					
Ox tongues	26.5	51.8	14.1	6.7	0.8
Kidneys	19.9	63.1	13.7	1.9	1.0
Sweetbreads	—	70.9	16.8	12.1	1.6
Heart	5.9	53.2	14.8	24.7	0.9
Liver	7.3	65.6	20.2	3.1	1.3
Lungs	—	79.7	16.4	3.2	1.0
Suet	—	13.7	4.7	81.8	0.2

AVERAGE COMPOSITION OF MUTTON, BY MURRAY—PERCENTAGES.

Part of Carcass.	Refuse.	Water.	Protein (N × 6.25).	Fat.	Carbo- hydrates	Ash.
<i>Mutton, average medium fat :</i>						
Leg	18.4	51.2	15.1	14.7	—	0.8
Loin	16.0	42.0	13.5	28.3	—	0.7
Neck (best end)	21.3	39.9	11.9	26.7	—	0.6
Breast	9.9	39.0	13.8	36.9	—	0.6
Scrag	27.4	42.1	12.3	17.9	—	0.7
Shoulder	22.5	47.9	13.7	15.5	—	0.7
<i>Mutton organs :</i>						
Kidneys	—	78.5	16.5	3.2	—	1.3
Kidney fat	—	3.4	1.8	95.4	—	0.1
Heart	—	69.5	16.9	12.6	—	0.9
Liver	—	61.2	23.1	9.0	5.0	1.7
Lungs	—	75.9	20.2	2.8	—	1.2
<i>Lamb, average medium fat :</i>						
Leg	17.4	52.9	15.9	13.6	—	0.9
Loin	14.8	45.3	16.0	24.1	—	0.8
Shoulder	20.3	41.3	14.4	23.6	—	0.8
Breast	19.1	45.5	15.4	19.1	—	0.8
Neck	17.7	46.7	14.6	20.4	—	0.8

AVERAGE COMPOSITION OF PORK, BY MURRAY—PERCENTAGES.

Part of Carcass.	Refuse.	Water.	Protein (N × 6.25).	Fat.	Carbo- hydrates.	Ash.
<i>Pork (fresh), average medium fat :</i>						
Leg	10.7	48.0	13.5	25.9	—	0.8
Hind-loin	19.7	41.8	13.4	24.2	—	0.8
Fore-loin	18.1	41.8	14.1	25.5	—	0.9
Ham	12.4	44.9	12.0	29.8	—	0.7
Belly	6.2	29.5	6.5	56.6	—	0.4
Head	68.4	13.8	4.1	13.8	—	0.2
Lard (refined)	—	—	—	100.0	—	—
<i>Pork organs :</i>						
Kidneys	—	77.8	15.5	4.8	—	1.2
Liver	—	71.4	21.3	4.5	1.4	1.4
Heart	—	75.6	17.1	6.3	—	1.0

AVERAGE COMPOSITION OF VEAL, BY MURRAY—PERCENTAGES.

Part of Carcass.	Refuse.	Water.	Protein (N × 6.25).	Fat.	Ash.
<i>Veal, average medium fat :</i>					
Hind-knuckle	62.7	27.8	7.7	1.7	0.4
Fillet	14.2	60.1	15.5	7.9	0.9
Loin (whole)	16.5	57.6	16.6	9.0	0.9
Breast	20.6	52.7	15.6	11.0	0.8
Neck (best end)	18.9	59.5	16.0	5.2	0.8
Shoulder (lean)	18.3	59.9	16.9	3.9	1.0
Fore knuckle	40.4	44.1	12.2	3.1	0.6
Scrag	31.5	49.9	13.9	4.6	0.7
<i>Veal organs :</i>					
Calf's heart	—	73.2	16.8	9.6	1.0
Calf's kidneys	—	75.8	16.9	6.4	1.3
Calf's liver	—	73.0	19.0	5.3	1.3
Calf's lungs	—	76.8	17.1	7.0	1.1

Choked meat is indicated by pale colour, soft, wet, and flabby condition of the muscles.

Abnormal conditions are generally due to disease.

Dropsical meat is pale in colour, wet and flabby to the touch.

Frozen beef may be more tender, but has less flavour.

Beef is best during the winter and spring, after being grain or stall fed.

Slink meat has a pale bluish-red, watery, and gelatinous appearance.

When the fat is yellow, oily, or fibrous, it is not considered to be prime beef.

MEAT INSPECTORS' CERTIFICATES.—Below will be found the particulars of the two institutions which grant certificates which are recognized by the Local Government Board.

The **Royal Sanitary Institute** holds examinations in various large towns during the year, and in London in the beginning of May and December. As a rule, a candidate must possess an inspector's certificate before he is allowed to sit, and must show that he has received some practical training in meat inspection.

SYLLABUS OF SUBJECTS.

A knowledge of the laws, by-laws, and regulations affecting the inspection, storage, and sale of meat and other articles of food, including their preparation and adulteration.

Elementary physiology, names, situations, appearances, and methods of identification of the organs of the body in animals used for food. The parts into which the carcasses of animals are commonly cut up for food. Size and weight of the chief internal organs. Position of lymphatic glands in the carcasses of food animals, and the methods of exposing and examining these.

Signs of health and disease in animals destined for food, in the flesh and organs of such animals after slaughter. General disease processes: Inflammation, emaciation, œdema, fatty degeneration, necrosis, caseation, calcification. Common diseases of the respiratory organs, digestive systems, bones, blood, and kidneys. Contagious diseases: Tuberculosis, anthrax; other contagious diseases. Parasitic diseases of the ox, sheep, pig, rabbit, and poultry.

The appearance and characteristics of fresh, frozen, chilled, and pickled meat, poultry, milk, fruit, vegetables, and other foods, including canned foods. The conditions rendering them, or preparations of them, unfit for human consumption.

Marketable marine and fresh-water fishes, crabs, lobsters, shrimps, prawns, etc. Their identification, seasons, and chief sources. Recognition of their condition.

Post-mortem changes in healthy and diseased carcasses; decomposition in foods.

The various methods of packing and storing food; their effect on the food. "Canning" and other methods of preserving. Preparation of animal products in sausages, tripe, lard, and similar forms. Carriage and distribution of foods.

Practical methods and procedure with regard to inspection of food.

The hygiene of cowsheds, slaughter-houses, lairs, and all places where animals destined for food are kept.

Hygiene of markets, dairies, shops, and other places where food is stored, prepared, or exposed for sale.

Practical methods of stalling, preparing animals for slaughter, and humane slaughtering of animals. Transportation of animals and carcasses.

Forms of application for the examinations, to be filled in by candidates, can be obtained at the Offices of the Institute, 90, Buckingham Palace Road, S.W.

THE SANITARY INSPECTORS' EXAMINATION BOARD.

Regulations as to Examinations for the Special Certificate for Inspectors of Meat and Other Foods.

The examination shall be written, oral, and practical, upon the following subjects, so far as they bear upon the duties of an inspector of food :

1. The general appearances and physical characteristics of the several classes of food (including beverages) in ordinary use by man in the United Kingdom ; whether natural, or manufactured, or compounded, fresh or preserved.

2. The changes to which each class of food is liable : decomposition, contamination, deterioration, damage, as bearing upon its fitness for food of man.

3. Methods of preservation of food.

4. Illicit treatment of food substances, including adulteration, dilution, abstraction of parts, substitution or addition of other substances, use of injurious preservatives.

5. General characteristics of health and disease in animals (when alive and after slaughter), including morbid conditions and immaturity, and the principal parasites.

(Diagnosis of disease in the living animal is not expected, nor expert knowledge of microscopy, beyond the use of an ordinary pocket lens—*e.g.*, in the identification of trichinosis.)

6. The name, situation, and appearance of the several organs of the body in animals used for food, including the distribution of the lymphatic glands.

7. The methods of slaughtering and preparing for slaughter and the dressing of carcasses.

8. The hygiene of cowsheds and slaughter-houses, and of

places where animals of any kind destined for the supply of food are kept.

9. The hygiene of markets, dairies, and other places where food is stored, prepared, or exposed for sale, or transported.

10. Seasons as affecting the supply or fitness of certain kinds of food.

11. The methods of inspection and sampling in respect of each class of food, and of inspecting of each class of premises enumerated above.

12. The circumstances in which food of each class is to be passed, as of good or second quality ; or to be regarded as adulterated, falsified, unfit for the food of man, or otherwise in contravention of the law, and to be dealt with under statutory powers. The procedure to be adopted in each case.

13. The Acts, By-laws, Regulations, and Orders relating to food and the inspection and importation of food.

All communications to be addressed to the Hon. Secretary, Sanitary Inspectors' Examination Board, 1, Adelaide Buildings, London Bridge, London, E.C.

The following books are recommended to candidates for this examination :

"Meat and its Inspection," by Litteljohn. Price 10s. 6d. net.

"Practical Meat and Food Inspection," by Robertson. Price 10s. 6d. net.

"Inspection of Fish, Poultry, Game, Fruit, Nuts, and Vegetables," by A. H. Walker. Price 5s. net.

The above books may be obtained direct from the publishers ; also, a very useful book to familiarize the candidates with the type of questions set at this examination is "Meat and Food Inspectors' Examinations : Model Answers to Questions set," by Billing and Walker (the author). Price 3s. 6d. net.

MEDICATED WINES.—The number of the wines of this class is increasing. They are put on the market with special names, but some contain meat extract, sherry, port, coca-leaves, cocaine, etc.

MEDLARS.—This fruit is pear-shaped, brown in colour, with an unusually large eye or disc at the top. This is a fruit which is not very common, yet one the average inspector knows little about. He should, therefore, be careful not to seize them as unfit for food, for they are practically uneatable until they have gone

through a natural process closely resembling decay. The medlar, apart from dessert, is also used for jelly, cheese, and as a sauce for game. They are grown in this country.

MEDULLA OBLONGATA.—The name given to the central part of the brain, which is situated at the lower part of the skull, just where the spinal cord joins the brain. It is the centre from which most of the principal cranial nerves start.

MELANOSIS.—Parts and organs of a carcass affected with melanosis appear to be sprinkled with black ink. It is the usual practice to condemn them as unfit for food.

MELONS.—The varieties of melons are very numerous. They differ so very much in size, shape, and colour that it is difficult to adequately describe them. Some are round, flat, oval, or of elongated shape. The colour also varies from white to black, and almost every shade of green and yellow, while the skin or surface of some is smooth, rough, netted, wrinkled, or warted. They are delicious eating, and have a soft, sweet, aromatic flesh; but some of the common yellow melons are not of very good flavour. The foreign melon is in season from July to October, while the home-grown, cultivated under glass, may be several months earlier. Large supplies are imported from Guernsey, France, Spain, Italy, and other Mediterranean countries, as well as some from South Africa. Some melons when ripe show a yellow rind. They are judged by pressing the ends, which give readily when they are in good condition. The flesh of the ordinary melons is yellowish, but with some varieties it may be white, greenish, salmon-coloured, or red. This is notably so in the case of those arriving from Cantalupo, near Rome. When melons are unfit for food, the stalk end shows brown or discoloured, is very soft, and often mouldy and wet.

MELT.—See Spleen.

MEMBRANES.—Thin white animal tissue which covers the organs.

MESENTERIC DISEASE.—This disease affects cattle. The mesentery is often the seat of abscesses of a tubercular nature. When alive, the animal's skin has a dirty, yellow, and scurfy appearance, is hide-bound, and is usually emaciated. Often when in this condition they are known as "piners," "mincers," "clyers," etc.

MESENTERY.—A fold of peritoneum which retains the small intestines in their place in the abdominal cavity. It contains

a great deal of fat in well-fed animals, and has a chain of lymphatic glands along it which are of great importance in meat inspection.

MICROCOCCUS.—A general term applied to any small round microbe.

MIDDLES AND RUNNERS.—These are the narrow intestines of cattle, the former being the wider of the small intestines, and are from 18 to 35 feet in length.

MIDDLING.—The coarser part of flour. It is a rather common, inferior kind of flour.

MIDRIFF.—A butcher's term for the diaphragm.

MILD ALE.—See Ale.

MILIARY TUBERCULOSIS.—This is caused by the bacilli entering in large numbers into the blood-stream. The Local Government Board recommend that the entire carcass and all organs should be seized whenever there is miliary tuberculosis of both lungs.

MILK.—The composition of milk depends upon a number of circumstances. The breed of the cow influences the quantity and quality. Alderneys probably give the most fat, Longhorns most casein; and while some breeds give a large supply of average quality, others give similar supplies of poor quality. The age of the cow has also some influence on the milk: very young and old cows give milk of poorer quality. The time that has elapsed since the birth of the calf also affects the quality of the milk. The quantity and quality of the food have a marked effect on the character of the milk. Carrots, beets, mangolds, etc., increase the quantity of sugar in the milk; while large quantities of watery foods eventually cause a thin, poor milk to be given by the cow. Musty or mouldy foods affect the taste of the milk. Cabbage, rape, turnip, swedes, brewers' grains, etc., often give the milk a peculiar flavour. The morning's milk contains more fat than the evening's. The fore-milk is deficient in fat, while the strippings are rich in fat. From November to January the milk is at its best, being rich in fat and solids other than fat. February to April: During these months the fat is less, though other solids remain stationary. From May to August the fat remains low; while during July and August the milk is poorest in all respects, but improves during September and October. The health of the

animal also has some effect on the quantity and quality of the milk. The maximum amount of milk is generally produced between the fourth and fifth calf. The average amount of milk per cow per day is about 12 quarts.

Adulterations.—Milk is adulterated by the abstraction of the fat or cream; the addition of water or skimmed milk, and the use of injurious preservatives. Annatto, caramel, or some coal-tar dye, may have been added to colour the milk and disguise other adulterations.

Board of Agriculture Milk Regulations.—Whole milk to contain not less than 8·5 per cent. of milk solids other than milk fat; not less than 3 per cent. of milk fat.

Skimmed or separated milk must contain not less than 9 per cent. of milk solids.

Preservation of Milk.—The freer milk is kept from bacteria, the longer will it keep. Milk should be so treated that all bacteria will be destroyed. Probably one of the most common methods of preserving milk is to lower its temperature as soon after being drawn from the cow as possible. The lower the temperature of the milk, and the longer it can be kept cold, the greater will be its keeping qualities. Other forms of preservation are discussed under the headings of Pasteurization, Sterilization, Condensed Milk, Desiccated Milk, etc.

Preservatives in Milk.—The commonest preservative is boracic acid, but carbonate of soda, salicylic acid, formalin, are also used. The Departmental Committee of the Board of Agriculture in 1901 advised that the use of any colouring matter or preservative in milk be made an offence under the Sale of Food and Drugs Act. A preservative may affect the consumers of the milk, especially young children and invalids; it also retards the growth of bacteria, without destroying it.

Tainted Milk.—This may arise from various causes, among which are the following: The cows may be suffering from udder troubles and other diseases; cows wading in stagnant water, the filth dries on the udders, etc., and finally gets rubbed off into the pail; the use of foods which impart objectionable odours and flavours to the milk; foddering cows at meal-times, especially with dusty hay, etc.; the cows drinking dirty and impure water, or the pails and utensils being washed in same; general lack of cleanliness

in milking ; milk left in the cowshed too long, consequently it absorbs odours, bacteria, etc. ; the milk being kept in badly ventilated dairies, or not being strained and cooled immediately after milking.

MILK BREAD.—The name should be used only for bread made wholly or partially with milk in place of water. A little lard in the bread, or glaze on the outside, is often used to imitate this kind of bread.

MILK FEVER, OR PARTURIENT APOPLEXY.—Parturient apoplexy, also called “milk fever,” “dropping after calving,” etc., is a disease of cows, more especially of milking breeds, and chiefly occurs at the time when they have attained their fullest milking capacity. It has been recognized for generations, and has been a fruitful cause of loss to the agricultural community. the deaths in many instances averaging from 40 to 60 per cent. of all cows attacked.

Symptoms.—The disease generally commences within from twelve to forty-eight hours after an easy parturition, but it may be delayed for a few days longer. (In only extremely rare cases has it come on preceding parturition, or later than six days afterwards.)

The first noticeable symptom is sudden cessation of feeding, rumination, and lacteal secretion, with uneasiness, moaning, a dull expression of the eyes, padding of the hind-legs, rapid breathing, swaying from side to side, and knuckling over the fetlocks. Later on the cow drops. This may be succeeded by a stage of excitement, characterized by the throwing about of the head and bellowing ; but more frequently the cow passes into a semi-conscious, sleepy condition, and is unable to rise. She remains in this state, moans slightly, and assumes a characteristic posture, with her neck flexed laterally, and her nose touching the point of her shoulder.

As the disease progresses, the cow becomes comatose, is unable to see, to swallow, or to void excreta ; distension of the belly sets in, and death supervenes.

If the animal has been slaughtered in the early stages, very little change is noticeable in the flesh. If the disease is advanced, the flesh is very dark in colour, sticky, and smells offensively. The lymphatic glands are generally inflamed and enlarged. The hind-quarters are specially affected, and are unmarketable, and usually condemned.—*Partly extracted from Leaflet 96, Board of Agriculture.*

MILK-SUPPLY AND INSPECTION.—That we have much to learn from other countries in the supervision and inspection of our milk-supply no food inspector of experience will deny. The following matter is taken from a poster which is to be found in all the dairies shipping and supplying milk to the City of New York. It is much to be regretted that similar regulations are not to be found in our dairies, cowsheds, and milkshops, which can be seen by employés and the public generally.

[To be Posted in all Dairies.
Department of Health. The City of New York.]

RULES AND REGULATIONS WHICH MUST BE OBSERVED BY FARMERS AND DAIRYMEN IN THE CARE OF COWS AND HANDLING OF MILK SHIPPED TO THE CITY OF NEW YORK.

The Cows.

1. The cows must be kept clean.
2. Manure must not be permitted to collect upon the tail, sides, udder, and belly of any milch cow.

The Stables.

1. Cow stables must be well lighted and ventilated.
2. Floor must be tight and well drained.
3. Manure must be removed from the stalls and gutters before the morning milking and also the afternoon milking, where the cows remain in the stable all day.
4. Walls and ceilings must be kept clean.
5. The ceiling must be so constructed that dust and dirt thereon shall not readily fall to the floor or into the milk.
6. Stables must be whitewashed at least once a year.

The Water-Supply.

1. The water used in the barn and for washing milk utensils must be free from contamination.
2. It must be kept clean, and must not be used for any purpose except the handling of milk.

The Milkers.

1. No person having any communicable disease, or caring for persons having such disease, must be allowed to handle the milk or milk utensils.
2. The hands of the milkers must be carefully washed immediately before milking.

The Utensils.

All milk utensils, including pails, cans, strainers, and dippers, must be thoroughly clean, and must be washed and scalded after each using.

The Milk.

1. All milk from diseased cows must not be shipped.
2. The milk must not be in any way adulterated.
3. The straining of the milk must be done in the milk-house only.
4. All the milk must be cooled to a temperature not above 55° within two hours after being drawn, and kept thereafter below that, and cooled to 50° or less, if not afterwards delivered at the creamery twice daily.
5. The use of any preservative or colouring matter is an adulteration, and its use by the producer or shipper will be sufficient cause for the exclusion of his product from the City of New York.

RECOMMENDATIONS.

In addition to the preceding rules, the Department makes the following recommendations :

The Barn-Yard.

1. It should be well drained and dry, and should be as much sheltered as possible from the wind and cold.
2. Manure should not be allowed to collect in the barn-yard, and should not at any time be in contact with the stable or milk-house.

The Stable.

1. The cow-house should have an abundance of light and ventilation. The ventilation should preferably be from the top.
2. There should be at least 600 feet of air-space for each cow.
3. It is desirable that the place where the cows are kept be used for no other purpose. A cow-barn should not be used as a storage-place for straw, hay, or other foods, or as a waggon or tool shed, as the dust and dirt which accumulates in a place of this character is liable to drop into the milk while being drawn.
4. The stable floor should be tight, and be of some non-absorbent material.

5. Cement or brick floors are the best, as they can be more easily kept clean than wood or earth.

6. If the space over the cow is used for storage of hay, the ceiling should be made tight, to prevent chaff and dust falling through. The practice, somewhat common amongst farmers, of packing hay, etc., on loose poles over the cow is exceedingly bad, since it invites the collection of dust and cobwebs, and the difficulty of keeping the stable clean is increased.

7. The stable should be whitewashed twice a year.

8. The manure gutter should be from 6 to 8 inches deep, and should be kept free from manure.

9. The use of land plaster or lime is recommended upon the floors and gutters.

10. The flooring where the cows stand should be short enough so that all manure will be dropped into the gutter, and not upon the floor itself.

11. The floor should be swept at least an hour before milking, in order that the dust may have a chance to settle before the milking is begun.

12. If individual drinking-basins are used for the cows, they should be frequently drained and cleansed.

The Cows.

1. The cows should be kept at all times in a healthy condition, and an examination by a veterinary surgeon should be made twice a year.

2. The cows should be groomed daily, and all collection of manure, mud, and other filth should not be allowed to remain upon the flanks, sides, udders, or bellies during milking.

3. The clipping of long hairs from the right side of the cows is of assistance in preventing the collection of filth, which may drop into the milk.

4. The tails should be well cut, so that the brush should be well above the ground.

5. In winter the tail may be clipped.

6. The cows should be bedded with sawdust, shavings, dried leaves, straw, or some equally clean material.

7. The use of horse manure for bedding is to be condemned.

8. To prevent the cows lying down and getting dirty between cleansing and milking, a throat latch of rope or chain should be fastened across the stanchions and under the cow's neck.

The Milking and Milkers.

1. The milkers should be clean.
2. Their hands should be thoroughly washed with soap and water, and carefully dried on clean towels before milking.
3. Clean overall and jumpers should be worn during the milking of the cows, and should be used for no other purpose; and when not in use, should be kept in a clean place, protected from dust.
4. The hands and teats should be kept dry during milking.
5. The practice of moistening the hands with the milk is condemned.
6. The first few streams of milk from each teat should be rejected, as this contains more bacteria than the rest of the milk.
7. All milk drawn from the cows thirty days before and ten after calving should be rejected, and also all milk from diseased cows.
8. The pails in which the milk is drawn should have as small an opening at the top as can be used for milking. This renders the collection of dust less likely.
9. The milking should be done rapidly and quietly, and the cows should be treated kindly.
10. The fodder should not be fed to the cows during or just before milking, as dust therefrom will fall into the milk.

The Milk.

1. The milk should be removed as soon as drawn to the milk-house, and strained and cooled to the proper temperature at once.
2. A good plan is to strain the milk into cans which are standing in water which reaches the neck of the can.
3. The more rapidly the milk is cooled, the safer it is, and the longer it will keep sweet.
4. Ice should be used in cooling, as very few springs are cold enough for this purpose.
5. If aerators are used, they should stand where the air is free from dust or odour, and on no account should they be used in the stable.
6. Milk-strainers should be kept exceedingly clean, and scalded a second time before using; and if cloth strainers are used, several of them should be provided, in order that they may be frequently changed during the straining of the milk.

MILK, THE COLOUR OF.—The colour of the milk from cows in their normal and healthy state, should be creamy, but this varies according to—

1. The animal and breed.
2. The influence of the season.
3. The composition of the food.
4. The state of gestation or non-gestation.
5. The time that has elapsed since the last calving.
6. The state of health.

Milk given immediately after calving is nearly yellow, but this gets paler as time increases. The milk from a Jersey cow is yellower, while that from a Dutch cow whiter than that given by the majority. Cows fed in the field, as a rule, give yellow milk; while carrots, parsnips, maize, barley, and oil-cakes act in the same way. Hay, beetroot, bran, give a whiter milk.

MILT.—The soft roe of fish. See Spleen.

MINCERS.—Thin old animals used by the sausage-makers because of their cheapness and the small quantity of fat they contain. Often they are driven or excited before being killed. This makes the animal bleed imperfectly, and consequently the meat is gummy, and sticks well together when chopped.

MINERAL WATERS.—A term applied not only to natural mineral waters, but to most aerated drinks.

The following is a short summary of the principal natural waters, with their properties, now on the market, compiled by W. N. Edwards, F.C.S. :

Æsculap .. Saline and aperient.	Fachingen .. Alkaline, chalybeate.
Aix-la-Cha- pelle Sulphurous.	Ferruginaris .. Ferruginous.
Apenta .. Aperient.	Franz-Joseph Saline and aperient.
Apollinaris .. Table water.	Friedrichshall Saline and aperient.
Biebrach .. Table water.	Gerolstein .. Table water.
Bilin Table water.	Giesshubler .. Alkaline.
Birmensdorf Saline and aperient.	Godesberger Gaseous table water.
Bonnes .. Sulphurous.	Harrogate .. Sulphurous.
Bourboule .. Arsen. ferruginous.	Homburg .. Saline, chalybeate.
Buffalo Lithia Alkaline, lithiated.	Hunyadi-Janos Saline and aperient.
Bussang .. Chalybeate.	Kalzmar .. Gaseous table water.
Carlsbad .. Alkaline, lithiated.	Kissingen .. Saline and sulphur- ous.
Catley Abbey Alkaline, acidulated.	Kreuznach .. Saline, bromo- iodized.
Condal .. Saline and aperient.	Kronenquelle Saline, sodio-lithi- ated.
Contrexéville Alkaline.	Leamington
Ems Alkaline and saline.	Spa .. Aperient.
Enghien .. Sulphurous.	
Evian .. Alkaline and gaseous.	

Marienbad ..	Alkaline, chalybeate.	St. Marco ..	Lithiated, gaseous.
Mont Doré ..	Alkaline, muriated.	St. Moritz ..	Alkaline, chalybeate.
Neuenahr ..	Alkaline and gaseous.	Salvator ..	Alkaline, lithiated.
Oberbrunnen	Lithiated.	Saratoga ..	Saline.
Orezza ..	Ferruginous.	Schwalbach ..	Chalybeate.
Pougues ..	Alkaline.	Selters ..	Alkaline, acidulated.
Pullna ..	Saline and aperient.	Soultzmatt ..	Alkaline.
Purton Spa ..	Iodized.	Spa ..	Chalybeate.
Pyrmont ..	Ferruginous.	Sulis ..	Gaseous table water.
Reginaris ..	Table water.	Taunus ..	Gaseous table water.
Rhens ..	Table water.	Tarasp ..	Saline.
Roisdorf ..	Alkaline, muriated.	Thonon-les-	
Rosbach ..	Table water, gaseous.	Bains	Alkaline and gaseous.
Royal Hun-		Vals ..	Alkaline, acidulated.
garian ..	Salient and aperient.	Vichy ..	Alkaline, acidulated.
Royal Nieder		Villacabras ..	Saline and aperient.
Selters ..	Alkaline and acidulated.	Vittel ..	Sulphated, ferruginous.
Royat ..	Saline, arsenicated.	Wiesbaden ..	Saline.
Rubinat ..	Saline and aperient.	Wildungen ..	Alkaline.
St. Galimer ..	Table water, gaseous.	Woodhall ..	Saline, bromo-iodized.

MINIATURE WENSLEYDALE.—Another name for Little Wensleydale cheese.

MINT, OR SPEARMINT.—There are several kinds of mint grown, as peppermint, pennyroyal mint, and spearmint. The leaves and the ends of the shoots are used for seasoning and for mint sauce. It is usually sold in the green state from May to August.

MIRABELLE.—An oval-shaped plum, yellow in colour, grown largely in France, and imported preserved to this country.

MIXED SPICE.—Also called “pudding spice.” It is made by mixing together cinnamon, cloves, nutmeg, caraway, coriander seed, ginger, etc., with rice, flour, and sugar. It is often adulterated, and, owing to its nature, is not easily detected.

MOCK CAPERS.—The real capers are sometimes substituted, and the unripe seeds of the common flowering nasturtium are used. They are boiled for about twenty minutes in vinegar, just covering the seeds, afterwards straining and bottling up with white pepper and white vinegar. Green peas are sometimes pickled as above and used as capers.

MOCK TURTLE SOUP.—The basis of this is the gelatinous substance found in the scalp of the calf, together with good brown soup stock, etc.

MODIFIED MILK.—Pure cow's milk modified so as to closely resemble mother's milk. This is done by the addition of cream

and sugar, or lime water, or whatever else is needed to adapt it to the baby stomach.

MOLASSES.—This is the liquid or syrup which is drained from sugar, and from which sugar no longer crystallizes on boiling. It is usually darker in colour than treacle, and more impure.

MOLLIES, OR MOLLEYS.—A measure used by foreign fruit-growers.

MONK-FISH, THE.—Is also called the "angel-fish" and the "fiddle-fish"—the former on account of the wings being likened to the cowl of a monk or the wings of an angel, while the latter from the supposed resemblance to the shape of a fiddle or violin. By naturalists it is thought to be the connecting-link between the dogfish and skate. It resembles the skate in appearance, has a flat body, a dark brown colour, with lighter spots or markings. It is often sold in the fried-fish shops as skate.

MONT D'OR CHEESE.—A soft cheese made from the milk of the cow or goat. It is made largely in France, and is a small cheese weighing about 5 to 6 ozs. It has a distinct flavour and a creamy interior.

MOOR FOWL.—This name is given to the blackcock, but the red-legged ptarmigan is chiefly known by this title. They are not much eaten, and are seldom seen at the game dealers'. They also go under the name of "moor-cock" or "moor-hen."

MOOR ILL.—A term used to denote redwater, which see.

MORBID CONDITIONS.—Summary of morbid conditions to be noted in meat inspection, grouped in the respective localities in which they occur, as set out by Messrs. Leighton and Douglas in vol. iii. of "The Meat Industry and Meat Inspection," reproduced here by special permission :

1. **Skin.**—Wounds, bruises, contusions, emphysema, anthrax, actinomycosis, warbles, decubitus, congestion, hæmorrhages, erysipelas, navel inflammations, thickening in boars, black pigmentation, mange, and other parasitic affections, œdema, tumours, and ulcerations.
2. **Mouth.**—Mucous inflammations, traumatic inflammations, foot and mouth disease, ulcerative stomatitis, cysticerci (muscles), results of acids and alkalis, diphtheritis (calves), œdematous swellings.
3. **Tongue.**—Actinomycosis, œdema, foot and mouth disease, glossitis, ulcers.

4. **Pharynx and Œsophagus.**—Pharyngitis, anthrax, papillomata, hæmorrhages, swine erysipelas, worms.
5. **Stomach and Intestines.**—Gastric inflammations, anthrax, ulcerations, nematode nodules, enteritis, swine fever, parasites, tuberculosis.

PARASITES OF STOMACH AND INTESTINES

Cattle.—*Gastrophilus pecorum* and *hæmorrhoidalis*, *Amphistomum conicum*, *Strongylus contortus*, *S. ostertagi*, *S. curtecei*, *S. oncoporus*, *S. harkeri*, *S. retortæformis*, *Moniezia expansa*, *Pentastomum larvæ*.

Sheep.—*Strongylus contortus*, *S. ostertagi*, *S. curtecei*, *S. retortæformis*, *S. filicollis*, *Moniezia expansa*.

Swine.—*Filaria strongylina*, *Gnatostomum hispidum*, *Ascaris lumbricoides*.

6. **Peritoneum.**—Calcification, melanistic deposits, anthrax, tuberculosis, emphysema (swine), peritonitis, hæmorrhages, sarcomata, parasites (*Cysticercus tenuicollis*).
7. **Liver.**—Fatty degeneration, capillary angiomas, atrophy, jaundice, waxy degeneration, bacterial necrosis, sarcomata, echinococcus cysts, *Cysticercus tenuicollis*, actinomycosis, putrefactive decompositions, infarcts, foetal necrosis, rupture, chronic venous congestion, melanosis, hæmorrhages, intestinal hepatitis (cirrhosis), adenoma, tuberculosis pentastomum, coccidiosis, abscesses, bile-staining.
8. **Kidneys.**—Congenital malformations, nephritis, tuberculosis, infarcts, sarcoma, *Eustrongylus gigas*, hydronephrosis, pyelonephritis, fatty degeneration, white spot kidneys, carcinoma, cysts.
9. **Testicles.**—Tuberculosis, botriomycosis.
10. **Uterus.**—Fœtal presence, septic metritis, tuberculosis, myomata.
11. **Udder.**—Melanosis, simple mastitis, septic mastitis, actinomycosis, œdema, tuberculosis, tumours, echinococci.
12. **Spleen.**—Perisplenitis, anthrax, abscess, sarcomata, echinococcus, *Pentastomum larvæ*, infarcts, tuberculosis, leucocythemia, tumours, carcinomata, distomum hepaticum, swine erysipelas, torsion.
13. **Larynx, Trachea, Bronchi.**—Inflammations, tuberculosis, syngamus trachealis, actinomycosis, bronchitis, papilloma.

14. **Lungs and Pleura.**—Pleurisy, atelectasis, melanosis, lobar pneumonia, infarcts, verminous pneumonia, pseudo-tuberculosis, actinomycosis, *Cysticercus tenuicollis*, *C. bovis*, *C. cellulosa*, stomach contents, empyema, emphysema, calcification, broncho-pneumonia, hæmorrhages, mycotic pneumonia, liver fluke, echinococcus cysts, pleuro-pneumonia, swine fever, inspiration of blood.
15. **Lymphatic Glands.**—Tuberculosis, œdema, actinomycosis, anthrax, *Pentastomum larvæ* (mesenteric), echinococci, sarcomata, carcinomata, swine fever, adenitis, cysticerci.
16. **Nervous System.**—Meningitis, *Æstridæ larvæ*, neuromata, abscess, tuberculosis, cœnurus cerebri, echinococci, *Cysticercus bovis* and *cellulosa*.
17. **Skeleton.**—Rickets, fractures, actinomycosis, echinococci, osteomalacia, tuberculosis, osteomyelitis, arthritis.
18. **Muscles.**—Rupture, hyaline degeneration, tumours, botriomycosis, hæmorrhages, myositis, actinomycosis, cysticerci, trichinosis.

MORELLE, OR MOREL.—This is a species of mushroom or edible fungus found growing in the woods, etc., in this country and on the Continent. It is used chiefly for flavouring soups, gravies, etc. It is also imported in a dried state from the Continent. It is one of the few edible fungi which occur in considerable abundance in the late spring and early summer. It possesses the advantage of having no ally of a deleterious nature with which it may be confounded. Both the cap and stem are hollow, and the surface of the cap bears a number of prominent ridges, joined together to form an irregular network.

MORTIFICATION.—The death of a part of a living body.

MOSELLE WINES.—These wines are made in the district of Moselle, in Germany. They are excellent wines of dry flavour, and are made in two kinds—still and sparkling. Some of the best known kinds are—Zeltinger, Brauneberger, Berncasteler, Schwarzenberger, Stephansberger, Lieserer, Niederberg, etc.

MOSS BUNKERS.—See American Anchovies.

MOULD ON MEAT.—Vegetable moulds are found on all meats, but especially on dried meat, such as hams, bacon, and smoked tongues. The mould may be green, black, white, etc., and in the case of dried and cured meats are not thought to be injurious. Consequently, they do not call for any attention on the part of

the food inspector. With regard to the frozen and fresh meat, a variety of opinion and procedure is prevalent, and no definite standard has up to the present time been fixed. The inspector should, therefore, tread cautiously, and when only a few mould-spots are present, no notice need be taken, providing it is otherwise all right. Should the meat be freely covered with white or, worse still, black or green mould-spots, it will be wise to detain it for further opinion.

MOULD ON RABBITS.—In a season this causes great loss of money to the frozen rabbit trade, and a great waste of food to the general public. Mould seems directly traceable to the variation of temperature, and this difference in temperature probably occurs while the cases of rabbits are being conveyed from the cold stores to the ship's cold chambers. It may also occur when the goods are being unloaded in this country. It starts first as white spots, and in a few days the carcasses become quite white and totally unfit for human food. It usually appears on surfaces which have been originally frozen, then defrosted and refrozen. The English rabbit is quite free from mould; it decomposes and becomes offensive before mould grows on it. No standard of mouldiness exists in this country by which rabbits may be condemned; and here, again, the difference among inspectors is to be regretted, as not only unfair to the trade, but as detrimental to the status of the food inspector. We find one inspector condemning rabbits with only a few mould-spots on, although recently it has been proved that these moulds are not dangerous, while another inspector allows the spots to be wiped off and passes the rabbits.

Other cases have occurred in which crates containing one or two mouldy rabbits have been entirely condemned. On the other hand, some inspectors allow the mouldy rabbits to be removed and destroyed and the rest passed. It is much to be regretted that the Local Government Board does not fix a standard with regard to mould-spots on rabbits and other refrigerated and frozen meat.

Rabbits also reach this country in a musty and tainted condition; and as this condition is very difficult to tell when in a frozen state, they consequently get past the port inspectors. When they are thawed out in the market, this soon becomes evident to the inspector.

MOULD ON TURKEYS.—The green fungoid growth sometimes seen on turkeys is the same as that which grows on hams. As a

rule it is not seen on fresh poultry, unless the skin has been allowed to become damp. Should stored birds become damp through a rise in the temperature, they will soon be affected, and here the variation of local authorities begins, as some seize the birds, while others do not.

MOULDINESS OF WINE.—In this disease mould plants are found growing on the surface of the wine. Its cause is uncertain.

MOUNTAIN SPINACH.—See Orach or Orache.

MUCOUS MEMBRANE.—The lining of all internal passages that communicate with the exterior.

MUCUS.—A thin glairy fluid secreted by the mucous membrane of the body. It is greatly increased in quantity by inflammation, but is always present in some degree.

MUFFIN.—A light spongy cake baked on an iron plate over the fire.

MULBERRIES.—These are commonly grown in this country, but to a much larger extent in the East. They are seldom seen in the market, as they decompose very rapidly, and are only fit to eat when quite ripe.

MULLET.—See Red and Grey Mullet.

MURIATED WATERS.—These usually hold in solution sodium chloride, or common salt, chloride of lithia, and iodo-bromated waters.

MURLINS.—An edible seaweed. See Badderlocks.

MURRAIN.—A name given to a number and variety of disorders, generally understood to mean an infectious disease of cattle.

MUSCATELS.—A fine quality of raisins, which are grown and cured chiefly in the Malaga and Valencia districts. They are usually imported in bunches in layers in boxes between white paper, and are chiefly used as dessert. They are sometimes called "raisins of the sun."

MUSCOVADO.—The raw sugar from which the molasses have been drained in tubs.

MUSHROOMS.—There are about thirty varieties of the edible mushroom. The best methods of distinguishing the edible from the poisonous have been given by several learned scientists, and are as on the following page.

Edible Mushrooms.—1. Grow in dry, airy places.

2. Are generally white or brownish.
3. Have a compact, brittle flesh.
4. Do not change colour by the action of the air when cut.
5. Juice watery.
6. Odour agreeable.
7. Taste neither bitter, acrid, nor astringent.

Poisonous Fungi.—1. Grow in clusters in woods and dark, damp places.

2. Usually with bright colour.
3. Flesh fibrous, soft, and watery.
4. Acquire a brown, green, or blue tint when cut and exposed to the air.
5. Juice often milky.
6. Odour commonly powerful and disagreeable.
7. Have an acrid, astringent, acid, salt, or bitter taste.

The wild field mushrooms are in season in August, September, and October; but the cultivated are in season all the year round, and are grown in hot-beds, in disused railway tunnels, arches, caves, etc.

They should be fresh, clean, and unbroken, and, when gathering, great care is necessary so that they are not bruised.

For market purposes they are divided into three classes: The "broilers" are fully opened; "cups" are the half-opened; and "buttons" are the rounded and undeveloped mushrooms. They are sent to market and exposed for sale in baskets weighing from 3 to 6 lbs., as well as in larger baskets.

MUSHROOMS (DRIED).—These are imported for making ketchup, sauces, etc. Small quantities are also dried in this country, and sold in packages weighing about 1 cwt. Doubt sometimes exists as to the presence of poisonous fungi.

MUSSELS.—Mussels are in the best condition between August and November. The season lasts from July to April. The average size is $2\frac{1}{2}$ to 3 inches. Large quantities are sent to market from the Wash and Holland. The sex of the mussel is easily told towards spawning-time. The male exhibits a whitish or reddish-yellow colour, while the female is a deep red colour. Mussels readily embody the typhoid bacillus, even to a greater extent than oysters or cockles. They have a redeeming feature, however: they cleanse themselves of any pollutions in about four days, if put into water free from contamination.

Inspection.—Bad mussels when in bags are easy to test, for if the bags are shaken, the mussels rattle; and on opening the bag the mussels are found to be open, thus indicating they are unfit for food. Probably they will smell offensively. It is, indeed, very rare that mussels gape when alive, and then only slightly.

MUSTARD.—This is a yellow flour obtained by grinding down the seeds of the mustard-plant. Several varieties are grown, but the black-and-white mustard-seeds are chiefly used. It contains a volatile, acrid oil, which is developed in it when mixed with water. As a condiment it promotes appetite and quickens digestion. It is often adulterated with starch, turmeric, cayenne pepper, flour, buckwheat, rice. Martin's yellow is sometimes used to colour white adulterating substances.

MUSTARD AND CRESS.—Are two of the most popular salad plants in cultivation in this country. They have little nutritive value, but they are stated to be rich in salts. They serve to introduce large quantities of water into the body, and are thus very refreshing in hot weather. The early mustard and cress are grown under glass, but the outdoor are in season in the spring and summer months. Large quantities of rape are grown and marketed, and sold for salads as mustard and cress. This may be detected by turning out the punnet, when the black scales of the rape seeds are easily distinguished from the yellow of the mustard on the roots.

N.

NARBONNE HONEY.—A very white honey from the district of Narbonne, France. It is a superior kind, and is gathered by the bees from the flowers of the rosemary-plant.

NASAL GLUT, OR OZÆNA.—A copious and foetid discharge from one or both nostrils of animals, seldom met with in cattle.

NASTURTIIUM, OR INDIAN CRESS.—This plant is of two kinds, the dwarf and the climbing. It is common in the gardens of this country, but is seldom used for food. The leaves, flowers, and young green plants are picked and used in mixed salads. The green seeds are also sometimes used in salads, but they also make a good pickle, and are in season from July to October.

NATURAL DEATH.—A term used in meat inspection to indicate death as the result of disease, accident, choking, etc., and where the animal has not been properly slaughtered and bled.

NATURAL DEATH (APPEARANCE OF CARCASS).—It sometimes happens that animals die naturally or before the butcher can be procured to slaughter them. In this case it is necessary for the inspector to use his judgment as to the cause of death, such as accident, etc.

The appearance of the carcass is untidy, and usually not properly dressed; it is very moist and soft. The exterior, or bark, shows very red and blotched. The bloodvessels are often full of blood, and the organs, if available, will contain large quantities of blood.

Decomposition rapidly sets in, and the fat assumes a greenish tint.

NATURAL WINES.—Are those in which fermentation has been allowed to go its full extent; as a rule they are poor in alcohol and sugar.

NAVEL ILL AND JOINT ILL OF LAMBS.—This disease is met with under such local names as "big joint," "joint evil," "schooley," in most parts of the British Isles.

Cause.—The disease is caused by the entrance into the system of the newly born lamb, through its unclosed navel, of germs whose special function is the formation of pus or matter. It is possible, however, that germs which are not pus-forming, but which may cause serious illness in lambs, may also enter the system of lambs by the navel wound. These germs are widely distributed in nature, but are found in greater numbers, and probably in a more virulent form, on those spots frequently soiled by animals, such as farmyards, lambing-yards, etc., than in the fields. For this reason a permanent lambing-shed, or a site for a temporary yard, used continually, is a more dangerous place than the pastures.

Symptoms.—The lambs are noticed a few days after birth to be moving stiffly, and to be disinclined to walk or suck. They lie down continually, and with difficulty are got on to their legs. Their joints begin to swell, and often it is apparent that abscesses have formed on them—the hock, stifle, point of the shoulder and knee being the joints usually affected. In the worst cases abscesses form in different parts of the body (particularly the kidney and liver), and kill the lamb by exhaustion, or by the poisons produced by the germs of the disease. Other

germs which do not necessarily cause "joint ill" may give rise to blood-poisoning, and kill the lambs more quickly, with symptoms of brain trouble and diarrhœa.—*Extract from Board of Agriculture Leaflet.*

NAVEL, OR SUNKIST ORANGE.—A seedless orange, so called from the peculiar protuberance at the apex. It is grown in California, Jaffa, Brazil, etc., and is a very popular fruit.

NECROSIS.—This is death of the bone or any tissue, whether soft or hard, belonging to the organs or skeleton. It is generally due to some injury, excessive heat or cold, bacteria, etc.

NECTARINES.—This fruit is similar to the peach, the difference being that peaches have a downy skin, while the nectarine has a smooth one. They are chiefly used for dessert, being rich and delicately flavoured. They are cultivated in this country under glass, or in very warm, sheltered positions. Some quantities, however, are imported into this country from France and Spain. They are in season in September and October.

NEMATODES, OR ROUND-WORMS, IN FISH.—Are sometimes found in plaice, lemon soles, cod, smelts, mackerel, herrings, etc.; they are generally found either in the intestine or in the abdominal cavity, and seldom in the flesh proper. There does not seem to be any definite means of detecting their presence from the outside appearance of the fish, but they are more prevalent in fish which are in an emaciated condition. The white thread-worms have been frequently seen in the boxes of smelts. These delicate fish seem particularly susceptible to the attacks of these worms, and are often in such quantities that condemnation is the only alternative. Mackerel are also particularly subject to attack by internal worms, twelve different species having been located. However, the heat to which they are subjected in cooking usually kills them; still, it is a wise proceeding to see that all fish are thoroughly cooked.

NEMATODE, THE, OR ROUND-WORM DISEASES OF POULTRY.

—The nematode worms are characterized by the rounded and generally threadlike character of the body. The sexes are separate. Some are free-living in the open, but the majority are parasitic, either on plants—*e.g.*, eel-worms—or on animals. Of the round-worms parasitic in poultry, the two worst genera are *Syngamus* and *Heterakis*.

I. **Gape-Worms.**—Gapes is a disease caused by a nematode, or round-worm, which takes up its abode in the windpipe, and

sometimes in the bronchial tubes. It is scientifically named *Syngamus trachealis*. The gape-worm is also known as the "red-worm" and "forked-worm." Not only fowls and turkeys, but pheasants, partridges, sparrows, linnets, starlings, rooks, martins, swifts, and green woodpeckers, are also invaded by this parasite. The disease is caused by the worms taking up their abode in the air passages, attaching themselves by their circular mouths, sucking the blood, irritating the membrane, and causing inflammation. These pests, if present in large numbers, also block up the windpipe and stop the passage of air to the lungs. In either case the birds may succumb. Chickens up to four weeks old are the most susceptible.

The gape-worm is nearly always found *in copula* inside the host, the small male worm being permanently attached to the female towards her head end, and the two worms making a fork; hence the name of "forked-worm." The smaller branch of the fork is the male.

It is chiefly in chicks and turkey poults that gapes causes the greatest mortality, although old birds are sometimes attacked. The birds contract the disease by picking up eggs or embryos from infected ground or polluted water, or by eating worms containing the eggs; probably also in eating earth-worms that have swallowed the eggs of the gape-worm. That wild birds play some part in the dissemination of gapes is also extremely probable.

The *Symptoms* of gapes are a curious listless gaping of the mouth, a wheezing cough and stretching forward of the neck, a ruffling of the feathers, and a drooping of the wings, while there is frequently an appearance of frothy saliva in the mouth, and sometimes in the nostrils.

The gape-worm is reddish in colour, often bright red. The male measures up to $\frac{1}{8}$ inch in length, and the female up to $\frac{4}{8}$ inch.

2. **White Intestinal Worms.**—Death is not frequent from intestinal worms, yet weakness is very often caused by two nematode worms, *Heterakis papillosa* and *H. inflexa*. These worms are found in different parts of the small intestine, often in considerable numbers. Sometimes they interfere with the passage of food by forming a plug and blocking up the alimentary canal.

Birds infested with them are usually ravenous, and yet keep losing condition.

Description.—Both worms are white or yellowish-white. *H. papillosa* resembles a small pin without the head, the body thinning out at both ends. The male measures $\frac{1}{4}$ to $\frac{1}{2}$ inch in length, and under the microscope shows at the hind-end two projections or spicules. The female measures $\frac{3}{8}$ to $\frac{5}{8}$ inch in length, and has the hind-end of the body distinctly more drawn out than in the male.

H. inflexa is a somewhat larger worm, and is not found straight, but with body twisted or curled. The male measures from $1\frac{1}{4}$ to 3 inches, and the female from $2\frac{1}{4}$ to 4 inches.—*Extract from Board of Agriculture Leaflet.*

NEPHRITIS.—The general term for various forms of inflammation of the kidney.

NESSEL CHEESE.—A soft cured cheese made from whole cow's milk; it is round in shape, and thin.

NETTLERASH.—See Diamond Disease.

NEUFCHÂTEL CHEESE.—This is a soft cheese, made in Switzerland from cream and milk, thickened by heat. It is mild in flavour and easily digested, and if eaten fresh it is considered to be one of the most palatable cheeses made. But if allowed to become old it may become very offensive. There are several kinds on the market, but usually they are pressed into cylindrical shapes, about 3 inches in diameter and $1\frac{3}{4}$ inches thick.

NEW ZEALAND SPINACH.—Is grown to a small extent in this country as a substitute for the common spinach. The young shoots and fresh leaves are cooked, and are said to be delicious.

NITROGENOUS MATTER.—In some of the tables in this book the formula $N \times 6.25$ is seen; this is the figure obtained by multiplying the amount of nitrogen in 100 parts by 6.25.

NON-FATTY SOLIDS.—These consist of all the solids of milk, with the exception of fat. They are casein, albumin, lactose, and ash.

NOODLES.—This is a paste very similar in composition to macaroni, spaghetti, etc.; it is drawn out in the form of a strap. There are two kinds, egg and water noodles; it is adulterated by the addition of rice, potato, and corn flours.

NORWAY LOBSTER.—An edible crustacean abundant in the northern seas, sometimes called the "Irish prawn," "Dublin Bay prawn," etc., because it is caught in the Irish Sea. It is a pale pink in colour, long and slender. It is usually sold by the dozen.

NOUGAT.—Is a sweetmeat made from honey, sugar, almonds, pistachio, and other nuts.

NOVA SCOTIA SPRATS.—Another name for Digby chicks or smoked pilchards.

NUDELN.—A paste made after the manner of macaroni, but in strips instead of tubes.

NUTMEGS.—Are the fruit or inner kernel of the nutmeg-tree, growing in the East and West Indies, Madagascar, etc.

NUTRITION.—The process by which all organic structures are developed, replenished, and reproduced.

NUTROSE.—A soluble compound of casein in the form of a powder.

NUTS.—Nuts are a valuable source of proteid and fat, these two being the characteristic constituents of most common nuts. The edible portion, containing little water and much fat, is

AVERAGE COMPOSITION OF NUTS, BY M. E. JAFFA—PERCENTAGES.

Kinds of Nuts.	Refuse.	Edible Portion.					Ash.
		Water.	Protein.	Fat.	Carbohydrates.		
					Sugar, Starch, etc.	Fibre.	
Almond ..	47.00	4.9	21.4	54.4	13.8	3.0	2.5
Brazil nut ..	49.35	4.7	17.4	65.0	5.7	3.9	3.3
Chest- (fresh	15.70	43.4	6.4	6.0	41.3	1.5	1.4
nut (dry	23.40	6.1	10.7	7.8	70.1	2.9	2.4
Cocoanut ..	34.66	13.0	6.6	56.2	13.7	8.9	1.6
Filbert ..	52.08	5.4	16.5	64.0	11.7		2.4
Hickory nut	62.20	3.7	15.4	67.4	11.4		2.1
Peanut ..	27.04	7.4	29.8	43.5	14.7	2.4	2.2
Pecan ..	50.10	3.4	12.1	70.7	8.5	3.7	1.6
Pignolia (shelled)	—	6.2	33.9	48.2	6.5	1.4	3.8
Pistachio ..	—	4.2	22.6	54.5	15.6		3.1
Walnut ..	58.80	3.4	18.2	60.7	13.7	2.3	1.7

considered to be a very concentrated food. If taken at the proper time, in the proper quantity, and carefully masticated, nuts are easily digested. In this country it is a common practice to eat some kinds of nuts with a little salt. This certainly adds to their flavour, and is supposed to render them more digestible. Large quantities of nuts are now sold shelled in this country,

but this has some disadvantages, as they may become polluted by dust, dirt, bacteria, etc. They should therefore always be washed before being eaten raw. Damp affects nuts, and they soon show mould and decay if not carefully looked after. Shelled nuts are also more easily attacked by worms, beetles, etc., than the whole nuts, and are apt to go rancid if stored any considerable length of time. Practically no adulteration is possible in the shelled or whole nuts, but the shelled nuts have at times been subjected to sulphur fumes in order to bleach them, and make them better and more uniform in appearance. Generally speaking, bad nuts are light, and good ones heavy. Chestnuts may be tested in this way by being thrown into water. The bad ones float, while the good ones sink.

NUT WEEVIL.—See Hazel Nut.

O.

OATMEAL.—This meal is prepared by drying the oats in kilns, separating the husks and grinding the grains, fine or coarse, whichever quality is required. The ground oatmeals are adulterated by the addition of various meals, such as barley flour, maize flour, etc.

Inferior oats are sometimes treated with sulphurous acid. This artificially bleaches them, and makes them resemble better qualities; the weight is also increased, and there is less danger of deterioration.

ŒDEMA.—A term used to denote a swelling caused by effusion of serous or inflammatory fluid into the loose tissue lying under the skin or mucous membrane.

ŒSOPHAGOSTOMUM COLUMBIANUM.—This parasite is more generally known to inspectors by a much simpler name—viz., “pimply guts.” It is found encysted in the coats of the intestines of sheep in the form of small tumours, which vary from the size of a pin’s head to a pea.

Intestines affected should not be used for sausage casings, though they are sometimes; if so, the sausages should then be condemned.

ŒSOPHAGUS.—This is also called the “gullet”; it is a muscular tube, which connects the pharynx and the stomach, and is lined by a mucous membrane. It is along this tube that the food passes from the mouth to the stomach.

OFFAL.—This varies slightly with the different animals, but the blood is reckoned as offal.

Calves.—Liver, heart, lungs, spleen.

Ox.—Head, feet, lungs, heart, liver, stomach, intestines, bladder, and spleen.

Pigs.—Liver, lungs, heart, and chitterlings.

Sheep.—Head, feet, liver, heart, lungs, spleen, stomach, and intestines.

OFFAL, EXAMINATION OF.—The mouth and tongue should be free from blisters and blotches, the hide healthy, hoofs firmly attached. The lungs should contain air, and should float in water; there should be no evidence of inflammation, tuberculosis, cysts, worms, abscesses, etc. The heart should be healthy and free from bile staining; the liver should be a good colour, firm, and able to resist reasonable pressure; it should be free from flukes, abscesses, cysts, tuberculosis, etc. In the stomach there should be no odour of medicine or drugs, and the lining membrane should not readily peel off. The spleen should be free from tuberculosis.

OFFALS.—A term used by the miller to mean various substances derived from the grinding of wheat. Offals comprise bran, pollards, sharps, and germ offal.

OKRA.—This is also known as “gombo,” “gumbo,” etc. It is a vegetable not much used in this country, but it is extensively grown in America, where the seed-pods are chiefly used in the making of soups, etc.

OLD SHOOTERS.—A butcher's term for old and emaciated cows.

OLEOMARGARINE.—A name given to any fatty substance which is prepared to be used in a similar manner to butter.

OLIVE.—A small unripe fruit of an evergreen plant, which is cultivated in France, Spain, Italy, Greece, California, etc.

Green olives are imported into this country bottled in brine; they are used as an appetizer, to destroy the taste of what has been previously eaten, and to give a relish to the wine at dinner. Black olives are from Greece, picholine from California, queens from Spain.

OLIVE OIL.—This oil is sold under a variety of fancy names, and by such means gets rid of adulterated oils. The best kind is obtained from the fruit of the thornless olive, which is grown extensively in Spain, France, Italy, Greece, Morocco, etc. The

finest oil is obtained from the hand-picked and peeled olives, which are pulped and pressed. A second quality is obtained from the whole olive, while another kind is obtained from the kernels.

When fresh and good it is sweet, almost tasteless, of a bright gold colour, with a slightly green tinge, and it should be free from sediment.

This oil is very much adulterated. Dealers sell it under the various names, such as "salad oil," "sweet oil," "Florence oil," "Gallipoli oil," "Tuscan oil," "Californian oil," "Tuscan cream," "Aix oil," "union salad oil," "sweet nut oil," etc.

The common adulterants are cotton-seed, ground-nut, or arachis, rape, sesame poppy, lard oil, etc.

OMENTUM, OR CAUL FAT.—Is a thin transparent fatty membrane which covers part of the intestines as they lie in the abdominal cavity.

ONIONS.—This bulbous plant is known to everyone. It is grown largely in this country, but a large supply comes from abroad. Quantities of onions come from Spain from about July to February. These are rather mild, and are sold for use as vegetables. Portugal sends us some during May, June, and July. Egyptians come in during April to July, while Holland sends large quantities of small onions from August to January. Some very large onions are grown in this country. One variety sometimes reaches a weight of $4\frac{1}{2}$ pounds each. In judging onions, the points to be noted are symmetry, small necks, fine flesh, plumpness, etc. The colours are very varied. Bruised onions rapidly decay, especially if kept in a warm place. Keeping them in a cold dry room is the best method of storing them.

ORACH, OR ORACHE.—A vegetable which is closely allied to spinach; it is not grown very much in this country, but it is sometimes used as a substitute for it when spinach is scarce. It is also called "mountain spinach." It is sometimes mixed with spinach to tone down the acidity.

ORANGEADE POWDERS.—These powders are sold for the purpose of making a drink of this name; usually they consist of citric acid, castor sugar, and oil of orange.

ORANGES.—These are now in season practically all the year round, and, like apples, they appear on the market in endless variety. They reach us at various periods: the Australian between July and September; Brazilian, August and September; Jaffa, from

October to February ; Palermo and Messina, October to February ; Naples, May to August ; Florida, September and October ; Valencia and Denia, November to July ; Seville, January to March ; Muria, July to August.

Among the varieties we receive are the seedless oranges, the Maltese, or blood-red orange, the tangerine, mandarin, etc.

The seedless, also known as the "sunkist" and "navel" orange, so named from the peculiar protuberance at the apex, is known to all. They are largely cultivated in California, Brazil, Jaffa, etc., and have rapidly won their way into public favour in this country.

The tangerine is also a well-known orange. It is a small seedless orange, with a fragrant and easily detached skin, now grown in Spain, Italy, Malta, Algeria, etc. They arrive in this country about December, packed in boxes of twenty-five, fifty, and seventy-two.

In buying oranges, the points to note are weight, fineness, and delicacy of skin, with medium size. Oranges are especially valuable for invalids when perfectly ripe and well selected. They contain about 89 per cent. of water. Oranges with damaged skins go bad much quicker than those with whole skins. The blue mould soon gains access, and multiplies rapidly, so that a bad orange shows a light yellow patch, with a ring of green and blue mould around it, and is very soft.

ORTOLAN.—A small singing-bird about the size of a lark ; it has black wings. They are not much eaten in this country, but a small quantity is imported from Belgium, and also packed in casks, preserved in spices and vinegar, from the South of France and Italy. They are very delicate eating, and are in season from November to February ; by some people they are known as the "garden bunting."

OSSIFICATION.—A term applied to any part of the body in which calcareous or other matter is deposited in the tissue, so as to produce hardness or a bony-like aspect and character.

OSTEND RABBITS.—A considerable trade is done between this country and the port of Ostend in rabbits ; about 48,000 cwt. were exported in 1910. The name does not refer to a particular breed of rabbit, but simply to the port of shipment. The rabbits are reared by the smallholders, cottagers, peasants, farmers, etc., in the Belgian villages, and in the season they are collected alive by the dealers, who take the day's collection to a depot. Here the rabbits are slaughtered, dressed, and packed.

The dressing is simple, and most convenient for handling. After cleaning they are pressed flat in the cases. No particular kind of rabbit is reared for this trade, but the rabbit is a mixed breed of large size. The flesh is white and delicate, but it has not the flavour of the wild rabbit. The white flesh is said to be caused through the rabbits being fed on chicory-leaves, this plant being cultivated to a large extent on the Continent.

OSTEOLOGY.—Is the study of bones.

OSTEOSARCOMA.—This means a tumour composed partly of flesh and partly of bone, and having an irregular surface.

OSTITIS.—This is inflammation of the bone; it is known in both the acute and chronic forms. It may be caused by an injury, or arise from constitutional or hereditary causes.

OSWEGO.—A preparation of cornflour called after the town of this name, where it was first made.

OVER-PROOF SPIRIT.—This contains more than 49·24 per cent. of absolute alcohol.

OVERSTICKING.—A term used by butchers to indicate that an animal has not been skilfully stuck. When this occurs the chest cavity is pierced, and the blood flows inwards, and lodges on the right side of the parietal pleura. To do away with the unsightly appearance thus caused, the butcher sometimes strips the pleura. In most cases, however, it is now removed by washing, because of the suspicion aroused in the mind of the meat inspector by reason of stripping for tuberculosis.

OVO.—This consists of eggs dried at a low temperature, so that they are capable of being redissolved.

OXALIS, OR OCA.—This is a vegetable which is grown to a small extent in this country. The tubers are small and yellow in colour, and cooked and eaten in the same way as artichokes. The leaf stalks are acid in flavour, and are eaten in salads, etc.

OYSTERS—*Season.*—So many foreign oysters are now put on the market that they may be obtained all the year round. The close time for oysters is—Deep-sea, June 15 to August 4; other descriptions, May 14 to August 4. It is everyday knowledge that the names of months which contain the letter *r* are the months in which oysters may be eaten, though why this is so does not appear to be common knowledge. It is simply owing to the fact that during the other four months

oysters are spawning, and consequently are out of condition, being thin, tasteless, and not easily digested.

Varieties.—There are three species of oysters to be found in our markets: they are the English native, the American, and the Portuguese. But apart from these, owners of beds often name their oysters after the place or locality. For instance, we get Whitstables, Pyefleets, Colemouth, etc. Other varieties are empresses, alford's, imperials, callies, East Rivers, blue points, Dutch, etc.

The native oyster is not so large as the American or Portuguese, and is shallower.

The American is larger than the native, and longer in proportion to its breadth, while the Portuguese is very rough, wrinkled, coarse, and the bottom shell is very deep.

Natives are in their best condition from October to May, and relaid American and Portuguese oysters from June to October. Dutch and deep-sea oysters are sold and consumed all the year round.

Large quantities of foreign oysters are relaid in English beds, and there fattened. Most natives are in their prime at from four to five years of age, though Essex natives are considered better between five and six years of age. French oysters are in their prime between four and five years of age, and Portuguese at about three years. Foreign oysters, if relaid in English waters, are said to mature earlier.

The average size of the oyster is about 3 inches in diameter. Primes range from 3 to $4\frac{1}{2}$ inches, while some of the smallest natives are about $2\frac{1}{2}$ inches in diameter. Oysters vary in shape, colour, and flavour. The Portuguese are large, but our natives are small, and when in good condition are a creamy-white colour.

Inspection.—It is important that all oysters should be eaten perfectly fresh, and be alive when opened, and also that they should be eaten as soon as possible after they are opened. In the inspection of shellfish great care is necessary, for if bad they are very poisonous.

The shell of a healthy oyster should be tightly closed. If the shell gapes in the slightest degree, it is losing its freshness; if slightly gaping, it should close on being handled, and failure to do so should mean in most cases the condemnation of the oyster, as it will be dead. Portuguese oysters when gaping are generally dead, as it is rare that they open when alive, and then only slightly.

When oysters are being opened with a knife, if fresh the shells

will forcibly close upon it—the tighter the better, this being a proof that the oyster is strong and healthy.

Oysters are sent to the market packed in small barrels. The best way to keep oysters is to pack them tightly, deep shell downwards in the barrel. A lid should rest upon the oysters, and this should be weighted down. By this means they will keep from six to eight days, and possibly longer in cold weather.

P.

PADS.—An oval type of basket used by growers and market-gardeners; it holds $\frac{1}{2}$ to 1 cwt. of potatoes.

PADDY.—An Indian name for unhusked rice.

PAGLIA.—A cheese made in imitation of Gorgonzola in the district of Ticino, Switzerland. It is 8 inches in diameter and 2 inches in thickness; it has a very soft consistency, and a pleasant aromatic flavour.

PALE ALE.—See Ale.

PALM-NUT OIL.—An oil obtained from the kernels of the fruit of the various palms growing in the West Indies, Canary Isles, West Africa, U.S.A., etc. It is used in the manufacture of artificial butter, etc., and in the adulteration of the more expensive oils, butter, cocoa butter, etc.

PALM STARCH.—Another name for sago.

PALM SUGAR.—This is also called “jaggery”; it is a sugar of low quality, which is obtained from various palms in India. It is not imported to this country in any quantity at present.

PAN COTTAGE LOAVES.—These are ordinary cottage loaves baked in round tins.

PANCREAS.—A flat, irregularly shaped glandular organ of a brownish-yellow colour, attached to the liver. It is sometimes called the “sweetbread,” or “gutbread,” though it bears very little resemblance to that gland either in appearance or taste. It is not often diseased.

PANSITOSE.—A kind of meal used in sausage-making; it binds and stiffens the sausage.

PANTEGRAS CHEESE.—See Gouda Cheese.

PAPAYA OR PAW-PAW.—This fruit is grown largely in India, Brazil, the West Indies, etc. It is oblong in shape, orange-yellow in colour, and contains black seeds. It is eaten as a vegetable. Meat washed in water containing some of the juice of the fruit becomes tender. It is not seen much in this country, but is sometimes preserved.

PAPRIKA.—A red pepper which is prepared from a species of capsicum grown in Hungary. It is generally divided into classes according to strength and colour.

PARASITIC DIARRHŒA.—See Husk.

PARASITIC PSEUDO-TUBERCULOSIS.—See Pseudo-Tuberculosis.

PARMESAN, OR GRANA CHEESE.—Probably this is the most celebrated cheese. It is a disc-shaped cheese of about 20 inches diameter and 10 inches in depth, while its weight varies from 45 to 176 lbs. It is made at Crema, Codogne, and Sodi in Lombardy, also at Parma and Piacenza. It takes its name from the former town. It is an expensive cheese, and doubles its value with age. It keeps longer than softer cheeses, and it never acquires a rancid or putrid smell or taste. It is made from partly skimmed milk by the Italian farmers, who sell it to the merchants, and these men finish the curing and ripening in caves and curing cellars. When old it becomes hard. Grated Parmesan can be bought in corked bottles. The best is often kept three or four years to ripen, and is naturally a hard, dry, and grainy cheese.

PARSLEY.—Is grown in this country chiefly for the leaves, as they are used for garnishing, flavouring in both raw, boiled, or fried foods. The frosts of autumn tend to destroy the foliage. It is in season all the year, and is generally sold in bunches, which consist of a handful of leaves tied round. In good fresh condition it is finely curled, bright green in colour. It is sent to market packed in baskets.

PARSNIPS.—These resemble carrots in shape and in the general habit of growth. The flesh of the parsnip is much paler, being cream-coloured. They are in season during the winter and spring months. They are grown in this country to a very large size, some being as long as 5 feet.

PARTRIDGES.—Besides the native birds, large quantities are imported from Russia and other parts of the Continent. They are in season from September 1 to February, but are considered

in their best condition towards the end of November. Their average weight is about 1 lb. Generally the plumage is grey and reddish-brown. The distinguishing mark between the male and female is said to be the chestnut horseshoe mark on the breast, but this is not always certain. However, if necessary, it can be decided by the colouring of the wing feathers and various other signs. The female is usually slightly smaller and less pleasing in colour than the male bird. A large number of red-legged partridges are imported; they are good eating, but do not come up to the native bird in quality.

Age.—Young birds are recognized by the colour of the legs, which is yellow in youth in the native bird. The claws are sharp, and the bill dark and tender. The feathers give an indication of age; in the young the long feathers in the wing are pointed, or like the letter V. The head is easily crushed with the thumb-nail if very young, and if the feathers on the side of the breast are lifted, the flesh should be fine and tender, while if coarse and wrinkly it will be an old bird.

Old birds are known by the blunt claws, hard beak, and green legs. The wing feathers are rounded at the end. Sportsmen say that the age can be told by pressing the top of the head with the thumb-nail; if it is hard and unbreakable, they consider the bird is at least a year old.

Freshness.—This is denoted by stiff wings and legs, a rigid and not discoloured vent, eyes bright and not shrunken.

Staleness.—When the rump is turning green the bird has been kept long enough, and if the flesh is rubbed away easily it will be getting near the seizable stage. Partridges which are very maggoty are beyond the limit usually allowed for in game, and should be seized. However, in this matter the inspector will have to judge for himself. For instance, they may be maggoty about the head, and the other parts of the body sound. In such an instance care should be exercised.

PARTURIENT APOPLEXY.—See Milk Fever.

PARTURITION.—This is the process of giving birth.

PASTEURIZATION.—A process of partial sterilization; the milk is heated just high enough to kill bacteria, but not their spores. The time occupied in the heating varies inversely with the temperature used; the higher the temperature, the shorter the time. Temperatures from 140° to 190° F. are used.

PÂTÉ DE FOIES GRAS (FAT LIVERS OF GEESE).—This famous delicacy is made from the fat livers of geese. They are imported

in terrines for keeping purposes ; they are also preserved in tins for use at long distances. The birds are fed on maize and poppy oil for about six weeks, when they are usually ready for killing. The livers weigh about 2 lbs.

PATELLA.—The knee-cap.

PATENT FOODS.—So many of these are now on the market that it would be of little use to the inspector to describe them or their ingredients.

PATHOLOGY.—This is the science of the nature, causes, and remedies of diseases.

PATIENCE.—A vegetable not much cultivated in this country at the present time ; it is eaten in a similar manner to spinach, has mild flavour, and is slightly acid.

PEACHES.—This is a similar fruit to the apricot. They are largely grown under glass in this country, though in the southern countries there are some grown out of doors. They are extensively cultivated in France, America, Canada, South Africa, California, etc. The two classes of peaches are known as "cling-stones" and "free-stones," which indicate that in one the stone clings to the flesh of the fruit, while in the other it readily leaves it. The latter is largely used for dessert, the former for cooking and preserving. The peach differs from the nectarine in that the skin of the former is fluffy, while the latter is smooth. Peaches come from France in July and August.

PEA NUT.—Or, as it is named in this country, "the monkey nut," is very valuable. It is grown in most tropical regions, more especially in South America, West Africa, Java, etc. It contains about 25 per cent. proteid, 38 per cent. fat, and 24 per cent. starchy matter. It is very largely used in the manufacture of the numerous nut foods.

Several varieties of pea nuts are now grown, such as Virginia bunch, African or North Carolina, Spanish, Tennessee red, Valencia, etc.

PEA-NUT OIL.—Oil expressed from the ground pea nut, or, as we probably know it better, monkey nut. This oil is a common adulterant of olive oil ; it has a pleasant nutty flavour, and is also used as salad oil. Other names are ground nut, earth nut, and Arachis oil.

PEARL BARLEY.—This is made by separating the husk from the grain, and afterwards grinding, rounding, and polishing the

grains in a mill set wide. In some cases the grains have been treated with French chalk to improve their appearance in a similar manner to which rice was treated a short time ago ; this will be considered an adulteration.

PEARL MOSS.—An edible seaweed. See Irish Moss.

PEARL SAGO.—This is made by mixing sago flour with water to form a paste, afterwards passing it through sieves.

PEARS.—Although pears are largely grown in this country, yet large quantities arrive from France, United States, Canada, California, Australia, and South Africa. The fruit is picked before fully ripe. It is carefully wrapped in paper, packed in cases and boxes, and shipped here in cold chambers.

PEAS.—Are now grown in this country from June to November, the earlier peas coming from the Channel Isles, France, etc., or being forced. They are grown in a large number of varieties, and form a nourishing summer vegetable, while during the winter the dried peas form a valuable addition to the winter fare, either in soup or served as a vegetable.

PEA VERMICELLI.—Is made from a small bean which is grown in Burmah. It contains very little albuminous matter, and is easily digested.

PECAN NUTS.—Are imported from Texas in several varieties. The nutritive value of these nuts is exceedingly high in a very concentrated form. They contain about 17 per cent. of proteid, and 65 per cent. of fat. This nut is often prescribed for consumptives.

PECK OF FLOUR OR SALT.—Weighs 14 lbs.

PECKS.—A measure used by greengrocers, etc., to measure fruit, peas, etc.

In strawberries it equals 12 lbs., gooseberries 16 lbs., and 7 or 8 lbs. of peas according to locality.

PECORINO.—A cheese made in Italy from sheep's milk ; it varies in size, shape, and weight considerably.

PEKOE TEA.—The finest tea, which is taken from the youngest plants and the youngest and topmost leaves.

PELVIS.—This is the space formed by the pelvic or aitch bones and the lower part of the spinal column. It contains bladder, rectum, and organs of generation.

PEMMICAN.—Hard, sun-dried meat, such as beef, deer, etc., powdered and pressed into cakes, etc. Sometimes it has berries, fruit, sugar, and other flavouring added to the powder before pressing into cakes.

PENNYROYAL.—A species of mint, the leaves of which are used for seasoning puddings, etc.; also used in pharmaceutical preparations.

PEPPER.—Is obtained from the pepper-plant; when the berry is ground entire it becomes black pepper. White pepper is made by removing the husk previous to grinding; it is a very light-coloured pepper, and is much milder than the black variety. It contains an oil more acrid than mustard, and is used as a seasoning; it stimulates the stomach to increased action, and is usually taken with articles difficult to digest. Ground pepper is often adulterated and artificially coloured, the chief substances being wheat, buckwheat, ground olive stones, clay, chalk, sand, linseed meal, spent ginger, ground rice, mustard husks, etc.

PEPPERCORN.—See Ear Cockle.

PEPPERETTE.—See Poirrette.

PEPPERMINT.—A species of mint grown for the leaves and stems, which are used for seasoning. Its chief use is for the extraction of oil of peppermint; the best variety for distillation purposes is the black.

PEPPERMINT CORDIAL.—This consists of ordinary sweetened gin, flavoured with essential oil of peppermint and oil of citron; it is also known as "crème de menthe."

PEPTONE.—A body produced by the digestion of meat and other proteids.

PEPTONIZED FOODS.—Are those which have been partially changed to peptone by artificial means before they are eaten.

PEPTONIZED MILK.—This is milk which has been treated by the addition of some solid or liquid preparation of pepsin.

PERCH.—A common fresh-water fish, with firm, white flesh; it has a good flavour, and is easily digested. It is in season from June to February.

PERICARDITIS.—Inflammation of the pericardium or membrane round the heart.

PERICARDIUM.—This is the name given to the bag, sack, or membrane which encloses the heart.

PERIOSTEUM.—A delicate covering to the bones; it is richly supplied with blood, and takes an important part in the proper nourishment of bone. It varies in thickness according to the position of the bone.

PERIOSTITIS.—Is inflammation of the covering of the bone.

PERITONEUM.—This is the membrane which covers or forms the outer coat of the abdominal organs, liver, intestines, stomach, etc.; it also covers the walls of the abdomen. It is smooth, moist, thin, transparent, and glistening when healthy.

PERITONITIS.—This is inflammation of the peritoneum, or the membranes which line the abdominal cavity, covers the intestines, and forms the net or mesentery.

PERIWINKLES.—These are obtained from the shores of all parts of the British Isles. Large quantities are sent to the London market from the western islands of Scotland, and these are better in quality than those from the English and Irish coasts. The average size of the winkle seems to be about 1 by $\frac{3}{4}$ inch, though the first-class quality is slightly larger than this. Holland also sends large quantities into our markets, but they are inferior in quality to the native product. The fish are in season all the year round, there being no close season. They are in the best condition during the winter months. The fishmonger in buying live winkles chooses those which are large and active. There also appears to be a prejudice in favour of those winkles with black shells. If you ask why, they will tell you the public like those with black shells, but the flavour appears to be the same in both.

Cooking.—The winkles are thoroughly washed in a wire basket under the tap, and then are cooked by putting them while alive into boiling water, and allowing them to remain for about eight minutes, though this time varies with the size. When removed from the boiling water, they are quickly cooled in cold water, in order that the dark appearance of the shell may be kept. Decomposing winkles often give a tainted flavour to good ones if boiled with them, while those crusted with worms are also depreciated in flavour.

Inspection.—In inspecting boiled winkles, the foot should be prominent and not shrunken. A handful should be picked up and smelt; a good indication of their freshness is thus obtained. It has been stated that if the winkle, when being pulled out of its shell, breaks in two, then decomposition has commenced.

This may be correct in some instances, but it may be quite fresh and yet break in two, though this is caused by careless cooking. If a bag of winkles is being examined, it will be necessary to inspect those lying well down the bag. If bad ones are found, it will be necessary to condemn the lot, as it is not worth the trouble of sorting the good out, and even then the juices of decomposition will have probably penetrated to the good ones.

PERRIER.—This is a lightly mineralized and well-aerated natural water. The chief salt present is bicarbonate of soda. It is obtained from springs at Les Bouillens in France.

PERRY.—Made in a similar manner to cider, with the exception that the fruit juice is from pears.

PERSIMMONS.—These are also known as “Japanese kaki” or “date plum”; they grow in America, Japan, India, etc., and owing to their keeping qualities are being sent to this country in increasing quantities. They are about the size of an average apple, of scarlet colour, sweet agreeable flavour, flesh soft and juicy.

PETITS POUSSINS.—These are small chickens about four or five weeks old. They weigh about 8 to 10 ozs., and are rapidly developed by feeding carefully with ground foodstuffs mixed very largely with warm milk and fat; hence the name of “milk chickens,” by which they are known to some people. As these chickens are largely used as a luxury among the rich classes, it is very improbable that the inspector will be called upon to inspect them. They are in season during the months of April, May, and June, and the market is largely supplied from France and Belgium.

PFISTER.—A cheese made from fresh-skimmed cow's milk in Switzerland. It is drum-shaped, and weighs about 50 lbs.

PHARYNGITIS.—Or inflammation of the lining of the throat.

PHARYNX.—This is the upper part of the gullet; it is a muscular tube which connects the mouth with the œsophagus.

PHEASANTS.—There are a number of different kinds of pheasants; the distinguishing feature of each kind is the number of feathers the tail contains. The hen bird is more delicate in flavour. They are usually sold as a brace, and are in their best condition in October and November. The average weight of the cock bird is 3 to 3½ lbs., while the hen weighs about 2½ lbs.

Age.—The age can be told by the legs. With the cock bird the spur does not appear at all prominent till the pheasant is getting old, so that a long and pointed spur indicates age, while absence or a short round spur indicates youth. The legs of young birds are smooth and supple, while the scales are close and bright-looking. The wing muscles in old birds are very hard, while in young birds they are pliable. The wing feathers in young birds are pointed, while in the older birds they are rounded. The skin of the breast under the wing is tender in the young, while it is hard and wrinkled in old ones. In young birds the quills are soft, while in the old the feathers are much more developed.

Freshness.—Fresh pheasants have stiff wings and legs; the eyes are prominent; the feet are moist and supple.

Staleness.—Stale birds show very shrunken eyes, feet stiff and dry; the vent will be turning green probably, and the top skin will be easily rubbed off with the finger.

AVERAGE COMPOSITION OF PHEASANT, BY H. W. ATWATER—
PERCENTAGES.

	Refuse.	Water.	Protein.	Fat.	Ash.
As purchased	12.0	61.5	21.5	4.2	1.0
Edible portion	—	69.9	24.4	4.8	1.1
Meat, excluding giblets	—	70.0	24.7	4.6	1.1
Giblets	—	68.9	20.1	7.2	1.6

PHOSPHORESCENT MEAT.—This is meat which appears luminous when in the dark. It is supposed to be caused by the hooks, beams, etc., becoming infested with the characteristic microbes. It is not injurious to health.

PHYSIOLOGY.—The study of the functions or work that the different organs of the body perform in health.

PICK BASKET.—A measure used by growers in the provinces for strawberries; contains 12 lbs.

PICKLED LIMES.—These are imported from Brazil in small barrels.

PICKLES.—Large numbers of pickles are now on the market, but the chief kinds are cabbage, cauliflower, onions, walnuts, mixed pickles, gherkins, French beans, red cabbage, etc. Besides the home-supply, large quantities of these vegetables come from

abroad, either in brine or fresh. Cauliflower and red cabbage chiefly from Holland; gherkins from France and Holland; onions from Egypt, Holland, etc.; walnuts from France, Germany, Belgium, Italy, etc.

Large quantities of mixed pickles are sold, but here danger exists in their consumption, for unscrupulous makers use inferior or decaying vegetables, well knowing that the small pieces in mixed pickles will hide these; only reliable makers' goods should be used.

PIECES.—A soft sugar which has very little grain, usually obtained from beet-sugar refining. First pieces is a superior kind, while second pieces is an inferior quality.

PIGEONS.—Besides the native birds, we receive large quantities from Italy and France. Thousands of Bordeaux pigeons are sent to this country. This name is applied generally to fatted pigeons, whether bred in that or any other district. They are packed in boxes of four, six, and eight, the former being the largest-sized birds. They are in season from March to October. The tame pigeon is larger than the wild pigeon, but not so large

AVERAGE COMPOSITION OF PIGEON, BY H. W. ATWATER—
PERCENTAGES.

	Refuse.	Water.	Protein.	Fat.	Ash.
As purchased	13.6	55.2	19.7	9.5	1.3
Edible portion	—	64.0	22.8	11.0	1.5
Meat, not including giblets	—	63.2	22.9	12.1	1.4
Giblets	—	68.1	22.2	5.2	2.3

as the wood-pigeon. Pigeons are in their best condition from June to October. They are considered in their prime when fully feathered.

Age.—Young pigeons have breasts of a red colour, feet soft and tender, claws of a pinkish colour. As a rule pigeons are sold with the plumage on, so a good indication of their age can be obtained. The appearance of the neck feathers varies only slightly from the rest of the body, the feathers in young birds being only half developed. They have short pin feathers, besides which, if underneath the wings is examined, it will be found to be downy.

Old pigeons have red feet, which are harder, stronger, and have longer spurs. The neck is longer, and the feathers on it are brighter and more brilliant than those on other parts of the body. The feathers are fully developed. They have thin breasts and limbs, and there is an absence of down under the wings. The skin is darker.

Squabs are undersized birds, and are much used for food purposes, being tender. The flesh on the breast of these looks whitish, but this becomes darker as the pigeon ages.

AVERAGE COMPOSITION OF SQUABS, BY H. W. ATWATER—
PERCENTAGES.

	Refuse.	Water.	Protein.	Fat.	Ash.
As purchased	15.6	49.0	15.7	18.6	1.3
Edible portion	—	58.0	18.6	22.1	1.5
Meat, excluding giblets ..	—	56.6	18.5	23.8	1.4
Giblets	—	69.8	19.8	7.2	2.0

Freshness.—When fresh, they have their full flavour, have supple feet, firm vent, which is not discoloured.

Staleness.—This is denoted by a discoloured and flabby vent, flaccid flesh, and offensive smell. Pigeons lose flavour on being kept, and should be eaten fresh.

PIGNOLIA NUT.—See Pine Kernel.

PIG'S FRY.—Is the term applied to the heart, liver, lungs, spleen, sweetbread, and omentum of the pig.

PIKELETS.—See Crumpets.

PILCHARD.—This is similar to the herring in appearance, but smaller, fatter, rounder; scales larger; the under-jaw is shorter in proportion, and turns up. The colour on the back is olive-green, rather deep; sides silvery. The dorsal fin is darker in colour and nearer the head. They are caught largely on the Cornish and Devon coasts.

PIMENTO.—See Allspice.

PIMPLY GUTS.—See *Æsophagostonum Columbianum*.

PINDAL, OR PINDAR NUTS.—Another name for the pea nut.

PINEAPPLE CHEESE.—A cheese made to resemble this fruit in shape; it is a hard cheese made from whole cow's milk. It is

hard and highly coloured, and is chiefly made and eaten in America.

PINEAPPLES.—Large quantities of pines reach this country from Madeira, Canary Isles, the Azores, West Indies, and South Africa all the year round. The pineapples are cut before ripe, and packed in ventilated boxes. It is said of the pineapple that it will probably stand more rough usage than any other tropical fruit, and also keep a longer period. The large quantities of very small pineapples we see on the costers' barrows, marked so cheaply, are really the wild pineapple, and are by no means to be compared with a good cultivated pineapple. Usually they are very woody and indigestible, and of poor flavour. The fruit is attacked by a disease known as "blackheart." It attacks the heart of the fruit, making it appear water-soaked, and finally turning it black. An insect called the "mealy bug" also attacks the fruit among the slips and in the eyes. Pineapples in a state unfit for food should present no difficulty to the inspector, for they show a discoloured brown patch, which is very soft and generally mouldy.

PINE-KERNEL, THE, OR PIGNOLIA NUT.—Is now common in this country. It is the seed of several species of *Pignolia* pine-tree. The kernels grow in between the petals of the pine-cones. Each petal contains two kernels. They are chiefly obtained from Italy and the Mediterranean countries, the pine-forests on the Government lands in Tuscany being especially noted for these fine nuts; but small quantities are imported from California. The cones are gathered in the autumn when they fall to the ground. They are stored during the winter, and exposed to the sun in the spring. This opens the petals of the cones, when the kernels can be extracted. They are rich in proteid and fat, containing about 33 per cent. and 49 per cent. respectively.

PINERS.—This term is generally used to denote cattle which are very thin. It should be used to indicate cattle which pine or waste away without showing any ordinary signs of ill-health or disease; it is said to be due to a parasitic inflammation of the abomasum.

PINK EYE, OR RED COD.—A disease of dried cod; the chief symptom of the disorder is a pink or red colour, which is accompanied by a rancid odour. The salted fish undergoes partial decomposition, so that its quality is deteriorated, often being quite unfit for food. It may attack the fish both in the moist salted condition and after drying.

PINTAIL, OR SEA PHEASANT.—This is not a very common bird. It is a slim, beautiful duck. The female is without the long tail feathers of the male. They are found in considerable numbers in Ireland, and come to this country in the winter.

Wild duck, teal, widgeon, etc., are inspected for age, soundness, etc., in a similar manner to the tame. The distinguishing point between tame and wild is that the latter have black claws.

PIP.—A gallon basket. See Pup.

PISTACHIO NUT, THE.—Is a native of Sicily and Syria, but is now largely cultivated in California. It is a very choice nut, and on account of its delicate flavour is in great demand by confectioners. The nuts are small, about an inch long, and have a beautiful pale green kernel. They are bean-shaped, and grow in clusters in pods. Usually they are blanched before being used. They contain about 22 per cent. proteid and 54 per cent. fat.

PLAICE.—This is about the most popular of all the flatfish family. The colour of the upper side is dark brown, with red or orange spots that cover the body and fins. These spots are characteristic of this fish, not being found on any other fish. The mouth is small, and the teeth are more developed on the under side, which is white and perfectly flat, while the upper side is brown in colour and convex in form. This fish is seasonable all the year round, but it is preferred by some people when in a half-roed condition. It is found all round the coasts, especially in the North Sea on the Fisher and Dogger Banks. The market is largely supplied from Iceland, the Faroe Isles, and the White Sea. The fish attains a length of 18 inches or more, and a weight of 7 lbs., but the common market size is from 1 to 2 lbs.

Plaice are sold in the wholesale markets by the trunk of 6 or 7 stones, and in three sizes—viz., small, medium, and large. Iceland and White Sea plaice are sold by the stone.

This fish is in the best condition when thick and firm, flesh elastic to the touch. The skin should not be blistered, but adhere firmly to the flesh. The eyes should be bright and full, and the gills fresh looking. The spots should show very distinctly, and be bright in colour.

PLANTAIN.—This fruit is very similar to the banana—in fact, the majority of people do not know the difference, and in some tropical countries both are called “bananas,” while in others both are known as “plantains.” Briefly, the difference is that plantains have purple spots on the fruit-stem, have a thick rind,

large angular ridges ; also by their longer and larger sausage-shaped fruits, which are bent a little on one side, while the pulp is often of a red, streaky colour. See also Banana.

PLASMON.—A yellowish-white powder, which consists of soluble proteids of milk.

PLATE.—Another name for the butcher's joint known usually as the "brisket."

PLEURA.—A serous membrane which covers the inside of the chest and each lung. It should be perfectly smooth, thin, transparent, glistening, and pale in colour.

PLEURISY.—This is inflammation of the pleura ; in health the pleura is smooth, moist, glistening, and transparent. When diseased or inflamed, it often shows adhesions and thickening, while its surface becomes roughened, and it secretes a quantity of fluid.

PLOVERS.—There are several kinds of plovers, but the golden plovers are the best for the table, and realize the highest price at the game dealer's. The green plover, or lapwing, the grey and black, are the chief kinds marketed. The black being considerably less in cost than the golden, is often substituted, but there is little fraud in this, as the majority of people cannot tell the difference when cooked.

It is a pity that these birds are shot in such numbers, as they are of great value to the farmer, and indirectly to the butcher. These birds have been found to eat in large quantities the water snail—which is the intermediate host of the liver fluke, which produces the liver rot in sheep—besides numerous insect pests of the farmer.

The plovers are in season from September to January, but they come to the market in large quantities in October, when they are in prime condition ; the flesh is said to have then attained that full ripeness and flavour for which they are noted. The market is supplied in large quantities from Norfolk and the counties round the Wash, the broads and fenlands being their favourite feeding grounds. Holland, the country of canals and flat lands, also supplies us with large quantities through the winter.

The plover keeps a considerable time, but when stale the feet become dry, while those which have a hard vent are in good condition.

PLOVER'S EGGS.—These are a common sight on the poulterer's slab, packed in imitation nests, etc. The eggs are much sought

after, as they realize good prices, and are considered a great luxury in the spring, possessing a peculiar subtle flavour.

Considerable amount of fraud on the public is practised concerning these eggs—in fact, a sporting paper recently stated that “thousands of eggs sent to London every spring, and sold to a confiding public as the produce of plovers, are probably gulls' eggs. They are certainly gulls' eggs when the purchasers have them.”

There is not the slightest doubt that other eggs similar in size and markings laid by gulls, terns, etc., are substituted. The green plover is the bird whose nest is sought after for the eggs, and it is exceedingly interesting to those inspectors who take a delight in nature-study to read of the methods these birds adopt to lure the egg collector away from their nests. The men engaged in this occupation can readily tell by the look of the shells if the eggs are fresh, while if the nest contains less than four (four is the full number) they are certain, and take the eggs that are there. The eggs are olive-green, with dark specks on them. Hotels, restaurants, etc., often supply their customers' demands for these delicacies by either the cheap gulls' eggs, which closely resemble them in appearance, and in flavour when cooked, or by eggs which are about the same size, but whose shells are totally unlike the real eggs; but as they are not served up in their shells, frequently no one is the wiser but the chef and his assistants. Like the birds, a large quantity is sent to market from the east coast, but the largest quantity comes from Holland.

PLUCK.—A butcher's term to denote several organs from a pig or sheep; the name is derived from the fact of its being plucked out after slaughtering. It consists of the trachea, lungs, heart, and liver. The pig's pluck differs from the sheep's, and may be distinguished by the inspector by the following points:

Pigs.	Sheep.
Trachea short.	Much longer than pig's.
Œsophagus and larynx attached.	Not attached.
Lungs are short and broad.	Longer and narrower than pig's.
Liver, four lobes and one small one.	Two distinct lobes and one small one.
Spleen not attached.	Usually attached.

PLUM-PUDDING LIVERS.—This is a butcher's term for cavernous angioma. It is distinguished by black bloody spots on the surface and throughout the liver; the spots vary in size. Livers in this condition are always condemned.

PLUMS.—A large number of different varieties are grown in this country and abroad. California, France, Holland, Germany, etc., export large quantities in a fresh or dried condition.

PNEUMONIA.—Is inflammation of the lungs ; it causes structural changes in one or both lungs.

POIVRETTE, OR PEPPERETTE.—A powder which resembles pepper in appearance, but which is obtained by finely grinding olive stones. It is said to be used for adulterating pepper.

POKE.—A bag of about $\frac{1}{2}$ bushel capacity, generally used for selling onions.

POLE DAB.—See Witch.

POLENTA.—A flour made by the Italians from chestnuts.

POLLACK.—A fish similar to the coalfish, but has no barbel, and is of a dull green colour ; belly obscurely white. The flesh is good eating, but does not keep well, and consequently is seldom seen in inland towns.

POLLARDS.—The fine bran of the skins off the grain of the wheat which is separated from the corn in the process of grinding.

POLONIES.—These are made from various meats, such as veal, pork, ham, chicken, tongue. The meat is very finely minced, ground rice added together with various seasonings. The whole is then chopped finely, and after being thoroughly mixed is filled into skins and cooked for about an hour. The skins are dyed red with a harmless dye.

POMEGRANATES.—This fruit is a pulpy, many-seeded berry, about the size of an orange. When ripe it has a thick brown rind. The edible pulp is of a reddish hue, which has a sweetish flavour. The value of the fruit largely depends on the smallness of the seeds and the quantity of pulp it contains. It is now cultivated in Portugal, Spain, Italy, France, India, Persia, the West Indies, etc. They arrive in cases of 350 to 400 from Malaga, and of 250 in cases from Valencia, about the end of September.

POMMARD.—A still red wine produced in the Burgundy district in France.

POMMEL CHEESE.—Another name for Gervais cheese.

PONTGIBRAND CHEESE.—A foreign cheese not much in demand in this country. It is ripened at a very low temperature.

PONT L'ÉVÊQUE CHEESE.—This is a variety of soft cheese which is firm and has to ripen before use ; it is made from whole milk

in the vicinity of Havre in France. The cheeses are oblong, about 6 inches long, 4 inches wide, and 2 inches deep, and weigh about 1 lb.

POORNESS OF FLESH.—Is similar to emaciation in the appearance of the carcass. The meat may be quite good to eat, but owing to age, or the reverse, such as animals developing, male breeding animals, etc., there is a great scarcity of fat; the muscles are firmer and darker in colour.

POPPY-SEED OIL.—This is obtained from the seed of the poppy, and subjected to a refining process to free it from rancidity.

PORKER.—The technical name for a pig which is to be used as fresh meat; it is usually under a year old.

PORT.—This is one of the oldest and most famous red wines. It is produced in the Oporto district of Portugal, from which it takes its name. They contain a high percentage of alcohol, usually 15 to 22 per cent. by volume.

PORT DU SALUT CHEESE.—Is a very delicate variety of cheese made in Normandy. It is sold to some extent in this country, and is highly appreciated for its delicate flavour.

PORTER AND STOUT.—Are made in a similar manner to beer, but the malt is first roasted in cylinders, and this causes the dark colour.

PORTERHOUSE STEAK.—A cut from the best part of the sirloin near the rump; it is very tender and juicy.

POT.—A measure used in the Midlands for measuring fruit. A pot of cherries weighs 63 lbs. Plums and damsons, 72 lbs.

POT BARLEY.—A similar grain in appearance and manufacture to pearl barley.

POT-HERBS.—These are parsley, purslane, tarragon, fennel, borage, dill, chervil, horseradish, Indian cress, marigold.

POTATO.—As an article of everyday use, this is one of our most important articles of food. A large number of varieties are now on the market, with some high-sounding titles such as British Queens, Royal Kidneys, Scottish Triumphs, Scotch Epicures, Up-to-Dates, King Edwards, etc. Potatoes are rather subject to disease, and some seasons are disastrous to potatoes. The chief diseases are—(1) The potato disease; (2) wart disease, or black scab; (3) potato scab; (4) winter rot.

POTATO CHEESE.—A cheese made in Germany from sour cow's milk, and sometimes sheep's or goat's milk. Potatoes are boiled and grated, and mixed in certain proportions with the curd, and salt, caraway seeds, etc., added. After fermentation has occurred it is moulded, dried, and sometimes covered with beer or cream, and then allowed to ripen.

POTATOES IN BREAD.—The use of potatoes in bread is rapidly disappearing for various reasons, one of the chief being the difficulty experienced in obtaining good ones. When used they are added in the proportion of 10 to 14 lbs. to a sack of flour.

POTHEEN.—A whisky which has been manufactured in an illicit still. It is often made from molasses, etc.; it is thought by some people to have a taste of rum.

POTTED CHEESE.—Made from Cheddar cheese by grinding it fine and mixing with butter, condiments, spirits, etc. It is sold in jars.

POTTED CREAM.—This is cream which is usually sold in small brown jugs, and which generally has a small amount of boracic acid added for keeping purposes. The waxed wood fibre vessels are now superseding the jugs, as they need not be returned.

POTTED MEATS.—A large variety of these meats are now on the market; it is impossible to describe their composition, as so many different recipes are in use by the various manufacturers. They are composed of articles which lend themselves to the operations of food fakers, etc., because of their minced character, and being often highly spiced and flavoured.

POTTED SHRIMPS.—The shrimps are boiled, drained, and shelled as soon as cold. They are then slightly seasoned, and packed tightly into the pots, and sterilized. When cool, they are sealed by running molten fat, usually butter, on the top.

POTTLE.—A long tapering basket which holds about $1\frac{1}{2}$ pints, seldom used by the fruit-sellers now. Commonly used for measuring vegetables in South Bedfordshire.

POULARDES.—A hen deprived of its sexual organs in a similar manner to which the cock bird is made into a capon. They are specially fattened for early killing.

POULETS DE LAIT.—See Petits Poussins, or Milk-Fed Chickens.

PRATTIGAU CHEESE.—This is made from skimmed cow's milk in Switzerland; it weighs from 20 to 25 lbs.

PRAWNS.—Prawns are distinguished from the shrimp by the long serrated-edged sword or horn which they have projecting from their snouts. The name appears to have originated from the word "prong," on account of this projection. The ordinary market size varies from 2 to 3 inches long. They are cooked by dropping them alive into boiling water for five or ten minutes; the time is altered to suit the size.

The remarks as to the characteristics of good and bad shrimps apply equally in the case of prawns.

Large pink shrimps are sometimes sold for prawns. Imported prawns have also been known to be dyed a deep red colour before shipment.

Ostertag states that the adulteration of the shrimp to resemble prawns is done by boiling in fuchsin water. The adulteration may be recognized by the spotted appearance of the artificially coloured shrimp.

Prawns are usually sold fresh in our shops by the dozen, also cured and in tins. They are more delicate in flavour, and they should be a bright red colour, with no spawn under the tail when in best condition.

PRESERVATION OF FISH—*The Solling Method.*—This method aims at the preservation of fish without its coming into direct contact with the ice and ice water, which contains harmful bacteria. The method consists of wrapping the fish in a special paper, and afterwards laying it down amongst ice crushed about the size of a walnut. By this means the air is excluded, and the ice water is prevented from coming into contact with the fish. The low temperature of the ice acts directly on the fish through the paper, and by this means the fish is kept sweet and fresh for a long period.

Captain Solling points out that to procure the best results the fish should be gutted and bled as quickly as convenient after it is caught—on the fishing-boats if possible—to prevent the blood from congealing.

The greater the care taken in removing the blood-particles and cleansing when the fish is gutted and bled, the longer the fish will keep perfectly sound and sweet, and retain its flavour, while even with rough cleaning the wrapping will be found of great value. Still, in all cases where fish is likely to be kept for a long period it is advisable to use as much care as possible. The gills should also be removed.

Numerous experiments have been carried out with this special paper, and have proved that under proper conditions

fish may be kept in a fresher and better condition than in actual contact with ice, in cold stores, or with preservatives. The fish trade, generally speaking, object to the time and trouble which the system takes, as well as to the additional expense. This is much to be regretted, as the flavour, quality, and appearance are retained much longer by this method.

Ice.—The idea of using ice for preserving purposes is to keep the temperature low, thereby preventing decomposition as long as possible. Freezing fish has not met with great success in a general way; the fish are frozen solid, and kept so till ready for consumption.

The best method of preserving by ice is a combination of icing and cold air. The fish are laid upon shelves, in layers separated by ice, and cold air is passed through the store in such a manner and at such temperature as to insure that the ice will not melt, or, if so, only to a small extent.

The method used on the long-distance trawlers is to put the fish into boxes, with layers of crushed ice between them. The amount of ice generally used is half the weight of the fish. The temperature of the hold or fish-room should be about the temperature of melting ice. Under favourable conditions the fish remains sound and marketable for about thirty days after being caught, eviscerated, and iced. Frozen fish may be kept for a long time, but it should be used at once when thawed, as it spoils more quickly than fresh fish, and is more likely to contain injurious ptomaines if so kept.

Halibut probably stands freezing better than most fish; this is generally attributed to the lack of oil in the flesh. Frozen salmon is often found tainted with a peculiar kind of rankness; this is thought to be due to the bursting of the fat cells caused by the freezing process. When the flesh is thawed, the oil is set free and invades the tissues. A yellow discoloration of the skin is said to be from the same cause. All fish deteriorate when in cold storage, and lose in both flavour and firmness of flesh, while some are almost unfit for cold storage. The soakage of the ice in which fish is stored often causes the prime fish—such as turbot, soles, etc.—to become tasteless, flabby, etc., and this is the argument used by the manufacturers of patent paper wrapping, grease-proof paper, etc.

The amount of the decrease in value and quality depends upon the condition of the fish, mode of capture—line or trawl caught—whether stored gutted or ungutted, whether pithed directly upon capture, the length of time in cold store, and the

temperature at which stored, and loss by evaporation. The lower the temperature, the greater the disintegration of the flesh when thawed.

PRESERVED GINGER.—This is imported from China and the West Indies chiefly. The young green roots are washed and scraped, and preserved in syrup.

PRESERVED SOUPS.—See Tinned Soups.

PRICKED TINS.—Are those which contain unsound food, but have been pricked to release the gases generated. The tin is then pushed into the normal shape of a sound tin and resoldered.

PRICKLE.—A small basket used for holding small quantities of beans, etc.

PROCESS BUTTER.—This is a name given to old or stale butter, which has been worked over again and made to appear fresh for a time.

PROCESSING.—A term often used in prosecutions for unsound tinned goods ; is also applied to the sterilizing or cooking of the foods contained in hermetically sealed packages. Several methods of processing are in use, such as—(1) Open bath method, (2) calcium process, (3) closed retort, etc.

PROGNOSIS.—A term which means the prediction of probable progress and result of a malady.

PROOF SPIRIT.—A term used in the wine and spirit trade ; it consists of a mixture of water and alcohol in the following proportions : By weight, 50·76 water and 49·24 alcohol. By volume, 57·06 alcohol and 42·94 water in every 100 parts. Under Section VI. of the Sale of Food and Drugs Act, Amendment Act, 1879, the standard of strength is fixed for brandy, whisky, rum, and gin ; the first three must not be reduced more than 25 per cent., and the latter 35 per cent. under proof.

PROTENE FLOUR.—A white powder produced from milk, said to be pure casein.

PROTOZOA.—These are the lowest class of animal life ; the bodies are usually without definite structure.

PROVENCE OIL.—An olive oil of the finest quality used for edible purposes.

PROVIDENCE CHEESE.—Made in the district of Manche, France ; it is about 8 inches in diameter, and 1½ inches thick.

PRUNES.—These are dried plums of different kinds. The drying is done by two methods: In one they are dried by the sun, in the other artificial means are adopted, steam-heated ovens and similar evaporating apparatus being used.

Large quantities of prunes are imported from France, California, Bosnia, while Germany, Portugal, and Spain also send us a considerable number.

PSEUDO-TUBERCULOSIS.—This term is used to indicate a variety of diseases and conditions, and consequently is very misleading. Generally it is meant to describe a condition due to parasites; it is sometimes called "parasitic pseudo-tuberculosis," "husk," "strongylosis," etc.

It is caused by the parasite *Strongylus rufescens*, which is found under the pleura in the lungs. The sheep is chiefly affected. It appears in greenish nodules or patches, which vary from a pin's head to a small pea, and may affect a part or the whole of the lungs. As a rule, there is little change in the carcass; it is, in very bad cases, affected, and then the carcass must be judged on its merits.

PTARMIGAN.—Is the smallest kind of British grouse, and is the only native bird which turns white in the winter. The change of colour is remarkable. During the summer months it is a mottled brown and black; in August it turns to a blue-grey, mottled with black and dark brown; while in November it is nearly white. It is found in Scotland, especially in the high districts; but the London market is largely supplied by Norway and Russia. The birds are in season from September to April.

The willow grouse is often sold for ptarmigan, but it is considerably larger.

PUCK.—See Black Quarter.

PUDDING SPICE.—A finely ground mixture of rice flour, sugar, caraway, cassia, cinnamon, cloves, ginger, coriander, mace, nutmeg, etc., according to fancy. It is adulterated by mixing with ground spices which have been partially deprived of their essential oils, or mixed with starch, meal, etc.

PUFFY CHEESES.—These have large cavities unevenly distributed throughout them, often as large as an apple. The cheese is a bad shape, acquires a peculiar soapy flavour, and is thought to be caused by uncleanness.

PULLED BREAD.—This is new bread, the crumb of which has been pulled into pieces about 2 inches long, $1\frac{1}{2}$ inches broad, and

$\frac{3}{8}$ inch thick ; afterwards being browned and dried till quite crisp. It is largely supplied to hotels and restaurants.

PUMPERNICKEL.—A coarse kind of bread made from rye flour, said to be rather indigestible.

PUMPKINS.—These are chiefly imported. They are of several varieties, but, generally speaking, they are similar to a flat tomato in shape, and of a pale buff or salmon colour, while some varieties have weighed as much as 200 lbs. each.

PUNCH OF MOLASSES.—Weighs 10 to 12 cwt.

PUNCHEON OF PRUNES.—Weighs 10 cwt.

PUNNETS.—These are small wicker or chip baskets, which vary in size according to the produce which is to be marketed. They are used by greengrocers for displaying salads, mushrooms, radishes, seakale, etc.

PUP, OR PIPS.—A gallon basket made with a rim, and used for raspberries and strawberries ; they usually contain about 6 lbs. of fruit.

PURPLES.—See Ear Cockle.

PURSLANE, OR PURSLAIN.—This plant is grown in the garden for its leaves, which are eaten raw as a salad or cooked. There are several varieties, but all are considered to have anti-scorbutic properties. They are in season from July to October.

PUSTULES.—These are pimples or blisters on the surface of the skin, which contain pus.

PUTREFACTION.—The changes which animal and vegetable matters undergo after death. It is often accompanied by offensive smells, which vary in magnitude according to the stage of putrefaction reached.

PYÆMIA.—Literally pus in the blood. Navel ill, or joint ill, and bacterial endocarditis are forms of pyæmia.

PYROLIGNEOUS ACID.—Acetic acid which is derived from wood sawdust, spent dyewood, etc.

Q.

QUAILS.—These birds are imported into this country in immense quantities from Egypt, Algiers, Capri, etc. They are fattened up in warehouses on millet, etc., and it is a really interesting

sight to see the thousands of heads sticking out from the crates in which they are fattened. The bird is like a very small partridge. The male is distinguished by having a plain fawn breast, and the throat having an anchor mark on it; the bill is greyish-brown. The female bird is paler in colour than the male. The quail is sold in immense quantities in London, packed in boxes of a dozen, ready plucked. They will keep for several days.

QUARTER CRAN.—A basket or measure used for measuring a number of herrings; it usually contains from 250 to 300 fair-sized herrings.

QUARTER-ILL AND QUARTER-EVIL.—See Black Quarter.

QUARTERN LOAF.—Weighs 4 lbs.

QUARTER SIEVE.—A wicker basket holding about $\frac{1}{4}$ bushel.

QUINCE.—A yellowish-green fruit, which closely resembles an apple. They are of two kinds—viz., apple quince and pear quince, because of their close resemblance to these fruits. They are not much used now, except for making jellies and for cooking with other fruits. The Portuguese name for quince is “marmelo,” and from this is said to have been derived the word “marmalade.”

QUINNAT.—The Californian salmon, also known as “king salmon,” “Chinook salmon,” etc.; it resembles the British salmon closely.

QUINOA.—This vegetable is grown in this country to a small extent as a substitute for spinach, the young leaves being used.

QUINTAL.—A measure used in the fish trade; equals 112 lbs.

R.

RABBITS.—Immense quantities of wild rabbits are consumed in this country. They are trapped, snared, shot, and netted. Large quantities are also imported into this country from Australia and New Zealand, and these are caught by traps, as described in “Frozen Rabbits.” For appearance when skinned, the netted or trapped rabbit is the best, though by some people it is considered much inferior to the rabbit that has been killed by shooting, this being more tender and better flavoured. The shot rabbit has a bruised and often discoloured appearance when skinned. When in good condition, the average weight of a wild rabbit in the skin is from 3 to 4 pounds. They are

seasonable practically all the year, but they are in the best condition from October to February.

Age.—In young rabbits the ear is very tender, and is easily torn and bent. The claws are smooth, and when bent sideways easily break. A common method of testing for age is to press together the jaw with the thumb and finger, for when young this breaks easily. Large knee-joints, a short stumpy neck, nose sharp and pointed, teeth not so well developed, soft brown fur, are all signs of youth.

With old rabbits the ears are tough and dry, the claws are blunt and ragged, haunches thick, and fur greyish in colour.

Freshness.—This is known by the moist, bluish look of the flesh when skinned. The carcass should be stiff, flesh firm, and cool to the touch. It should smell sweet, and the fat inside the body should be white, and have no offensive odour. Mouldy and tainted rabbits are referred to under Mould on Rabbits. Bruised and discoloured marks are often seen on shot rabbits, but unless decomposition has commenced no notice is taken of it. See also Frozen Rabbits and Ostend Rabbits.

RADISHES.—These are in season from April to October, but some of the late varieties can be stored for winter use. The Channel Isles send us some very early radishes, and some are grown in frames in this country. They should not be eaten before they are fully matured. They are also frequently productive of digestive disturbances.

The early radishes are made up into flat, fan-shaped bunches of twelve or fourteen roots, and marketed in this way.

RAM MUTTON.—May be distinguished by being dark and coarse grained ; the fat is white ; the flesh is strong and rank.

RAMPION.—This is a plant cultivated for its flowers and young shoots, which are eaten in salad in the late autumn. The root is spindle shaped, of light colour, and agreeable flavour. It is eaten in its raw or cooked state, and is in season from October to December.

RANCIDITY.—An objectionable flavour and odour found in various products produced by decomposition.

RAPE-SEED OIL.—Is the oil obtained from the seeds of the rape-plant, and subjected to a refining process.

RAISINS.—These are grapes which have been dried naturally or artificially. Large quantities are imported from Spain, Greece, Italy, Turkey, France, Cape Colony, California, and Australia.

Numerous varieties of raisins are on the market ; amongst the best known are Muscatels, Bloom, Lexia, Sun, Valencias, etc.

RAISIN WINE.—Is the product made by the alcoholic fermentation of an infusion of dried or evaporated grapes, or of a mixture of such infusion, or of raisins with grape juice.

RASPBERRIES.—These berries come into season about the end of May, and last till early September. They are largely cultivated in this country, and very few are imported. They are a most delicate fruit, but soon lose their freshness and become mouldy and squashy. If the fruit is intended for jam, it is sent to the factory in tubs, and is frequently adulterated by the addition of water. In several cases inspectors in whose districts are large jam factories have examined consignments, and have found that the tubs were "topped," which means that a layer of good sound berries an inch or two thick was placed on the top. On turning the fruit over, it has often been found to be mouldy and in a very advanced state of decomposition, and adulterated with water. These cases are by no means rare.

RAY FUNGUS.—See Actinomycosis.

REBBIALA CHEESE.—This is made in the Italian Alps by the peasants from whole milk in small quantities ; rarely seen in this country.

RECTUM.—Also called straight gut ; it is the lower portion of the large intestine.

RECUIT CHEESE.—Another name for Ziger Cheese.

RED CABBAGE.—Is grown for pickling, the large solid heads being in good demand by the pickle manufacturers. Large quantities are imported from Holland during the winter months. They are in season from September to February.

RED COD.—See Pink Eye.

RED GUM.—Another name for rust.

RED GURNARD.—This fish is frequently seen at the fishmonger's, and is easily distinguished by the square, ugly, bony head. It has no soft skin over the broad bones ; the body rapidly diminishes to the tail. The colour on the back is a reddish-brown tinge, toning down to a silvery white under the belly. It has peculiar pectoral fins, and it is common for the fishmonger to open the fins on both sides, in the shape of a fan, as an attrac-

tion for his marble slab. The fish are in season from July to April, and are found all round the English and Irish coasts. They are, however, more common in the English Channel than in the North Sea. They are sold by the box in the wholesale markets.

RED HERRINGS.—The term “red herring” has different meanings in various parts of the country. For instance, in the Midlands it means an ordinary fresh herring; but generally it is understood in the trade to mean a salted, dried, and smoked herring.

Of late years the demand for it has greatly decreased, owing to improved railway facilities. It is cured in the following manner: The fresh herrings are not gutted, but are packed in salt in barrels, and allowed to remain till sufficiently cured. They are then threaded on spits, and allowed to hang in clean water for about one and a half days. They are next hung out in the open air to allow them to drain and dry, afterwards being put in the smoking kiln. They remain here for a considerable time, according to the colour required, two to six weeks being needed for the smoking process. They are then packed in boxes of about sixty or seventy to a box.

RED MILK.—A disease which shows itself by means of red-coloured patches on the surface of the milk; it is caused by the action of several kinds of bacteria.

RED MULLET.—This is a very delicate fish, and has been called the “woodcock of the sea,” for, like that bird, it is cooked undrawn, or with the trail left in. This fish was regarded as an essential to the aristocratic banquets of the Romans. To preserve the red colour, the fishermen scrape off the scales as soon as the fish is dead, and before death stiffening has set in. Great care is necessary in handling these fish, as the flesh is delicate and easily damaged; the flesh should be very firm and elastic, and thick and plump at the shoulders, bright-eyed, and of a delicate silvery-rose colour. In shape the body is round, with large thin scales firmly attached to the skin. Beneath the chin are two long stiff barbels. They are in the best condition during the summer months while the roe is forming. The flesh is white and remarkably free from fat. They are most abundant on the south and south-west coasts, especially Cornwall and Devon. They grow to almost 15 inches long and 2 lbs. weight, though the majority seen at the fishmonger's weigh not more than $\frac{3}{4}$ lb. The flavour of the fish is said to improve with its size. Cornwall supplies the best fish for the London

market, where they are sold by the pound by the wholesale dealers.

RED RAG.—Another name for rust.

RED ROBIN.—Another name for rust, a disease of wheat.

RED SOLDIER.—See Swine Fever.

REDWARE.—An edible seaweed. See Irish Moss.

REDWATER IN CATTLE (BOVINE PIROPLASMOSIS).—Redwater is a disease of cattle due to the entrance into the blood of a very small (protozoal) parasite called the *Piroplasma bigeminum*. It is probably identical with the disease described in America as Texas fever, and it seems to be prevalent all over the world.

The disease obtained its name, redwater, because it was believed that the affected animals always passed red urine. The parasite causes a breaking-up of the red blood cells, the colouring matter of which is set free. This coloured material is excreted in the urine, giving it a colour varying from dark red to that of black coffee. A clinical study of the disease in the laboratory, however, shows that the parasites may not destroy a sufficient number of red cells to cause the appearance of red urine. In fact, it would appear probable that red urine is not passed by the majority of infected animals, and on this account the disease is frequently passed over. The other symptoms are high temperature (105° to 107° F.), loss of appetite, severe constipation, and in some cases diarrhœa. It should be noted, however, that the recovered animal may suffer from a relapse, since the infective agent may remain in the body for a considerable time after apparent recovery; and it does not always follow because an animal has clinical symptoms of redwater outside the usual periods of prevalence that it was infected by ticks a short time before the typical symptoms appeared.

The death-rate from redwater in this country is not high, but the disease may cause the animals to fall off very much in condition, and in milch cows it causes a great diminution of the milk-yield.—*Extract, Board of Agriculture Leaflet.*

REED.—See Abomasum.

REFINED COTTON-SEED OIL.—See Cotton-Seed Oil.

REFINED SUGAR.—The finer qualities of sugar manufactured from raw sugar.

REINDEER TONGUES.—These are sent into this county curved, dried, and tinned. The chief source of supply is Norway and Sweden. The tongues of other animals have been known to be substituted for reindeer.

RENDEMENT.—This is the net amount of crystal sugar obtainable from a given amount of raw sugar.

RENNET.—Is a preparation obtained from the fourth stomach of the calf; it has the power of coagulating milk. Bad rennet may be recognized by its turbid appearance and its disagreeable smell. It is also obtainable in powders and tabloids.

RENOVATED BUTTER.—This is a name given to old or stale butter which has been worked over again and made to appear fresh for a time.

REVALENTA.—A flour in which the principal ingredient is lentils, other substances being barley flour, sugar, salt, etc.

RHUBARB.—A perennial plant grown for its leaf-stalks. It is one of the earliest outdoor fruits, and can be procured in winter by forcing. It is raised in large quantities in the Midland Counties, and in the early spring it forms an agreeable change from the dried and tinned fruits. The earliest forced produce is made up into bundles of three or four stalks, while the outdoor rhubarb is made into small bundles which vary in the number of sticks according to their size.

RICE.—Large quantities of rice are now imported into this country from Java, Patna, Rangoon, and Carolina, etc. The best rice comes from Carolina. It is larger, sweeter, and better coloured than other kinds. The polishing of rice with French chalk is now considered an adulteration.

RICE VERMICELLI.—This is prepared from unpolished rice; it contains a large proportion of digestible starch, and is a wholesome, nutritious, and digestible food.

RIGOR MORTIS.—The setting or firming of muscles after death, also called "death stiffening." It is usually complete in about twelve hours after death, and lasts from one to four days. The time of onset and duration, however, are liable to considerable variation.

RIOJA WINE.—A Spanish wine which is imported into this country in large quantities. The red rioja is similar to claret, but a white rioja is also imported.

ROASTERS.—Are young fowls about full grown, moderately fat. They are in two classes, small and large ; the former weighs from 4 to 5 lbs., and the latter 8 to 9 lbs.

ROBIN OF COFFEE.—Weighs 1 to 1½ cwt.

ROCAMBOLE.—A bulbous plant very similar in appearance to shallots ; it is not grown much in this country. The bulbs are gathered when the leaves turn yellow, and in flavour they are more delicate and pleasant than shallots. They are in season from October to March.

ROCK COCOA.—Manufactured in a similar manner to flake cocoa, but mixed with arrowroot and sugar.

ROKER.—Under this name the short-snouted species of ray is marketed ; it is obtained all round the coasts of the British Isles. Owing to the large amount of waste in this fish, it usually comes into the market cut into wings, thus saving the carriage of useless material. They are known as “ roker wings,” and are sold in the wholesale market by the barrel. It is distinguished by the fishmonger by the rough skin and the prickles found thereon.

ROLL.—A term used by market gardeners, greengrocers, etc., for a certain quantity of celery ; or twelve unwashed heads are a roll.

ROOK.—These birds are only used for food in their young state, and are said to be of good flavour, similar to pigeon, but are rather dry and coarse.

ROPE IN BREAD.—This is a disease which is caused by a bacillus sometimes found in flour. It shows itself on the baked loaf in the form of brown spots in the crumb. These spots become moist and slimy, and spread so that bread is gluey and can be drawn out in ropes. Bread affected in this way is unfit for food, and has a very nasty smell.

ROPY, VISCOUS, OR SLIMY MILK.—Is a condition which has been produced by the fermentation of certain kinds of bacteria. It is of a thickish, uniform leathery consistency ; when poured out the milk can be drawn into long threads or strings ; hence its name. It is said to be an article of commerce in Norway, Sweden, and Finland, and is much liked.

ROPY WINES.—A kind of ferment or disease to which wines which have not completed their fermentation are liable.

ROQUEFORT CHEESE.—This well-known cheese is made from ewe's milk ; it is one of the oldest, richest, and best kinds made in France. The cheeses are put into mountain caves to ripen. It is

similar to Stilton, but not quite so rich, and possesses a peculiar flavour. In shape it is cylindrical, about $6\frac{1}{2}$ inches in diameter, and 3 inches deep, and weighs from 4 to 5 lbs.

ROSBACH WATER.—A natural mineral water found near Wetterau; it contains sodium chloride, carbonates of lime and magnesia, and is gaseous.

RUE.—A plant cultivated for its bitter leaves, which have a strong odour. They are sometimes used for flavouring, and are considered a stimulant and an antispasmodic. They are also used for making rue gin.

RUM.—This spirit is obtained by fermenting molasses or the scummings from the sugar-pans, and then distilling the product in a still. Rum contains as much as 70 per cent. of alcohol, but it usually contains about 43 per cent. of absolute alcohol when retailed in this country. It is largely made in the West Indies and British Guiana, but inferior rums are also made in France from molasses produced in the beet-sugar manufactories. The legal minimum strength at which rum can be sold is 25 degrees under proof.

RUMINANTS.—These are the cud-chewing animals, whose distinctive feature is the absence of incisor teeth in the top jaw. These are replaced by the hard pad against which the teeth in the lower jaw bite. The principal ruminants are cattle, sheep, goats, deer, etc.

RUMEN.—The first stomach of the ox; it is the largest of the four, lies on the left side, and occupies about three-quarters of the whole abdominal cavity.

RUMINATION.—Is the chewing of the cud.

RUM SHRUB.—A rum which is flavoured by the addition of orange, lemon, and sugar.

RUNNERS.—A name given to the smaller intestines, which measure from 90 to 130 feet.

RUSKS.—A dry biscuit, which is very wholesome and digestible; chiefly used for invalids and infants. Usually made from flour, milk, butter, sugar, and eggs. They are stored in air-tight tins.

RUSSIAN HERRINGS.—These are prepared by cutting off the heads, cleansing, and soaking in brine for about one and a half hours. They are then hung up by the tails to drain and dry for

an hour or so, then fried in oil and put into cans. To each tin are added slices of lemon and onion, together with mustard and other seasonings, the tins afterwards being sealed and sterilized.

RUST.—A name given to a disease of wheat and other grains ; it takes the form of spots of rusty character growing out from the interior of the grain. It is also known by a variety of names, as "red robin," "red rag," "red gum," etc.

RYE.—A cereal which comes next to wheat as a bread-making grain. Bread made from rye flour is damp, close, and poor in volume, with a slightly sour taste. The better kinds of rye bread are said to be equal to that made from wheat, but the coarser kinds are rather indigestible. The rye grains are narrower and of darker colour than wheat, and are thus easily separated from the wheat by screening. About 35 per cent. comes from Russia, 32 per cent. from U.S.A., while some comes from Canada, Germany, etc.

RYE BREAD, OR BLACK BREAD.—This is used on the Continent more than in this country. It is very nutritious, and keeps fresh much longer than wheaten bread.

S.

SACCHARINE.—A white crystalline powder of very sweet taste which is obtained from coal-tar. A term also applied to invert sugar.

SACCHAROMETER.—An instrument so constructed and weighted that, when immersed in a sugar solution, the strength may be told on the graduated scale which is level with the surface of the liquid.

SACCHAROSE.—One of the scientific names for cane-sugar.

SACK.—A bag which holds from $1\frac{1}{2}$ to 2 cwt., used by greengrocers and market gardeners. A sack of apples = 3 bushels. A sack of wheat = 4 bushels.

SACK OF FLOUR.—Weighs 240 to 280 lbs.

SACRUM.—The bones of the trunk : in the ox, five ; horse, five ; pig, four ; dog, three.

SAFFRON, OR HAY SAFFRON.—This is a part of the dried flower of a species of crocus. When the dried flower is put into water it gives a splendid orange-yellow colour. The flowers are largely

cultivated in Spain, Austria, and France. It is adulterated by using other flowers, such as marigolds, etc. Its chief use is for colouring sweets, pastries, jellies, soups, and other foods.

SAGE.—Several varieties are grown in the gardens for the leaves and young stems; these are cut off in the autumn, tied in bunches, and dried and used for seasoning. A bunch consists of as many shoots as can be held in the hand. It is a very popular flavouring for sausages, soups, seasoning, etc.; it has a strong, sweet aromatic odour.

SAGE CHEESE.—A kind of cream cheese made by adding sage-leaves to it.

SAGO.—This is obtained from the pith of the various sago-palms. The tree is cut down, the pith removed, and the sago-starch washed out in water. Large quantities come from the Straits Settlements, and small quantities from the Philippines, Bombay, Java, etc.

SAITHE.—See Coalfish.

SALAD CREAMS OR DRESSINGS.—These vary in composition according to the fancy and taste of the manufacturer. The chief ingredients are salt, mustard, pepper, vinegar, eggs, cream, gum, wine.

SALAD OIL.—A large number of oils are now sold under this name; they include sweet, olive, cotton-seed, pea-nut, sesame, rape-seed, etc.

SALADS.—The following are generally recognized as salads (for their description see under each separate heading): Beet, celeriac, celery, chervil, chicory, chives, corn salad, cress, cucumber, dandelion, endive, lettuce, mustard, nasturtium, onion, radish, rampion, salsify, shallot, sorrel, tomato, watercress.

SALEP.—This consists chiefly of starch and mucilaginous matter. It is derived from the tubercles of several species of orchids, and is imported into this country from the East. It possesses nutritive and soothing properties.

SALMON DISEASE.—This disease attacks fish of the salmon species, which seem to be particularly susceptible. Formerly it was thought to be due to the growth of the fungus *Saprolegnia*, but Dr. Patterson made investigations, and found that the disease was due to the invasion of the tissues of the fish by a special bacillus, *Bacillus salmonis pestis*. He found that it could be transmitted

from dead fish to living fish in the same water. The bacillus gains access through abrasion or the ulceration of the skin, and the disease is, apparently, not contracted when the skin of the fish is in a healthy condition. By experiments it was shown that the cold season was more favourable to its growth.

The fish shows whitish patches on the scaleless parts of the body; these spread and form ulcers. In the later stages the head is covered with white ulcers, while the fins are sometimes stripped. The affected fish rapidly die.

SALMON FAMILY, THE.—The distinguishing feature of this family is the possession of the adipose fin between the dorsal fin and the tail.

So much has been written about the king of fishes that little need be added here. It is, however, interesting to note that its life-history may be divided into five sections: (1) Egg-hatching; (2) parr; (3) smolt; (4) grilse; (5) salmon.

The female fish deposits the eggs in the gravel forming the bed of the river; the male fish fertilizes them by covering them with the milt and fine gravel. After hatching, they are called "parr," and remain as such till they lose their troutlike appearance and visit the sea.

The parr, on becoming a smolt, acquires the silvery appearance of the salmon, and pays its first visit to the sea. Here it rapidly develops and gains weight. Its next appearance is as "grilse," and this term usually denotes a salmon that has never spawned. The grilse passes to the sea, returns, and grows till it finally becomes the salmon. The term "kelt" is usually applied to a salmon returning to the sea after spawning, and when unseasonable.

The flesh of the salmon, when fresh, is of a fine red colour, cool and firm. The scales should be very bright and silvery, and the fish stiff. In good condition it has a small head and tail and thick shoulders. When out of season, the fish has large scarlet, purple, and blue spots or bruises on its sides.

The fish is found in the rivers of the British Isles. It is also taken in the rivers of Canada and America in large quantities by means of revolving traps similar in appearance to a water-wheel. They are then turned into a trough, and here they are killed and taken to the canning factory or cool stores.

Large quantities of chilled and frozen salmon are imported into this country from Canada, Russia, Siberia, etc. It may

be sold at any time, provided it bears the seal of the Fishmongers' Company on it.

SALMON TROUT.—A species of trout resembling salmon in flavour and appearance. Salmon trout is much smaller than salmon, is comparatively stouter, and carries its bulk more towards the tail. The mouth is longer in proportion than that of the salmon; colour of the upper parts dark, with a tinge of blue, a tinge of pink on the cheek and along the side; whitish below, some rather shotlike spots on the gill-covers, and the ventral fins rather light; scales much smaller. The fish are in their best condition in spring and early summer, and are regarded as a great delicacy. The colour of the flesh is both red and white, but fish having flesh of the former colour are considered better in quality and flavour. The red-fleshed fish is sold by examining the inside of the throat through the gills: if this be red, then you have a red-fleshed fish.

SALT.—This is chemically known as sodium chloride (NaCl). Four kinds of salt are manufactured: (1) Fine grained or lump salt; (2) common salt; (3) fishing salt; (4) baysalt. The chief centres of salt manufacture are in Cheshire, Staffordshire, Worcestershire, Yorkshire.

Characteristics of Good Salt.—It should be fine grained, white, dry, and entirely soluble in water.

SALT OR PICKLED MEAT.—Beef and pork are the meats most often salted or pickled. They are usually immersed in a brine solution for about two weeks; the pickling is sometimes assisted by pumping the prepared brine into the thicker parts by means of a brine pump. The action of salt on meat is to extract the juices in large quantities; the salt which becomes absorbed into the tissues of the meat renders them strongly antiseptic, and preserves the meat from putrefaction. It must not be forgotten, however, that it also deprives the meat of considerable nutritive juices. When inspecting salt meat, it is usual to smell and taste the brine for sweetness or evidence of decomposition. Partially decomposed meat may be pickled, but this will show signs of putrefaction; the meat will be more or less spongy, often slightly greenish in colour, and have an offensive odour. Old meat salted will show signs of toughness and absence of fat.

SAMP.—Another name for hominy.

SAMPHIRE.—This plant is grown for its leaves, which are pickled in vinegar, and used as a seasoning and in salads.

SAMPLING—

LIST OF CERTAIN FOODS AND DRUGS.

Articles.	Minimum Quantity required by Public Analyst.	Total Quantity to be purchased.
Milk	6 ozs.	1 pint.
Condensed milk	One-third quantity	1 tin.
Butter	3 ozs.	$\frac{1}{2}$ lb.
Coffee	3 ozs.	$\frac{1}{2}$ lb.
Pepper	$\frac{3}{4}$ oz.	2 ozs.
Mustard	$\frac{1}{2}$ oz.	2 ozs.
Bread	One-third quantity	2 lbs.
Sugar	" "	$\frac{1}{2}$ lb.
Confectionery	" "	$\frac{1}{2}$ lb.
Jam	" "	$\frac{1}{2}$ lb.
Lard	" "	$\frac{1}{2}$ lb.
Arrowroot	" "	$\frac{1}{4}$ lb.
Olive oil	" "	1 pint.
Vinegar	—	1 pint.
Lime juice	" "	1 pint.
Cocoa	" "	1 lb.
Ginger	" "	1 lb.
Oatmeal	" "	1 lb.
Cheese	" "	1 lb.
Yeast	" "	1 lb.
Preserved peas	" "	1-lb. can.
Tinned pineapple	" "	1 can.
Wine	" "	1 bottle.
Rum	" "	1 pint.
Gin	" "	1 pint.
Brandy	" "	1 pint.
Whisky	" "	1 pint.
Lemon juice	" "	$\frac{1}{2}$ pint.
Beer	" "	1 pint.
Purified cream of tartar	" "	$\frac{1}{4}$ lb.
Flowers of sulphur	" "	$\frac{1}{4}$ lb.
Rhubarb	" "	$\frac{1}{4}$ lb.
White or yellow wax (B.P.)	" "	$\frac{1}{4}$ lb.
Citric acid	" "	$\frac{1}{4}$ lb.
Tartaric acid	" "	$\frac{1}{4}$ lb.
Seidlitz powder	2 powders	6 powders.
Glycerine	One-third quantity	$\frac{1}{2}$ lb.
Spermaceti	" "	$\frac{1}{4}$ lb.
Magnesia	" "	$\frac{1}{4}$ lb.
Epsom salt	" "	6 ozs.
Castor oil	" "	$\frac{1}{2}$ pint.
Linseed oil	" "	$\frac{1}{4}$ lb.
Oil of peppermint	" "	$\frac{1}{2}$ pint.
Cod-liver oil	" "	2 ozs.
Antipyrine	" "	6 ozs.
Laudanum	" "	6 ozs.
Ipecacuanha wine	" "	6 ozs.
Camphorated oil	" "	$\frac{1}{2}$ pint.

LIST OF CERTAIN FOODS AND DRUGS—*Continued.*

Articles.	Minimum Quantity required by Public Analyst.	Total Quantity to be purchased.
Sweet spirits of nitre	One-third quantity	6 ozs.*†
Spirits of sal volatile	" "	6 ozs.†
Spirits of camphor	" "	6 ozs.†
Syrup of senna	" "	$\frac{1}{2}$ pint.
Zinc ointment	" "	$\frac{1}{4}$ lb.
Gregory powder	" "	2 ozs.
Iodide of potassium	" "	4 ozs.
Distilled water	" "	1 quart.
Honey	" "	$\frac{1}{2}$ lb.
Golden syrup	" "	$\frac{1}{2}$ lb.
Lime water	—	1 pint.
Prescription	Depends upon	ingredients.

* To be sent in ground stoppered bottles.

† Not a food or drug.

SAMPLING MILK FROM CHURN, SOME METHODS OF :

1. **Dipper Method.**—This consists in agitating the milk in a churn with a dipper prior to withdrawing a sample.
2. **Plunger Method.**—This consists in agitating the milk in the churn with a plunger prior to withdrawing a sample.
3. **Pouring Method.**—Pouring the milk into an empty churn and back again three times prior to taking a sample.
4. **Tube Method.**—Drawing a sample with a glass tube.

SARDINES.—See Tinned Sardines.

SARSAPARILLA.—This is the root of a plant which grows in the tropics. Two kinds are in use: the mealy sarsaparilla, which comes from Brazil, Honduras, etc.; and the non-mealy, which is exported from Jamaica. It is chiefly used in the manufacture of mineral waters and drinks.

SARSAPARILLA WINE.—Is commonly sold by herbalists, etc., and is composed of compound decoction of sarsaparilla, common sherry wine, glycerine, and water.

SAUCES.—A very large variety of sauces are now made; they are useful for imparting a relish to the food, and in some cases aid digestion. Sauces, like sausages, lend themselves to all kinds of adulteration and inferior substances. The foundation of the

majority of sauces is soy ; other substances are vinegar, onions, lime juice, garlic, tamarinds, anchovies, chillies, cloves, etc., according to the kind which is to be prepared.

SAUERKRAUT.—A preparation of cabbages eaten largely in Germany, and on sale in most large towns in this country. It is made by cleansing white cabbage, cutting into fine strips, which are packed in a cask between layers of salt mixed with juniper berries, and caraway seeds, and other condiments, to impart flavour. The mass ferments, and when fermentation is complete the preparation is closely covered over and put in a cool place ready for use. It is usually made in October, and is ready to eat by February.

SAUMUR WINES.—A wine which is made in the district of this name in France ; it is a sparkling wine made in a similar manner to champagne. A number of varieties are on the market, some being very cheap wines.

SAUSAGE MEAL.—A meal made from biscuits, and used for mixing with the minced meat, etc., for the sausage filling.

SAUSAGES.—These are made by chopping and finely mincing meat of all kinds—*i.e.*, beef, pork, chicken, ham, etc. The minced meat is then mixed with moist white bread, ground rice or flour, sausage meal, etc., as well as seasoning with salt, pepper, and various spices to suit the taste of the customers. The prepared sausage meat is then put into a sausage-filler, and stuffed into the prepared casings or intestines of pigs and sheep. The filled casings are then pinched off into sections about 4 inches long, and are then ready for sale. The very cheap sausages contain a minimum of meat and a maximum of bread or some flour or meal. To give these inferior sausages the appearance of the better-class article, and so conceal the larger proportion of bread, etc., colouring matters are mixed with the chopped sausage filling. At one time Armenian bole, a natural red oxide of iron, was much used, but its use has been largely discontinued, owing to the cheapness of the aniline dyes, which give better colours and are easily manipulated. Saltpetre, cochineal, and other artificial colourings are also used, either with the object of colouring the meat or concealing the large quantity of bread, etc. Old cattle, bulls and cows that have wasted away, and so have the minimum amount of fat, are readily sold to the sausage-maker for mincing up ; in fact, these animals are often called "mincers" in the trade (see heading, Mincers). Sausages,

polonies, etc., are, by the less respectable tradesmen, an easy means of getting rid of inferior meat, odd scraps, and returned sausages, and being worked up and filled into fresh casings. It will be seen from the above remarks that the best means of preventing such methods is frequent inspection at all times of places where sausages are being prepared.

Decomposing sausages are rather difficult of detection until the smell alters them. Bad sausages give off a very offensive smell, and are usually discoloured. If doubtful, a sausage should be cut across and smelt. Another method is to pour boiling water over some of the sausage meat; if a little lime-water is also added, the smell of decomposition is more readily noticed in the steam. The drier the sausage, the better its keeping quality will be.

COMPOSITION OF SAUSAGES, BY HUTCHINSON—PERCENTAGES.

Variety.	Water.	Fat.	Protein.	Gristle, etc.	Starch.	Ash.
Pork	54.99	21.04	12.28	0.67	1.05	3.52
Cambridge ..	57.54	29.72	9.45	0.72	2.20	3.47
Mutton	55.58	30.51	1.89	3.11	3.90	2.50
German	46.54	17.87	16.38	1.13	15.00	4.47
Polony	45.57	32.66	17.26	0.54	2.30	2.80

SAUTERNE WINES.—A wine which is made in the Bordeaux district of France; a large number of varieties are on the market, but they belong to one of the three grades into which these wines are divided.

SAVELOYS.—This is a short, thick sausage, made from different kinds of inferior meats, salt, fresh, and sometimes of doubtful freshness. The meat is finely minced, mixed with moist pressed bread, sausage meal, etc., together with salt, pepper, and various spices. The mixed filling is then forced into casings, then cooked and smoked. These, owing to their being cooked, keep much better than sausages.

SAVORY.—There are two kinds, the summer and the winter variety. It is used as flavouring for soups, salads, etc. The young shoots are gathered and tied up in bunches, and sent to market, etc. The summer savory is in season from June to October, and the winter is in season all the year.

SAVOURY DUCKS.—See Faggots.

SAVOY.—Is another variety of the cabbage family ; its leaves are curled, wrinkled, and crimped. It is full-flavoured, with a compact heart. The frost improves the plant by making it more tender for eating. It is at its best during October and November, but is sent to the market up to early spring.

SCALDED CREAM.—See Clotted Cream.

SCANTERERS.—Same as Piners and Wasters.

SCHABZIGER CHEESE.—A Swiss herb cheese, made in turban-shaped cakes. It closely resembles sage cheese, in so far as powdered leaves of a plant or herb are added in the course of its manufacture. It is a sour-milk cheese, and is strongly flavoured.

SCHOALEY.—See Navel Ill and Joint Ill.

SCORE.—A term used by market gardeners, etc., in the sale of endive and lettuce ; it consists of twenty-two heads of each.

SCORING THE CARCASS.—A term used when dressing a bacon pig ; it means taking out the backbone and severing the sides.

SCORZONERA.—This plant is grown for the carrot-shaped roots ; they are cooked and eaten in a similar manner to salsify. The roots are black in colour, but the inside is white. The plants are not grown extensively in this country, but the roots are nutritious and wholesome, and have a sweet taste. They have the reputation of possessing antibilious properties, and are in season from November to March. They are generally sent to market in bundles of a dozen roots tied together.

SCOTCH BARLEY.—The process of manufacture is similar to that of pearl barley.

SCOUR.—A term used to denote diarrhœa in calves and lambs. Also called "white scour" or "white skit."

SCREWS.—A butcher's term for old, emaciated cows.

SCUTTLING TABLE.—A strong, sparrèd bench, with a scalding tank at its end ; used in a pig slaughter-house.

SEA-BREAM.—There are several kinds of bream, but the one which the inspector is most likely to be called upon to inspect is the common sea-bream. This fish is very abundant on the south and south-west coasts of Ireland. It is most seasonable between the months of June and December.

The body of the fish is deep, and has large scales, which are silvery in appearance in the smaller fishes. The larger show

an orange-pink colour on the back, with silvery sides ; another distinguishing feature is the black spot on the shoulder or behind the pectoral fin.

“ Chad ” is the name given to the young sea-bream. In small chad the black mark is not always present. The majority of sea-bream are about 2 lbs. in weight, and it is rare that a 5-lb. fish is on sale. The flesh is insipid, and has a muddy taste if boiled.

SEA GIRDLE.—An edible seaweed. See Irish Moss.

SEAKALE.—This is a delicious vegetable ; it is grown in pits in the dark. The stalks are the parts used, and when properly blanched and in good fresh condition are thought by some people to equal asparagus in flavour.

It is in season from November to April, and is especially valuable at that time of year. If it is exposed to light, its flavour and quality suffer.

The heads are cut about 6 inches long, with a small portion of the root attached, and sent to market and the shops in punnets of 1 lb. to 3 lbs. in weight, according to the early or late season.

SEA-MOSS.—An edible seaweed. See Irish Moss.

SEASONS FOR VARIOUS FOODS, ETC. :

American cress	Spring and summer.	Blackcock	.. August to November.
Angelica	.. Summer.	Borage	.. June to August.
Aniseed	.. June to August.	Borecole	.. November to April.
Apples	.. September to May.	Brazil nut	.. —
Apricots	.. August to September.	Brill	.. All the year.
Artichokes,		Broccoli	.. October to May.
Globe	June to August.	Brussels sprouts	October to March.
Artichokes,		Buck venison	June to September.
Jerusalem	October to February.	Bullaces	.. September to November.
Asparagus	.. February to July.	Burnet	.. May to September.
Balm	.. June to August.	Cabbage	.. All the year.
Bananas	.. All the year.	Capercaillie	.. August to November.
Barberries	.. July to October.	Capsicums	.. September to November.
Basil	.. June to August.	Cardoon	.. October to March.
Bass	.. August to October	Caraway	.. July.
Bay-leaves	.. All the year.	Carrots (young	
Beans (broad)	June to August.	and old)	.. May to March.
Beans (French)	July to September.	Cashew nut	.. All the year.
Beans (runner)	July to October.	Catfish	.. February to July.
Beet	.. October to April.	Cauliflower	.. June to September.
Bilberries	.. July to September.	Celeriac	.. November to March.
Blackberries	August, September, and October.	Celery	.. September to April.

- Celery-leaves September to June.
 Chamomile .. June to August.
 Cherries .. June to August.
 Chervil .. May to January.
 Chestnut .. November to January.
 Chickens .. February to October.
 Chicory (indoor) Autumn and winter.
 Chicory (outdoor) Spring and summer.
 Chinese artichokes October to February.
 Chives .. May to August.
 Coalfish .. September to February.
 Cob nuts .. September to February.
 Cockle .. All the year.
 Cocoanut .. August to February.
 Cod October to February.
 Common sole Autumn and winter.
 Conger eel .. March to October.
 Coriander .. June to September.
 Corn salad .. Summer and winter.
 Clary June to August.
 Crab All the year.
 Cranberries .. October to February.
 Crawfish .. May to July.
 Crayfish .. July to February.
 Cress (indoor) Autumn and winter.
 Cress (outdoor) Spring and summer.
 Cucumbers .. May to October.
 Curfants .. June to September.
 Custard apple June to September.
 Cygnets .. May to July.
 Dab August to September.
 Damsons .. September and October.
 Dandelion .. November to February.
 Dates .. September to February.
 Dewberries .. August to October.
 Doe venison .. October to January.
 Ducklings .. February to July.
 Ducks .. July to February.
 Ducks (wild) August to March.
 Eels All the year.
 Egg-plant .. June to October.
 Elderberries August and September.
 Elder-flowers May to June.
 Endive .. November to March.
 Escallops .. All the year.
 Fennel .. May to August.
 Figs (dried) .. All the year.
 Figs (green) .. August to September.
 Filberts .. August to October.
 Flageolets .. May to August.
 Flounder .. March to April.
 Fowls .. All the year.
 Garfish .. Autumn and winter.
 Garlic .. July to February.
 Geese .. October to March.
 Geese (wild) .. September to March.
 Good King Henry April to June.
 Gooseberries (green) April and May.
 Gooseberries (ripe) August to September.
 Goslings .. March to September.
 Grapefruit .. August to September.
 Grapes .. All the year.
 Grass lamb .. March to August.
 Grayling .. October to March.
 Greengages .. August to September.
 Green goose .. May to September.
 Greens .. October to March.
 Grey mullet .. July to February.
 Grouse .. March to September.
 Guinea-fowls January to April.
 Haddock .. May to February.
 Hake April to January.
 Halibut .. All the year.
 Hares .. September to April.
 Haricot beans All the year.
 Hazel nut .. All the year.
 Herring .. All the year.
 Hickory nut .. Autumn.
 Horehound .. May to August.
 Horseradish .. October.
 House lamb .. December to February.
 Hyssop .. Summer.
 Indian corn .. July to September.
 John Dory .. January to March.
 Kale December to March.
 Kid April to July.
 Kohl Rabi .. July to December.
 Lamb .. March to August.
 Lamprey .. January to May

- Landrails .. September to February.
- Larks .. October to January.
- Latchet .. July to August.
- Lavender .. August.
- Leeks .. August to May.
- Lemon sole .. All the year.
- Lemons .. All the year.
- Lentils .. July.
- Lettuces .. All the year.
- Leverets .. August to September.
- Limes .. May to January.
- Ling .. July to October.
- Lobsters .. All the year.
- Mackerel .. April to December.
- Maize .. July to September.
- Marigold .. June to September.
- Marjoram .. June to September.
- Meagrim .. June to September.
- Medlars .. October to January.
- Melons .. July to October.
- Mint .. May to August.
- Monk fish .. Autumn.
- Mulberries .. August and September.
- Mushrooms .. February to October.
- Mussel .. July to April.
- Mustard and
cress All the year.
- Mutton .. All the year.
- Nasturtium .. July to October.
- Nectarines .. September and October.
- Nettles .. March to May.
- Onions .. All the year.
- Onions (spring) March to September.
- Orache .. April to October.
- Oranges .. All the year.
- Ortolan .. May to September.
- Oyster
(English) September to May.
(foreign) All the year.
- Parsnips .. September to April.
- Partridge .. September to February.
- Peaches .. August to October.
- Pea nut .. —
- Pears .. All the year.
- Peas .. June to September.
- Pecan .. All the year.
- Peppermint .. May to September.
- Perch .. August to June.
- Periwinkles All the year.
- Petits poussins April, May, and June.
- Pheasants .. October to February
- Pigeons .. August to April.
- Pigeons
(Bordeaux) All the year.
- Pignolia .. All the year.
- Pike .. October to April.
- Pilchard .. July to January.
- Pineapples .. All the year.
- Pintail .. September to March.
- Pistachio .. All the year.
- Plaice .. All the year.
- Plover .. September to February.
- Plover's eggs April and May.
- Plums .. August to October.
- Pomegranates September to December.
- Pork .. October to April.
- Potato (new) April to July.
- Potato (old) .. All the year.
- Prairie hens .. February to April.
- Prawn .. All the year.
- Prunes .. All the year.
- Ptarmigan .. September to April.
- Pumpkins .. September to October.
- Purslane .. July to October.
- Quails .. September to February.
- Quince .. October and November.
- Rabbits
(Ostend) All the year.
- Rabbits (wild) September to March.
- Radishes
(forced) April to June.
- Radishes
(outdoor) June to November.
- Rampion .. October to December.
- Raspberries .. June to September.
- Red cabbage September to January.
- Red gurnard July to April.
- Red mullet .. June to September.
- Rhubarb
(forced) December to March.
- Rhubarb
(outdoor) .. April to October.
- Rocambole .. October to March.
- Roker .. Autumn and winter.
- Rosemary .. All the year.
- Rue .. August.

Salmon	February 2 to	Thyme	.. All the year.
(English)	August 31.	Tomatoes	.. All the year.
Salmon		Trout	.. February to September.
(foreign)	All the year.	Truffles	.. August to November.
Salsify	.. November to March.	Turbot	.. All the year.
Sapuca	.. —	Turkeys	.. October to March.
Savory		Turkeys	
(summer)	June to October.	(poults)	July to October.
Savory		Turnip	.. May to January.
(winter)	All the year.	Turnip-tops	.. February to April.
Savoy	.. October to January.	Vegetable	
Scorzonera	.. November to March.	marrow	July to October.
Sea bream	.. June to December.	Venison (buck)	June to September.
Seakale	.. February to June.	Venison (doe)	October to January.
Shallots	.. August to February.	Walnuts	.. July to December.
Shrimp	.. All the year.	Watercress	.. All the year.
Skate	.. Autumn and winter.	Wheatears	.. July to October.
Skirret	.. November to March.	Whelk	.. All the year.
Smelt	.. September to March.	Whitebait	.. All the year.
Snipe	.. November to April.	Whiting	.. All the year.
Sorrel	.. All the year.	Whortleberries	July to August.
Spinach	.. February to August.	Widgeons	.. August to March.
Sprat	.. Winter.	Wild duck	.. October to February.
Strawberries	June and July.	Witch	.. August to April.
Sturgeon	.. September to March.	Woodcock	.. November to February.
Tansy	.. May to September.		
Tarragon	.. May to September.		
Teal	.. September to March.		
Tench	.. July to September.		

SEAWEED, EDIBLE.—There are a number of edible seaweeds; they form an agreeable change from ordinary vegetables, and on the coasts are a great boon to the poorer inhabitants. They should be collected as the tide leaves them, as exposure to the air tends to make them bitter. The principal kinds are laver, Irish moss, dulse, badderlocks, etc.

SEGG.—A male animal that has been castrated only a short time previous to slaughter.

Another description is a male animal that was castrated after being used for service.

SELF-RAISING FLOUR.—This is ordinary flour to which has been added a certain proportion of cream of tartar and bicarbonate of soda, or tartaric acid and bicarbonate of soda, or practically a baking powder. On the addition of water, gas is given off, causing the pastry, etc., to rise.

SELTZER WATER.—An artificial water is now made resembling the natural water which comes from springs near Limburg, in Nassau. The natural water is sparkling and effervescing, and

contains bicarbonate of soda, lime, magnesia, bromide of iron, carbonic acid, etc. It is used for drinking with spirits, liqueurs, etc.

SEMOLINA.—Is the coarse meal ground from certain varieties of hard wheats, chiefly from Italy and Spain. It contains more nitrogenous substances than average wheat flour, sago, arrow-root, etc., and is consequently more valuable as a food. The cheaper forms have been adulterated with rice, corn, and potato flours.

SEPARATOR SLIME.—The mud which collects in the bowl of the separator in the course of separating milk.

SEPTICÆMIA.—The contamination of the blood with septic organisms generated in an external wound or injury, inducing blood-poisoning.

SEPTIC FEVER.—A fever which is due to septic organisms gaining access to the system, as in septicæmia and pyæmia.

SERON OF ALMONDS.—Usually weighs $1\frac{1}{2}$ to 2 cwt.

SERON OF COCHINEAL.—Usually weighs 140 lbs.

SERUM.—A clear straw-coloured fluid, which is produced by the clotting of the blood.

SHADDOCK.—A fruit named after its discoverer, Captain Shaddock. It resembles a large orange, is light yellow in colour; the rind is thick, white, spongy, and bitter; the pulp is watery and acid. It closely resembles the grape fruit, but is much larger. Shaddock sometimes attains a weight of 20 lbs.

SHAGGY CAPS.—This is an edible fungus with a cylindrical cap, which is dull brown. It is so distinctly marked that it cannot be confused with mushroom or any other fungus when once seen.

SHALLOTS.—These bulbs are much in favour as a relish for soups and for pickling. They are ready for use from July to February. Usually sent to market in bags, or peck or bushel baskets.

SHARK'S FINS.—These are considered a great delicacy by the Chinese. They may be obtained in this country preserved in tins, bottles, etc., but have no large sale.

SHEEP BRONCHIAL WORM.—Another term for the worm *Strongylus filaria*.

SHEEP FOR MUTTON.—The chief breeds are Lincolns, Leicester, Border Leicester, Scotch Blackface, Shropshire, Southdown, Kent Romney, March, Kerry Hill, Oxford Down, Hampshire Down, Wensleydale, Dorset Horn, Welsh Mountain.

SHELLFISH, METHODS OF CATCHING.—Lobsters, crabs, and prawns are caught in pots. These are small round baskets with a hole in the top, through which the fish crawl inside, and from which they are unable to return; the pots are kept down by weights. Prawns are also trawled for, but shrimps are usually caught by trawling either by hand or worked from a boat. Oysters are dredged for. Mussels are caught by picking and dredging. Cockles are raked for by hand. Whelks are caught by lines, in pots, and by dredging. Periwinkles are picked by hand.

The crab, lobster, and prawn seem to live among the rocks; but the whelk, cockle, and scallop are found on soft ground or sand.

SHERRY.—A wine made chiefly in Andalusia, Spain. A considerable quantity is exported to this country. In colour it varies from pale yellow to deep brown.

SHOE NUTS.—Another name for Brazil nuts.

SHREDDED WHEAT.—A preparation of whole wheat in the form of shreds, which have been baked similarly to a biscuit.

SHRIMP PASTE.—The shrimps are boiled, drained, and shelled as soon as cold; then made into a paste by mixing and grinding with some suitable fat. Seasoning is added, and, after being filled into small bottles, jars, etc., they are sealed hermetically by one of the many patent covers, or hot fat is run over the top.

SHRIMPS.—Shrimps are said to derive their name from the habit they have of curling up or shrinking when caught, and they are of two kinds—brown and pink.

The general size of the brown shrimp is from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches long. Dealers judge them by their size, outside colour, freshness, and colour of flesh. The brown shrimp is usually found near to the estuaries of rivers and sand-flats, while the pink shrimp keeps more to the open sea. Shrimps are fished for all the year round, but both pink and brown shrimps are rather scarce during the winter months. They are in their best condition during the summer months. Brown shrimps are plentiful from March to the end of October, and pink shrimps from May to November. An average number of shrimps to a gallon is 2,700 to 2,800. The best brown shrimps come from Leigh-on-Sea, but the large

Flushing shrimps are good. The best pink shrimps come from Harwich and Boston districts. A large quantity of Dutch shrimps are also imported. There appear to be two distinct seasons for these. The South Dutch shrimps are sent to our markets between the months of March and October, and are usually good in quality. The North Dutch shrimps are in our markets during the winter months, but are not so good in quality as the South shrimps. Large quantities of shrimps are sent from the estuaries of the Thames, and from Pegwell Bay, Ramsgate, Morecambe Bay, etc.

Shrimps are cooked by dropping them into boiling water for about five to eight minutes. In some cases they are boiled alive on the boat that brings them to market, but locally caught shrimps are often sent to market alive.

Shrimps in good condition have their tails turned inwards, pressing firmly against the body. They are stiff. They have also a clean-looking shell and clear, prominent eyes, emit a pleasant smell, and should have a crisp feel. They are usually sold by the pint.

Bad shrimps, on the other hand, go sticky. This is tested by inserting the hand in a quantity; they also go soft, smell unpleasant, and often become heated.

SHROPSHIRE CHEESE.—This is a cheese similar in appearance and taste to Cheshire cheese. Large quantities are made and sold in and around the Shrewsbury district.

SIEVE.—A measure used in the fruit trades; it has a capacity of 8 imperial gallons, or 4 pecks.

SILENT SPIRIT.—Alcohol made by means of a patent still, so as to be devoid of any flavour or odour. It is generally made from potatoes, but can be made from a variety of articles.

SIMPLE FEVER.—This is characterized by a general derangement of the system, rapid breathing, increase of temperature, quickened pulse, shivering, etc.

SINGLE-CREAM CHEESE.—A very good cream cheese of poor quality, but having more of a cheesy flavour; can be manufactured from cream containing 25 to 30 per cent. of fat. Many persons prefer this type of cream cheese. About twenty-four $\frac{1}{4}$ -lb. cheeses are made from 1 gallon of such cream.

SISTER BRICKS.—Loaves baked in pairs, so that one side of each loaf is crusty and one side crumbly.

SIX ALE.—A term used in public-houses to indicate ale or beer sold at 6d. per quart.

SKATE.—There are several varieties of rays put on the market under the general name of "skate." The common skate is distinguished by having a smooth skin; it is a pale grey colour with black spots. This fish is more frequently seen in the market than any other. It has been caught weighing over 200 lbs., but one weighing 150 lbs. is considered a large fish. Skate is found on the coasts around the British Isles, and is in its best condition during the autumn and winter months. This fish belongs to the cartilaginous fishes, the bones being simply cartilage. Its flesh is considered to be highly nutritious and easy of digestion. It is chosen for its firmness, breadth, thickness, and creamy appearance, and is often sold crimped. The fish will keep fresh probably longer than any other fish, and it is being used more than ever it was. It sometimes possesses an ammoniacal smell: the costers, etc., give this the name of "pissy skate," owing to the supposed resemblance to urine. It is frequently condemned when in this condition.

SKIRRET.—This plant is chiefly grown for its long edible roots, which are somewhat like salsify. The roots are cooked and eaten in a similar manner to that plant.

SLAUGHTER-HOUSES, PRIVATE.—The following are the chief disadvantages:

1. The inspector cannot be present always at the slaughtering owing to the varying hours.
2. The dishonest butcher may in his absence remove all evidence of disease from the carcass and organs.
3. Usually the apparatus is out of date, and the slaughter-house improperly situated, and likely to become a nuisance from noise, smell, sounds and sights.
4. Humane slaughtering often at a minimum through absence of control.

SLAUGHTERING, METHODS OF:

Without Stunning.

1. Cutting or stabbing the neck.
2. Stabbing the breast.
3. Pithing or nape stab.
4. Shecheta.

With Stunning.

1. Poleaxing.
2. Stunning.
3. Striking bolt apparatus, etc.
4. Shooting.
5. Electricity.

1. In *cutting or stabbing the throat* with a knife, the vessels of the throat are pierced or severed.

2. When *the breast is stabbed*, the heart is injured, and insensibility does not take place for some time. If skilfully performed, the blood escapes in great volume from the wound; and the more rapidly the bleeding takes place, the better in point of colour will the quality of the meat be.

3. In *the nape stab, or pithing*, the muscular system is paralyzed, but the animal is not insensible, and consequently it is considered a cruel form of slaughtering.

4. In *shecheta*, or the Jewish method of slaughter, the animal is roped up and then thrown on to the floor. The head and neck is stretched tightly, and the cutter severs the large blood-vessels with one cut. The bleeding of the animal is very complete.

1. *Poleaxing*.—The animal's head is generally first secured by a rope drawn through a ring in the wall or floor; the animal is struck on the skull with a poleaxe, and falls to the ground. A cane is inserted in the hole, and pushed up and down the spinal canal, causing the animal to lose all sense of pain. The animal's throat is next cut lengthwise for about 4 to 6 inches to release the blood. The disadvantages of this method are: It does not effect complete bleeding; lack of skill on the part of the operator may cause unnecessary suffering to the animal, by repeated blows.

2. *Stunning*.—This method consists in striking the animal a heavy blow with a hammer, mallet, club, etc., in a certain spot of the forehead, which produces a state of insensibility; the animal's throat is then cut. This method often damages the skull, leaving clotted blood underneath. The brain is often spoilt, and the head is rendered less valuable. There is little danger of missing the aim, and it assists in a painless death.

3. *Striking Bolt Apparatus, etc.*—A large number of patterns of various bolt and mask apparatus are in use, more especially on the Continent. The bolt apparatus is placed on the particular

spot of the animal's skull, and then driven home by the operator with a wooden mallet ; proficiency is soon acquired.

Several kinds of masks are also in use.

4. *Shooting*.—A number of different kinds of masks, pistols, etc., have been invented for this purpose. Probably the best one is the R.S.P.C.A. Humane Killer. It consists of a short revolver barrel placed at right angles to the wooden stock and trigger ; the operator therefore stands clear of the animal.

5. *Electricity*.—No thoroughly satisfactory manner of producing insensibility by electricity has yet been introduced.

SLIMY MILK.—See Ropy Milk.

SLINK, OR FŒTAL MEAT.—This is meat from animals prematurely or improperly born. It is always sodden, wet, soft, and flabby. In the carcass the hoofs will be soft and pale in colour, the lungs unexpanded, and these, if thrown into water, will sink. The muscles are watery and flabby, and easily penetrated with the finger, while the fat will be scanty. Red marrow will be found in the tubular bones. Slink carcasses have a dull colour, and smell offensively, and are always seized and condemned.

SLIPCOTE CHEESE.—See Colwick Cheese.

SLOE.—The fruit of the blackthorn. Sloes are ready for picking when they have a full rich bloom ; they should not be picked when unripe. One of their principal uses is the manufacture of sloe gin.

SLOKE.—An edible seaweed. See Laver.

SLOTE.—Another name for the butcher's joint known usually as "neck."

SLOUGH.—This term is used to indicate the throwing-off of a dead part ; it may be only partial or complete.

SLOUK.—An edible seaweed. See Laver.

SMELT, OR SPARKLING.—This is a fish which is semitransparent in structure. Its colour is a light olive green, with silvery sides and belly, and its size varies from 6 to 8 inches long. The fish is in its best condition from September to March, and is obtained from the estuaries of rivers, such as the Thames, Medway, Forth, Tay, and other rivers on the East Coast. Large numbers of fish are sent to London from Holland, etc., where they are caught in the estuaries of the Scheldt, Rhine, Meuse, etc. These fish are imported packed in boxes of about one hundred fish. The name "smelt" is supposed to have been taken from the

odour given off by the freshly caught fish, and resembles that of a cucumber. The flesh is very delicate, and possesses a flavour entirely its own. It is, however, very perishable, and when perfectly fresh has a fine silvery appearance and bright rosy gills. Doubtful smelts have a dull appearance, are without the characteristic cucumber odour, and have discoloration under the jaw and flaccid stomach. Another point to which the inspector should direct his attention is the susceptibility of the smelt to the attacks of wire-worms; in some cases they are so affected as to be unfit for food. The worms are easily seen, and, fortunately, they affect the intestines, but not the flesh. The atherine is sometimes packed and sold instead of the proper smelt, which it closely resembles; but it is inferior in flavour, and may be recognized by the absence of the adipose fin, which is a distinguishing feature of the salmon family.

SMOKED EELS.—These are cured extensively on the Continent, and imported largely into this country now. The heads and fins are first cut off; the bellies are then opened as far as the vent; they are next washed and thoroughly cleansed. After about five hours' immersion in brine they are taken out and thoroughly drained, seasoning rubbed in, and finally they are smoked for about twelve to eighteen hours.

SMOKED PILCHARDS.—These fish are cured in a similar manner to red herrings, but, like the sprats, they are not cured and smoked so hard. They are sold in bundles of six, and are known in the trade as "Digby Chicks."

SMOKED SPRATS.—These fish are cured in the same manner as the above. They are then tied up in bundles of about twelve.

SMOKIES.—These fish, haddocks usually, are not split, but are termed "close fish." The fish are beheaded, gutted, and thoroughly washed and scrubbed. They are then sorted into pairs of about equal size, and tied together by their tails, and pickled for about half an hour, according to size. They are next allowed to drain, and finally the fish are smoked over a hot fire with abundance of smoke till they are a gold colour, after which they are generally packed in boxes for the market.

SNIPE.—There are several kinds of snipe, but the common snipe is mostly shot in this country. The bird is plentiful in marshy districts. In colour it is brown, with darker markings, and the lower parts are white. It has a long bill and oval nostrils. Sportsmen distinguish the various snipe by the number of tail

feathers. The common has fourteen, the great snipe sixteen, and the Jack snipe only twelve.

The birds are in season during the winter months, November to February, and are then in their best condition. The average weight is about 4 ozs.

When young its feet are soft and tender, but if old they are thick and hard.

When the bill becomes moist and the throat muddy, they are getting beyond the "high stage," and should be carefully inspected.

SOAKED GOODS.—This term is chiefly used to denote peas, beans, etc., that have been allowed to dry and become stale and withered. Such goods are, before canning, soaked in water, and then sold under fancy names as fresh.

SOAPY MILK.—A condition of milk which is caused by an organism found in straw, litter, fodder, etc. It imparts a distinct soapy taste to the milk, and it is thought that the disturbance of litter, etc., just previous to, or during the process of, milking is the cause.

SOFT CHEESE FLY.—This attacks Camembert and other soft cheeses.

SOFT HERRING ROES.—These are put up in tins, and, after being salted, are hermetically sealed. They are also put into tins and glass dishes without the salt. Fresh roes are also sold packed in small wooden boxes about 6 × 4 × 2 inches in size.

SOLDIERS.—A term given to beasts that have died naturally or from accident, and consequently have not been properly bled.

SOLE.—See Common Sole and Lemon Sole.

SOMARI NUTS.—A native of Demerara. The nuts are not imported in any large quantity, but are used chiefly for dessert.

SORGHUM.—A grass grown largely in the United States, and from which sugar is extracted in small quantities.

SORREL.—This plant grows wild in this country, and is cultivated as well. It is also known as "sour sauce," "green sauce," etc. Its leaves are used in soups, sauces, salads, etc., because of their acidity. The leaves are also used boiled as a vegetable and as a substitute for spinach. They are in season all the year.

SOUP SQUARES, OR TABLETS.—These can be obtained in a large variety. Unfortunately, they are not all that can be desired, some of the cheap kinds being very deficient in nutritive value. The inferior kinds are adulterated with gelatine, spiced, coloured, and faked up, and in a number of cases have not a particle of meat in their composition.

Particular attention should be given in their inspection to dampness; the soup squares readily become mouldy, and are soon unfit for food.

SOUPS.—See Tinned Soups.

SOURCROUT.—See Sauerkraut.

SOUR MILK, OR LACTIC ACID CHEESE.—This is made from skim milk or butter milk; the milk is allowed to become sour and the curd separated.

SOURNESS OF BREAD.—A fairly common disease of bread; it is said to be due to the excessive development of bacteria.

SOUTHERNWOOD.—This plant is grown for its medicinal properties.

SOY.—This substance, which enters into the composition of nearly all sauces, is an Indian or Chinese preparation. It is obtained by fermenting the soy bean with wheat, though an English soy is made by mixing treacle or molasses and salt together.

SPAGHETTI.—An Italian paste made at Naples, etc., in a similar manner to macaroni and vermicelli, and from the same kind of wheat flour, but very much finer threads.

SPANISH NUT.—See Hazel Nut.

SPARLING.—See Smelt.

SPEED.—See Black Quarter.

SPICE BALLS.—See Faggots.

SPICE, GROUND.—The various kinds of spices are described under their respective headings. Ground spice is also on sale separately or mixed, and it is here that most adulteration takes place. The following adulterants have been discovered from time to time, ground up and mixed with a certain proportion of the genuine article, walnut, Brazil, almond and cocoanut shells, date and olive stones, mustard and pepper husks, etc. The substitution of inferior spice is also practised.

SPINACH.—Is one of the lightest and most easily digested of our vegetables. The leaves are also used in soups; cultivated sorrel

and the leaves of some of the smaller variety of beet are sometimes substituted for it. Spinach is in season practically all the year, according to the kind.

SPITZ CHEESE.—A small cheese made from cow's milk. It is cylindrical in shape, being 4 inches high and $1\frac{1}{2}$ inches in diameter.

SPLEEN OR MILT.—This is a soft, spongy, glandular organ, of different shapes and sizes, according to the kind of animal.

Cattle.—This is a very long oval shape, from 14 to 18 inches long, flat and thin at the edges. Its colour varies from a greyish-blue to a reddish-brown. In weight it averages from 2 to 3 lbs.

Horse.—This is sickle-shaped, flat, and flabby. Its colour, when fresh, is violet, but this in course of time turns to reddish-brown. Its approximate weight is 2 lbs.

Pigs.—This is flat and tongue-shaped, and thin at the edges, red in colour, and weighs from 4 to 5 ozs.

Sheep and Goats.—This spleen is oyster-shaped, with thin edges. Approximate weight, 3 to $3\frac{1}{2}$ ozs.

SPLITS.—A term to denote a half-bottle of aerated water.

SPONTANEOUS COAGULATION.—A term applied to the coagulation of milk brought about by the formation of bacteria in the milk itself, and not by outside substances.

SPORADIC.—When cases of disease occur at various times and places, they are said to be sporadic, just the opposite to epidemic.

SPORE.—A term applied to the resting-stage of low forms of plant life, such as fungi and bacteria.

SPRAG.—A market term for cod which is 20 to 30 inches long; when longer it is known as half-cod, and then cod. See Codling for less measurement than 20 inches.

SPRAT.—These beautiful silvery little fish are often spoken of as "young herrings," but, as pointed out in the description of the herring, they are an entirely different fish belonging to that family. In length they rarely exceed 6 inches. They are caught in large quantities, and are put on the market both fresh and smoked. They are in the best condition during the winter months, the season being from November to March. Some of the chief fisheries are at the mouth of the Thames, along the coast of Essex, Kent, the South Coast, Firths of Forth and Tay, etc. They are found all round the coasts of the British Isles.

When in a perfectly fresh condition, they are bright and silvery in appearance, have clear eyes, and a plump shape. When stale, the eyes and appearance are dull.

SPREADER.—See Gambrel.

SPRUE.—The smallest asparagus is sold as "sprue" for flavouring soups.

SQUABS.—See Pigeons.

SQUASH.—A name given to a variety of cooling drinks which have been extracted from various fruits, such as lemon-squash, etc.

STAG.—A term used to denote an improperly castrated animal, or one castrated late in life.

STANDARD BREAD.—Bread made in the usual manner, but from standard flour. It is darker in colour, and, in consequence, lends itself to adulteration.

STANDARD FLOUR.—This is flour containing 80 per cent. of the grain after the bran and poorer middlings have been eliminated. It is considered that if, after the milling processes are completed, less than 80 per cent. is present, the flour has lost some of its essential qualities; while if more be left, the flour still contains some of the indigestible and useless particles. It is said to be adulterated with pea and bean flours, and refuse from the milling of flour.

STANDARD RENOVATED BUTTER.—This is butter renovated, but containing not more than 16 per cent. of water, and at least 82.5 per cent. of butter fat.

STARCH SUGAR.—See Glucose.

STARTER.—This term is used in dairying to denote a substance which is added to milk or cream to accelerate the acidifying in cheese or butter making.

The common starters are sour milk, sour whey, buttermilk, and sometimes a culture of the lactic acid ferment.

STEARIN.—The chief constituent of solid fats.

STERILIZATION POINT.—A term used in the canning trade; it is the degree of temperature when the entire contents of tinned and sealed packages are heated, and when sterilization is complete. When this point has been reached, the contents of the tin will be preserved almost indefinitely. The sterilization point is not fixed for various articles, but is usually about 170° F.

STERILIZED MILK.—Milk is sterilized with the object of rendering the milk free from bacteria and its spores. This is usually accomplished by raising the temperature to about 230° F. for about twenty minutes.

STEER.—A term used to denote male castrated cattle which have never served a cow.

STERLET.—A smaller species of sturgeon with a very delicate flavour. The finest caviare is said to be made in Russia from the roe of this fish.

STERNUM, OR BREAST-BONE.—This is in seven sections, and in the horse is placed edgeways up, while in cattle it lies flat.

STILTON CHEESE.—Is the most popular of all the blue mould varieties of cheese in this country. It is made from new milk and cream, the cream of the evening's milk being added to the morning's milk. It is one of the best-flavoured and richest cheeses made in this country; originally it was made at Stilton, in Leicestershire, but is now made in various parts. The chief points in appearance are its tall, cylindrical shape, wrinkled coat, and blue mould, while it has a characteristic texture and flavour. Some makers are said to give it a ripened appearance by placing the cheeses in a warm, damp cellar, and covering them with decomposing straw, etc.

STINKING RUST.—A disease of wheat and grains. See Bunt, in Diseases of Flour.

STIRK.—A calf which is too large and too old to be called a calf, and too young to be termed a bullock, and is from six to twelve months old.

STOCK FISH.—A term used to denote salted and dried cod and other fish of the same family.

STOMACH SWEETBREAD.—This is the pancreas, and it is sometimes termed the "stomach sweetbread" to distinguish it from the sweetbread proper, which is the thymus gland, also termed "heart sweetbread."

STONE.—A measure of weight; in the fruit and greengrocery trades it is 14 lbs.

STONE OF FISH.—Weighs 8 lbs.

Flour.—Weighs 14 lbs.

Meat.—Weighs 8 lbs.

STORES.—A term used to denote animals developing, and not ready for slaughter.

STOTT.—A term used to denote male castrated cattle which have never served a cow.

STOUT.—A stronger form of porter, or a black variety of beer, prepared by the use of a caramelized malt.

STRACCHINO CHEESE.—A rich cheese made in Italy, but has very little sale in this country.

STRAWBERRIES.—Large quantities of this fruit are grown in this country, but a small quantity comes from France in May, before our own are ready. They are, however, not so fine flavoured, plump, or of such rich colour. The counties which grow large quantities of this fruit are Kent, Middlesex, Cambridgeshire, Hampshire. They are in season in this country during June and July; and although they contain about 89 per cent. of water, and their nutritive properties are very low, yet they are very refreshing at that time of the year. Those inspectors who have jam factories in their district should keep an eye on the deliveries of this fruit, for often delays in transit occur, and consequently the fruit arrives in a wet, pulpy mass, often decayed and mouldy.

STRAWBERRY GUVA.—This is a small kind of guva about the size of a walnut; it is deep red in colour, soft, and delicious eating.

STRICHETTI.—An Italian paste used in soups, etc.; very easily digested.

STRIK.—See Black Quarter.

STRIKE.—A basket measure used by fruit growers; usually holds about $\frac{1}{4}$ sieve or bushel. In some districts a strike represents 64, 72, and 84 lbs., according to the fruit being sold.

STRIPS.—A term given to inferior small pieces of cinnamon bark.

STRONGYLOSIS.—See Pseudo-Tuberculosis.

STRONGYLUS CERVICORNIS.—This worm inhabits the abomasum of cattle, and the intestine of sheep and lambs; it causes great mortality. In colour it is greyish-white.

STRONGYLUS COMMUTATUS.—A worm which affects wild rabbits and hares.

STRONGYLUS CONTORTUS.—A red-and-white worm, marked like the old-fashioned barber's pole. They are principally found in the abomasum of sheep in great numbers. They are also found in the stomachs of cattle in small quantities.

STRONGYLUS CONVOLUTUS.—This inhabits the abomasum of cattle and sheep ; it lives coiled up in nodules in the mucous membrane.

STRONGYLUS FILARIA.—A white threadworm found in the bronchi and trachea of sheep. It produces "hoose" in lambs.

STRONGYLUS FILICOLLIS.—This rose-coloured worm inhabits the abomasum of cattle and sheep, and is chiefly found in the small intestine. It causes scour in sheep.

STRONGYLUS GRACILIS.—This worm affects cattle, sheep, and pigs ; it causes emaciation, diarrhœa, etc.

STRONGYLUS MICRURUS.—A white tapering worm which is found in the ox and calf ; it causes "hoose" in the calf.

STRONGYLUS OSTERTAGI.—A white worm found in the fourth stomach of cattle.

STRONGYLUS PARADOXUS.—A white or brownish worm, found chiefly under the pleura of a pig's lungs.

STRONGYLUS RUFESCENS.—A reddish-brown worm found under the pleura of sheep's lungs.

STURDY, OR GID IN SHEEP.—The disease, known commonly under the name of sturdy, gid, turn-sick, etc., is caused by a cyst, or little bladder, called *Cœnurus cerebralis*, which develops in the nerve centres, and more particularly in the brain.

The animals which most frequently suffer from it are lambs and shearlings ; it is rare in sheep over two years of age. The disease occurs occasionally in goats, oxen, and other ruminating animals. It is very rarely found in horses. The disease is, however, spread by other animals than these. The tapeworm, which lives in the small intestine of a dog, and is by no means uncommon in sheep dogs and sporting dogs, is the real source of infection.

The tapeworm is made up of a square-shaped head, with a long thin neck and a number of segments. These segments contain eggs, and when ripe they drop off. They are easily seen with the naked eye, being about $\frac{1}{2}$ inch long and $\frac{1}{3}$ inch wide. They may go on increasing in number till the tapeworm is quite 40 inches long. They fall off as they become ripe, and are passed through the bowel of the dog to the ground, and it may be on to the pastures where the sheep are feeding. Then they decay, and the rain washes the eggs over the grass or into ditches or pools from which animals drink. These eggs die if they cannot get moisture.

It is known that a fortnight's exposure in warm, dry air will destroy them entirely, whereas even after three months' exposure on damp grass the eggs remain alive, and lambs pastured thereon have caught the disease by browsing the infected grass. This is one reason why sturdy or gid is more common in flocks which feed on damp pastures, especially when the spring and summer have been rainy ; but it should be understood that moisture only acts by favouring the preservation of the eggs.

If swallowed by a sheep, the eggs hatch out embryos with six hooks, which bore their way through the wall of the stomach or intestines and enter a bloodvessel. They are eventually carried in the blood to the brain, spinal cord, and other parts of the body, but they only develop into fully formed cysts or bladders in the two former. This cyst gradually increases in size, and brings about the symptoms by which the disease is usually recognized.

The cyst, which is the sole cause of "gid," is a little bag of variable size, and, though originally very small, may in two or three months become as big as a hen's egg. Its outer coating is very thin, and it is more or less expanded by a clear colourless liquid. The parent cyst develops on its surface 100 to 200 little chambers, like white spots, about the size of a millet seed, and each contains the head of a future tapeworm. They cannot develop further till the sheep dies, and the brain or the part containing the cyst is eaten by a dog. When this happens, each little worm-head is set free from the cyst by the digestive juices. It becomes fixed to the wall of the intestine, and grows for about two and a half months, when the segments are passed out on to the grass in the manner which has already been described.

Symptoms.—A sheep affected with gid may be excitable, and very timid when approached, or it may be dull and stupid. Usually it is seen apart from the rest of the flock, walking about unsteadily. Frequently it turns round in a circle. It is seldom at rest for any length of time, and if disturbed may try to run away, but it can only move helplessly round in one direction, often with its head carried unevenly on one side. In advanced cases the sheep may become blind.

If the cyst exist in the usual place near the surface of the brain and on one side, the animal usually walks round to that side ; if a cyst exists on both sides, it may circle to one side or the other at different times ; if it be situated in the fore part of the brain, the sheep raises its nose and walks straight forward, only stopping as a rule when it knocks up against something ;

whilst if the cyst is lodged in the back of the brain, the head is raised, and the sheep stumbles forward with a jerking, uncertain motion of its limbs, breaking into a sort of shambling run, ending in a fall and a violent struggle to get up. If there be several cysts in various parts, the abnormal movements vary.

In the course of time the affected sheep refuses to eat, and by the combined effects of starvation and almost constant movement it rapidly wastes away and dies. The sheep may live for about six weeks after the appearance of well-marked symptoms.

The cyst may be lodged in the spinal cord, usually at the region of the loins. In this case weakness and drooping of the loins is noticed. Eventually the sheep becomes completely paralyzed in its hind-quarters, which it cannot raise from the ground. In such cases the animal may live for months.

The disease is not transmittable to man, but if the disease is very advanced, the carcass is usually emaciated and flabby, and is then condemned. But in the early stages it may be in good condition.—*Extract, Board of Agriculture Leaflet.*

STURGEON.—This is a large fish, which sometimes attains a length of 18 feet. There is no regular fishery in the British Isles, but the fish is occasionally caught. A sturgeon weighing upwards of 700 lbs. was landed at Billingsgate in March, 1909; it was sold for over £16, and was reported as being the heaviest ever brought there. Those usually brought to the London market come from Holland during the summer months. Sturgeon are very abundant in Russia, and also inhabit the Baltic, the Caspian Sea, Black Sea, Mediterranean, the Don, Danube, and other large rivers. In colour the sturgeon is olive, greenish, or yellowish, as the case may be. It has characteristic bucklers or plates along the back, which number from eleven to thirteen, and along the side twenty-three to twenty-six, those along the abdomen being less conspicuous and varying greatly in number. The mouth is fleshy, the snout is produced, and often half as long as the head. The flesh of the sturgeon is generally esteemed. A cross section is said by fishmongers to resemble fish, flesh, and fowl in appearance. The chief use for this fish is the preparation of caviare from the roe, and isinglass from the bladder, and large industries are carried on abroad, especially in Russia, in their preparation.

SUCCORY.—See Chicory.

SUCHONG TEA.—A tea lower in quality than Pekoe. It is obtained from the middle branches and leaves.

SUET.—This is the name usually given to the fat surrounding the kidneys, heart, etc., of oxen and sheep. The suet from a healthy animal, when set and cool, will be very firm or even hard, dry, and crumbly. The colour depends upon the breed and food of the animal. However, it should not be red, nor contain watery serum or jelly.

SUFFOLK CHEESE.—This is made from milk that has been skimmed three times. It is consequently an inferior cheese.

SUGAR.—The domestic sugars are chiefly derived from the sugar-cane and the white beetroot. The sugar is manufactured from the sugar-canes of India, East and West Indies, Brazil, etc. It is done by first stripping the ripened canes of all leaves, then passing them between rollers, which squeeze out the juice. This juice is heated, skimmed, and partly cleansed of impurities, evaporated down, and crystallized. It is this raw sugar that is largely imported into this country, and which is afterwards refined into the various kinds, such as large crystals, small crystals, loaf sugar, moulded cubes, granulated sugar, icing and castor sugars, etc.

Beet Sugar.—The method of manufacture is to first wash and clean the beetroots. The juice is then extracted by pulping or other processes. The juice is next purified, and the sugar is extracted in a similar manner to that used for cane sugar.

Adulteration.—Like all cheap food products, sugar is not adulterated now to any great extent. The dyeing of beet sugar crystals to resemble and sell as Demerara was once a common practice; however, now they are usually sold as yellow crystals. Sand is rarely added; it is so easily detected. More deception seems to be used nowadays in making the low-grade and cheaper sugars resemble in appearance the better qualities. These low-grade sugars are deficient in sweetening powers.

Good sugars are hard, crystalline, dry, white, and not sticky. Poor sugars are coloured, show imperfect crystals, and are damp and sticky. White and refined sugars should be very white, dry, and should be highly crystalline and entirely soluble in water. Brown or moist sugars should be light in colour, large-grained, fairly dry, with about 5 per cent. of water. Moist beet sugar is said to be recognized from cane sugar by the peculiar whiteness and softness of the crystals. Another common test frequently seen in print is that when beet sugar is put into tea without milk it will turn the liquid very dark, but cane sugar will not. This may be true of some of the common beet sugars,

which contain iron, but with the highly refined beet sugars this test is not to be relied upon. Beet sugar may sometimes be detected by its colour and taste. The sugar is rubbed between the palms of the hands, when the smell will be more noticeable.

SUGAR FUCUS.—Is an edible seaweed, used in Ireland. The same species of plant is used in Great Britain under the name of "dulse," etc.

SUGAR MITES.—These are insects found in raw sugar, and are the cause of grocer's itch. The method of detection is to dissolve the suspected sugar in warm water, holding up to the light, when the mites will be seen on the sides of the glass. A powerful magnifying glass or a low-power microscope will readily detect these in the sugar.

SUGAR VINEGAR.—This is made by fermenting a glucose solution.

SUGARED AND DRIED PINEAPPLE.—The pineapples are pared, then sliced to about $\frac{3}{8}$ inch thick. The slices are dried till 60 or 70 per cent. of their weight is lost; they are then placed in syrup from six to eighteen hours. They are next taken out, drained, and redried till they appear fairly firm. They darken slightly on keeping.

SUGARING OFF.—The process and season for tapping maple-trees for maple sugar.

SULTANAS.—These are a small seedless variety of grape, which is largely cultivated in Greece, Turkey, Persia, etc. In colour they are a slight yellow, and are cured in a similar manner to raisins. In some cases sultanas have been subjected to sulphurous fumes in order to improve their appearance.

SULPHUROUS WATERS.—Contain sulphuretted hydrogen or the metallic sulphides in solution.

SUNKIST ORANGE.—See Navel Orange.

SUPPURATION.—The formation of a yellowish-creamy matter or pus, which is of two parts, corpuscular and watery. It is both acute and chronic, and can go on in different parts of the body, forming abscesses.

SWEATING.—When frozen meat becomes thawed, it becomes wet, and is said by butchers to be sweating.

SWEDES.—A kind of yellow turnip, largely eaten by cattle, but also sold by the greengrocer for a winter vegetable. They are distinguished from other turnips by the leaves being of a bluish colour, and smoother on the surface. In the root the swede has

a "neck" from which the leaves spring, this being absent in other turnips. They form a welcome addition to our winter diet, being a wholesome vegetable.

SWEETBREAD.—This should be the thymus gland of the calf and lamb; it is a whitish glandular organ, usually sold by the butcher as a pair, though really it is two portions of one organ. They are called by the butcher the "heartbread" and the "throatbread," because of the positions in which they are found by him. The meat is soft, easily masticated and digested, and is considered a great delicacy. They are pale in colour. A pair weighs from $\frac{3}{4}$ to 1 lb. Lambs' sweetbreads weigh about 2 ozs. When taken from oxen and sheep, they are much smaller, cheaper, tougher, and less digestible.

Lambs' testicles are sometimes substituted for sweetbreads, but these may be easily recognized by their oval shape and their uniform texture.

The pancreas of the ox is also called the sweetbread by the butcher, but it could never be mistaken for the real sweetbread, as it is different in size, shape, colour, and taste.

Large lymphatic glands are also said to be sold for sweetbreads.

SWEET HERBS.—Thyme, sage, savory, clary, mint, marjoram, basil, rosemary, lavender, costmary.

SWEET-NUT OIL.—A fancy name by which common or adulterated olive oil is sold.

SWEET POTATO.—This is used very largely in the United States, France, and Spain. It is seen to a small extent in this country, but it is too sweet to eat with meat.

SWEETSOP.—Another name for Custard Apple.

SWELLS.—A term used in the canning and grocery trade to indicate blown tins or those containing the gases of putrefaction.

SWINE ERYSIPELAS.—This disease may be defined as a contagious disease of swine, caused by the bacillus of swine erysipelas.

Symptoms—Acute Cases.—In acute cases of swine erysipelas the animals show the usual signs of severe illness—viz., rise of temperature, shivering, loss of appetite, and vomiting. In such cases a fatal termination may take place in twenty-four to forty-eight hours, but the animals frequently live much longer. In the less acute cases a red patchy eruption, from which the disease gets its name—erysipelas—appears on the buttocks, thighs, body, and ears.

The breathing is very rapid, and the swine stagger about when made to walk. Ultimately they lie prostrate in the litter, and die comatosed.

Mild Cases.—In mild cases the general symptoms are not marked. The swine appear to be out of sorts, and show the usual skin eruption, which is sometimes called "nettle rash."

Animals which have apparently passed through the acute stages of the disease may remain unthrifty for a long time. Sometimes they die suddenly from disease of the heart, which is not an uncommon sequel of the disease. In other cases they present symptoms of lameness, due to trouble in the joints.

The skin is discoloured by livid patches as in swine fever, but sometimes the only symptoms shown are those of nettle rash. The bacillus apparently can flourish for a long time outside the bodies of animals, so that, once the disease is introduced into insanitary styes, the infection tends to remain there. For some reason, however, which is ill-understood, the disease may assume a very mild form for a time, then burst out acutely. In Great Britain the acute forms have been observed particularly in the warm months.

Post-Mortem Appearances.—The membranes of the stomach and intestines show red patches, and are often swollen. The intestinal glands on the membrane are red and enlarged. Sometimes the surface over these glands is abraded, but the distinct ulcer of swine fever is never seen. The lymphatic glands throughout the body are swollen and red. The spleen is often enlarged.

The membranous coverings of the lungs and heart show red spots, and sometimes water is present in the chest and heart sac.

The lungs are congested.

In the chronic form the tissues around the opening between the chambers of the heart, particularly on the left side, are frequently thickened and rough—that is to say, endocarditis is present.

The carcass rapidly decomposes; it sets badly. In the earlier stages the meat is passed, but much depends on the condition of the carcass. The disease is not transmittable to man.

—*Extract, Board of Agriculture Leaflet.*

SWINE FEVER.—Swine fever is a contagious and eruptive fever peculiar to swine, and due to a filterable virus. By the term "filterable" is meant that the virus is so minute that it can pass through the pores of the closest porcelain filters. If, for example, a fluid containing the virus of swine fever is mixed with one containing anthrax bacilli, and passed through a

bacterial filter, the filtrate would contain no anthrax bacilli, and would be incapable of giving anthrax to the pig when inoculated, but it would still cause swine fever by inoculation, because the virus of that disease is not retained in the pores of the filter. The swine fever microbe, unlike the anthrax bacillus, is too small to be seen by the highest powers of the microscope, and for this reason it may also be described as an ultramicroscopic virus. That there is a specific and infective agent, however, is not open to doubt, notwithstanding the fact that it cannot be seen, for swine fever can be produced with certainty in susceptible pigs by inoculating them with the filtered or unfiltered blood of diseased pigs.

Incubation Period.—The incubation period is about five days. It is not to be concluded, however, that very distinct symptoms will always be noticed at such an early date. The first sign of infection is usually little more than a rise in temperature, which can only be ascertained by using a thermometer. In most outbreaks the distinct signs of illness do not appear for eight or ten days, or even more, and this has led to mistaken views being held on the length of the incubative period. In some outbreaks, however, the virus is so potent that the distinct symptoms may appear much earlier, and the swine attacked may be dead in less than ten days.

Symptoms.—Young swine are, as a general rule, more severely attacked than others. It seems probable that the virus of swine fever possesses varying grades of virulence, and that in consequence the outbreaks differ in severity. As seen in this country, the outbreaks of swine fever might be referred to three principal classes, which tend to approach each other as the surrounding circumstances alter.

To sum up shortly, pig owners may reasonably be expected to suspect under the following circumstances: (1) When a number of animals are dying; (2) when a number of animals are sick or unthrifty; (3) when periodic deaths are taking place, even if the other pigs appear healthy; (4) when a high mortality is noticed in sucking or newly weaned pigs, even if the older ones appear to be healthy; (5) when a number of pigs are sick or dying with symptoms of pneumonia, diarrhœa, or what may appear to be acute swine erysipelas; (6) the fact of the suspicious symptoms appearing first in pigs which have been recently purchased, or in a sow which has been to the boar, in pigs recently cut, or in those which have been off the premises to a market and have been brought back, should always increase

the suspicion ; but careful inquiry into the circumstances in connection with a considerable number of outbreaks shows that the fact of no new pigs having been brought on to the premises for some months does not of itself justify a definite conclusion that an outbreak of disease is not swine fever.

Post-Mortem Appearances.—The carcasses of pigs which have died of swine fever may or may not be emaciated, and purple patches may be present on the skin of the ears, belly, and hocks. In the acute cases characterized by death after a short period of illness redness of the lymphatic glands is observed ; there are signs of inflammation on the mucous membrane of the intestines, while the membrane is often dotted over with innumerable red blood spots. These small hæmorrhages, however, are not peculiar to the very acute forms, and they may also be seen in the more chronic cases. In the more chronic forms one finds a diphtheritic deposit in the form of a yellowish membrane on the inner surface of the intestines. The most typical lesion is the swine fever ulcer, which is most commonly found in the large bowel about the junction of the ileum and cæcum, but swine fever ulcers may also be found much more rarely in the throat, on the tongue, and on the skin. In examining the intestines of sick animals which have been killed for purposes of diagnosis, it must be borne in mind that it does not follow that the disease is not swine fever because the more typical lesions of ulceration and diphtheritic deposit are not found. The experimental inquiries have shown that many animals may have a slight attack of swine fever and recover in a little more than ten days. If cases of this description be examined in the febrile stage, nothing more may be found in the bowel than slight redness or abrasions on the folds of the mucous membrane. The most common form of ulcer is about the size of a three-penny piece. Its edges are circular and raised above the membrane. Its centre is soft, and either yellow or black in colour. Congestion of the mucous membrane of the bowel should always be looked upon with suspicion, and particularly if it is combined with inflammatory lesions in the lungs.

Swine fever is a disease scheduled under the Diseases of Animals Act of 1894, and the existence or suspected existence of the disease must be notified to the police (or proper authorities) in accordance with the provisions of the Swine Fever Order of 1908.

The carcass is always condemned and destroyed under this order.—*Extract, Board of Agriculture Leaflet 27.*

SYMPATHETIC FEVER.—See Traumatic Fever.

SYMPTOMATIC ANTHRAX.—See Black Quarter.

SYNOVITIS.—Is inflammation of the membrane lining a joint.

SYRUP.—A name given to a saturated solution of sugar in water. The term is often used indiscriminately.

T.

TABES.—Literally consumption, as *tabes mesenterica*, or consumption of the bowels.

TÆNIA.—The genus to which most tapeworms belong.

Tænia Alba.—This cestode is found in the ox. It is not quite so common as *expansa*, and averages a foot in length, and is from $\frac{1}{2}$ to $\frac{3}{4}$ inch wide. The segments are very white.

Tænia Denticulata.—This is the same tapeworm as *Tænia expansa*.

Tænia Expansa.—This is the tapeworm more especially found in lambs and sheep. It derives its name from the fact that its segments are considerably wider than their length. It is the cause of very serious outbreaks of disease in wet seasons and on marshy lands.

Animals affected lose condition, become hidebound, frequently have abnormal appetite and thirst; diarrhœa is present, and the segments of the worms are found in the excreta.

Tænia Ovilla.—This is the same tapeworm as *Tænia expansa*.

TALLY.—A term used by the market gardeners to denote heads of cabbage, beet, etc. It usually numbers sixty heads.

TAMARINDS.—The fruit of the tree of this name, usually imported into this country preserved in syrup.

TANGLE, OR RED WAVE.—Is an edible seaweed. After thoroughly boiling, it is eaten with butter, pepper, and lemon juice.

TANSY.—This plant is grown for its aromatic leaves, which are used in colouring and flavouring puddings.

TAPIOCA.—This substance is obtained from the roots of the cassava. It is a wholesome, nutritious, farinaceous food, easy of digestion, and especially useful for invalids. It is exported from South America, Africa, British Guiana, etc. Several

kinds of adulterated tapiocas are on the market ; these are made from gum and potato flour.

The genuine tapioca is prepared by pulping the tuberous roots, after washing and scraping. The juice is collected and the starch is deposited ; this is washed and dried, and is then known as "Brazilian arrowroot." The granular tapioca of commerce is formed by heating this starch on hot plates ; this causes the starch to separate into the granular form so well known in England.

TARRAGON.—The plant is cultivated for the aromatic leaves, which are used for their seasoning properties in salads, soups, etc. The leaves are also pickled with gherkins, and in the manufacture of the noted tarragon vinegar.

TAWNY PORT.—This is port which has been kept a long time in cask. This causes it to lose colour, and it contains less body and alcohol.

TEA.—Is the prepared leaves of the tea-plant, which is grown in China, Assam, Ceylon, Java, etc.

Tea is manufactured chiefly by machinery at the present time. After gathering the leaves, the first process is withering. It is either done naturally by the sun, or artificially by a current of warm air. This renders the tea dry and spongy.

Rolling is the second process. The leaves are rolled by machinery, which rolls or twists the leaves slightly, and also breaks the leaves, so that the juices are released.

Fermentation is the third process. The leaves are spread over a floor and covered with wet muslin for a few hours to allow the tea to undergo slight changes.

Firing is the fourth process, and the leaves are subjected to hot air, which dries and also changes the colour.

Sorting is the fifth process. The tea is first hand-picked to remove the grosser impurities, and afterwards sieved to separate into the various grades. The largest leaves are then cut in two by a machine.

Final firing is the last process before packing, and this is done in order to expel any moisture taken up in the sorting process. The tea is then ready for packing.

The classification of tea is varied and of so little value to the food inspector that it is not proposed to enter into it at any length. The varieties of tea are named according to the different leaves from which they are produced—Flowery Pekoe, Orange Pekoe, Souchong First, Souchong Second, Congou, the first-named being from the smallest and the last from the largest leaves.

The essential qualities of good tea are flavour, thickness, pungency, and appearance. Good tea should be crisp to the touch, well twisted, and free from excessive stalk. The leaves should be of good size and whole. To ascertain this, moisten the leaves and unroll them. If incomplete leaves are found, it is a sign that large and coarse leaves have been cut in two with intent to deceive.

There should be an absence of dust, stalk, dirt, etc. The liquor should be light in colour, and fragrant, not dark nor black, and pungent. The wet leaves should be bright and reddish, not dull and dark.

Adulteration of tea at the present time is not carried on to any great extent, but the following have been used at some time: Exhausted tea-leaves; the leaves of such plants as the willow, elder, sloe, hawthorn, beech, etc.; the various colours of the teas imitated by colouring with Dutch pink, Prussian blue, indigo, etc. The detection of the leaves of other plants is done by the microscope; the addition of sand, quartz, and such weight-adding substances is detected by finding the amount of ash and comparing with tables showing ash in the genuine teas. The colouring of teas is also found by making a solution in cold water and analyzing.

TEA CREAM.—A thin cream, usually sold in dairies. It is produced by skimming milk in the ordinary way.

TEAL.—Of all the wild-fowl, this is considered to be the most delicate eating. Next to the mallard and widgeon, it is our most common wild-duck. It is the smallest of British ducks, weighing little more than 12 ozs. It is in season from September to February, but by some people it is thought to be better flavoured when frosty.

TEETH OF ANIMALS.—

TEETH OF ANIMALS.

Animal.	Total.	Incisors Upper Jaw.	Incisors Lower Jaw.
Horse	40	6	6
Ox	32	0	6
Sheep	32	0	6
Dog	42	6	6
Pig	44	6	6

TEG.—A young sheep from six to eight months old.

TENCH.—A pond fish which has rather a muddy taste. It is smaller, richer, and more delicate than the carp. It is in its best condition during the winter months.

TENDERLOIN.—See Fillet Steak.

TETANUS.—A bacterial disease, which is commonly known as "lockjaw," is caused by the bacillus of tetanus. It occurs in cattle and sheep. Not often seen by the meat inspector, but the usual practice is to condemn the carcass because of the inferior quality of the meat for food.

TEXEL CHEESE.—A sheep's milk cheese, made in Holland. It weighs 4 lbs., and is coloured green.

THEAVE, OR THREAVE.—See Geminer.

THENAY CHEESE.—A soft cheese made in France. It is made from unskimmed evening and fresh morning milk. It is made into cheeses about 5 inches in diameter by 4 inches in height.

THERMAL DEATH-POINT.—The temperature at which micro-organisms have their vital powers destroyed. This is usually about 170° F.

THERMOMETER.—An instrument by which the degree or intensity of heat of a substance (liquid, solid, or gaseous) is registered.

THREAVE.—See Geminer.

THYME.—There are several varieties of this plant grown in this country. As a herb it is valued for its leaves, which have a strong odour and taste. It is generally cut at the end of July, and dried for winter use.

THYMUS GLAND, OR SWEETBREAD.—This is found lying on the underside of the trachea at the entrance to the chest. It is very large in the young animal, but gradually disappears after birth.

TIERCE OF COFFEE.—Weighs 5 to 7 cwt.

TIERCE OF PORK.—Weighs 320 lbs.

TIERCE OF SUGAR (WEST INDIES).—Weighs 7 to 9 cwt.

TIGNARD CHEESE.—A hard cheese made from sheep's and goat's milk in France.

TINNED FISH.—A large variety of tinned fish is now on the market. The following list gives some idea of the increase in tinned fish during recent years :

Anchovies—filleted, French, Norwegian, American, or “ moss bunkers ”; bloaters ; caviare ; clam juice ; codfish-balls, roes ; codlings, smoked ; digby chicks ; eels, stewed ; fish croquettes ; haddocks ; herrings—filleted in wine sauce, *à la sardine*, Dutch, fresh, ham cured, kippered, red, spiced, in shrimp sauce and mustard, tomato sauce, soft roes ; *hors d'œuvres* ; lobster—curried, devilled, cutlet ; mackerel—kippered, in oil ; oysters ; pilchards ; prawns ; roes, soft ; salmon in oil, American, cutlets, in flat tins ; Norwegian lax ; silvocea ; sardines—boneless, Cornish, French ; martinache, with tomatoes, Portuguese ; Teysonneau sardelless, smoked ; sardine ; whitebait ; soles—fried, fillets ; sprats, dried ; tunny ; whitebait ; skate.

TINNED FISH, EXAMINATION OF.—In examining a consignment of tinned fish at the port of landing, the procedure is to have a percentage of the cases opened—usually about 10 per cent. If these prove satisfactory, the whole consignment is passed, finally being distributed to the various towns, where they get examined again when the district inspector does his periodical inspection of the grocers' and provision shops, etc. Should the percentage of tins prove unsatisfactory, the whole consignment is examined, and the defective tins are thrown out. At the port of landing this causes no loss to the importer, as he is allowed for all tins which are known in the wholesale trade as “ blown,” “ washy,” “ doubtful,” “ cracked,” and “ cracked solder tins.”

In examining a consignment of tinned goods a lookout is kept for stained cases. If one is found, it probably contains a leaky tin or tins. Another point to be noticed is bulging cases. This probably denotes that the case contains a “ blown ” tin or tins. The tins to be tested are taken one in each hand ; the ends then are struck together. If the centres are good, a rather hard metallic sound is given off ; but if “ blown,” it gives off a drumlike sound, and the ends of the tins are convex in appearance. It is well for inspectors to understand that the fact of the ends of a tin being convex does not always denote its being blown, and consequently decomposing. It may be due to bad workmanship, or through the ends being too large for the tin. In such cases, when the ends of the tin are pressed with the thumb, they yield slightly, and in a different manner to a “ blown ” tin. When this pressure is removed, the tin assumes its “ blown ”

appearance, and may be quite sound. This kind of tin is known in the trade as "slack packed." They should be examined for soldering defects, and for being damaged. Another point to be noted is the sound when shaken. The tins may be dry through the liquid having oozed away, and the contents probably decomposing, though the ends are still concave. The gases generated gradually escape through the hole or crack in the solder.

If the appearance of the tin is stale, with rust-spots showing through the label, probably the tin is very old, and in this matter the inspector will have to use his judgment. Unfortunately, in this country we have no law with which to enforce the stamping of the date of canning on each tin. This is much to be regretted, as it has been proved that the amount of metal (lead, tin, and zinc chiefly) dissolved from the tin and solder increases with the age of the tin. A scratched, dirty, or rusty tin usually denotes that the contents are old.

It is also often stated that tins which have two solder marks on the end are tins that have been "blown," and while in that condition pricked to let out the decomposing gases, the tin end forced back into its concave shape and resoldered again, and that such tins should be seized. This may be the fact in some few cases, but in the majority it is not so. For instance, some tins have no solder spots at all, and others have two, and the majority one. The two spots might be caused by a little solder being dropped on to the tin by the workman, or by the method of canning adopted by the firm which packed the goods. While one firm may make a fresh hole in the tin, others unsolder the existing one, so that further evidence of unsoundness is necessary before the goods can be condemned.

TINNED HERRINGS.—Small herrings are treated in oil, like mackerel and sardines. They are also tinned with tomato, which is a very popular line now. The herrings are cooked in oil, packed in tins, and covered with thick tomato sauce instead of oil.

TINNED KIPPERED MACKEREL.—The mackerel are first beheaded, then split open and properly cleansed, and thoroughly smoked. They are then put into oval tins, sealed down, and properly sterilized.

TINNED LOBSTER.—The majority of tinned lobster consumed in this country comes from Canada. The chief canneries are at Newfoundland, Nova Scotia, and New Brunswick. The lobsters

are boiled alive in a 3 per cent. salt solution till they are properly cooked. They are next taken out and quickly cooled in strong cold salt water. The shells are then removed, and the flesh put into tins and glasses, any space being filled with a flavoured brine. Undoubtedly glass is better for preserving this crustacean, the flavour not being affected. If tins are used, they are in all first-class goods lined with good parchment paper. This prevents the phosphorus in the flesh from attacking the metal of the can, and also destroying the flavour of the lobster and giving it a peculiar and disagreeable taste. The tins and glass cases are then capped and sterilized, and finally sealed up.

TINNED OYSTERS.—The oysters are first thoroughly washed, then loaded into a cage and placed in a steam chamber for about ten minutes, when the shells open readily. After removal from the shell they are sorted into sizes—primes and selects—then washed well in clean cold water, and the damaged and discoloured oysters removed. They are next put into tins and filled with strong brine, then sealed, and sterilized for about ten minutes at a temperature above boiling-point.

Mussels are also tinned in a similar manner to oysters, but are not in common use in this country.

TINNED PRAWNS.—Are also prepared in a similar manner to shrimps.

TINNED RUSSIAN HERRINGS.—These are prepared by cutting off the heads, cleansing, and soaking in brine for about one and a half hours. They are then hung up by the tails to drain and dry for an hour or so, fried in oil, and put into cans. To each tin are added slices of lemon and onion, together with mustard and other seasonings, the tins afterwards being sealed and sterilized.

TINNED SALMON.—Our largest supply of tinned salmon is derived from America, but we also get some from Norway, Siberia, etc. In the grocery trade the tins are called "talls," "flats," and "halves." Salmon cutlets are also sold in oval tins and in glass boxes. The variety of brands is numerous, but the best qualities are probably the Chinook salmon, next the Silver or Coho salmon, then Sockeye or blue-back salmon. Other kinds include the king salmon, red salmon, etc. Dealers have complained that an inferior species of salmon is frequently canned with a name which leads the public to think it is a better article than it really is, and no doubt a good deal of fraud is practised in this manner.

One method of tinning is as follows: The fish, after being caught, are taken to the cannery. Here the scales and entrails are removed, and the heads cut off. They are next thoroughly washed in warm water to remove blood, etc. The fish is next partly cooked by placing them in nets and lowering into a tank and boiling. On removal they are cut into portions and packed into tins—bones as well as flesh—afterwards being filled up with a 3 per cent. salt brine, or in some cases with sweet oil. The tins are then submitted to a high temperature—about 10° above boiling-point. This destroys any germs that may have found their way into the tins.

Another method of tinning salmon, as carried out in Alaska, is as follows: The fish are pitched from the boat on to a table on the wharf. Here a man stationed at the end cuts off its head, and passes the fish along to the next, who takes out the backbone and entrails. The fish are again passed on, and the next man removes the loose flesh and all blood. The tails are next cut off, and the fish thrown into a tank of water and cleansed. They are then removed to the cannery, where they are automatically cut up into 1-lb. portions by revolving knives, and conveyed to a table. Here a man is stationed, and he puts the cut portions on a travelling belt, which conveys the fish to a ramming machine, which takes the fish portions and rams one into the empty tins. The filled cans are now carried to a table, and those cans which are not properly filled are made quite full with pieces of salmon flesh. They are afterwards wiped clean of all flesh, fat, etc., ready for the soldering. The lids are next put on, and automatically soldered by a machine, afterwards being tested for faults by immersing in a tank of water. All faulty ones are removed, carefully examined, and made good. The cans are then taken to the boilers, cooked by steam for an hour, re-examined, and then dipped into shellac, drained, and dried. Finally the labels are pasted on, when they are ready for putting into the cases. Usually the cases contain forty-eight pound tins.

TINNED SARDINES.—Sardine is the French name for the fish known on our shores as "pilchard." The tinning of sardine is carried out in several ways. The following is a description of the two commonest:

1. The sardines, after being taken from the nets, are conveyed to the factory in baskets. They are here sorted into three sizes—small, medium, and large. They are next beheaded, the entrails removed, washed, and packed in brine. When taken

from the brine, they are dried in the sun in the summer, and in the winter by an artificial draught of warm air. They are next placed in olive oil, and about half cooked. The fish are then drained and packed in tins or glasses, which are filled with hot olive oil. The tins, after being wiped, are sealed up while hot, and finished, labelled, etc.

2. In this process the dried fish are placed on wire nets, and put into the oil-pan. In a few minutes the sardines begin to rise, and are considered sufficiently cooked. They are then taken out and drained. When cool, the fish are packed in tins and glasses, and oil run in. They are next sealed up and sterilized, tested, and finally labelled.

In frying the fish great care is necessary, for if the oil is too hot the fish is discoloured or burnt. Some of the low grades of fish are cooked by means of steam. Cotton-seed oil is also used instead of olive oil. Sprats are also preserved in the same way as sardines, and I need not say are not sold as sprats.

In America sardines and sprats are often tinned with cotton-seed oil, and, not content with this, they put on labels resembling the best French productions.

Boneless sardines have some sale in this country, but they are chiefly made for the New York market.

TINNED SHRIMPS.—The shrimps are boiled alive, and after draining and cooling they are shelled. They are next placed in muslin bags the same shape as the tins, and which have been dipped in a strong salt pickle. When full, the bags are tied and placed in tins which have been prepared by lining with good parchment paper to prevent the fish acting upon the metal and so spoiling the taste. The bag is then pressed into the tin, which is sealed up, sterilized, and finally made air-tight.

If glass bottles or cases are used, the shrimps are simply packed as tightly as possible, sterilized, and sealed up.

TINNED SOUPS.—A large variety of soups is now on the market, either in tins or bottles, the preparation in either case being similar. They are usually made by boiling together meat, game, vegetables, etc., until the essence of the solid ingredients is almost entirely extracted by the fluid in which they are boiled. The resulting liquor is then either strained first or put into the tins and bottles together with the pieces of meat, vegetables, etc., after straining only. The tins and contents are then sterilized and sealed up.

The chief kinds of soups likely to come under the inspector's

notice are—Beef, with one or more of the following: carrots, celery, onions, lentils and vegetables, peas and vegetables; bisque; bouillon fleet; chicken; chicken consommé; creery; fermieré; giblet; gravy; green pea; hare; haricot; hotch-potch; Julienne; kidney; mock turtle; mulligatawny; mutton broth; oxtail, thick and clear; oyster; printanière; tomato; turkey; turtle; vermicelli. For the points to be noted in the inspection of these see notes under Tinned Goods.

TODDY.—This is a drink made from various recipes. The usual ingredients are gin, brandy, whisky, apples, sugar, and boiling water.

TOMATOES, OR LOVE APPLES.—This fruit or vegetable (for this is a very debatable point with some people) has attained great popularity in the last twenty years. It arrives in great quantities from the Canary Isles, Spain, Portugal, France, America, the Channel Isles, and, besides which, is extensively cultivated at home. The very early tomatoes come from the Channel and Canary Isles. The chief variety is the red, but a small quantity of the yellow tomato is marketed. They are practically in season all the year round. When becoming unfit for food, brown spots are seen on the surface, with specks of white and blue mould.

TONGUES OF OX, HORSE, SHEEP, GOAT, AND PIG.—Ox tongue is rough on the surface, due to filiform papillæ; it tapers to a point, has distinct prominence on the blade, a number of circumvallate papillæ on the surface, and contains nine segments of bone, called "os hyoides." The epiglottis is semicircular; it weighs, on an average, 3 lbs.

Horse tongue is smooth on its surface, narrow, and tapers to within 4 inches of the end, when it widens out again. It has five segments of bone. The epiglottis is pointed, and it has only two, but very distinct, circumvallate papillæ. Black spots are never found on *horse's* tongue, as is sometimes in cattle.

Sheep's tongue is pointed, hollowed out in the middle line, and has a dorsal ridge, as in cattle. The filiform papillæ are blunt and not horny.

Goat's tongue—similar to sheep.

Pig's tongue has no dorsal ridge. The surface is smooth; and two prominent circumvallate papillæ are noticed.

TORTELLINI.—A fancy Italian paste used in soups, etc. It is very easily digested.

TOUS-LES-MAIS.—This is a similar substance to arrowroot, and is very easily digested. It is obtained from the root of a West Indian plant.

TOXICOLOGY.—The science of poisons, their nature, action, and antidotes.

TOXINS.—These are poisonous substances produced by bacteria.

TRACHEA, OR WINDPIPE.—This is the long tube which runs from the larynx to the roots of the lungs, where it divides into the bronchi.

TRAUMATIC, OR SYMPATHETIC FEVER.—When fever arises from some extensive injury or wound, it is known as the above.

TRAVNIK CHEESE.—A soft cheese made from sheep's milk, to which a small quantity of goat's milk has been added. It is made in Bosnia, Albania, etc. In size the cheeses vary from 14 to 28 inches in diameter, with a height of 24 inches. It weighs from 50 to 130 lbs. It has a soft consistency, is nearly white in colour, and has a pleasant, mild taste.

TREACLE.—See Golden Syrup.

TREBLE COTTON-SEED OIL.—See Cotton-Seed Oil.

TREE PRIMROSE.—This plant is grown to a small extent in this country for the long edible roots. They are sometimes cooked and eaten as a vegetable, but more often used in salads and soups.

TRICHINIASIS.—A disease in man caused by eating pork infested with *Trichini spiralis*.

TRICHOCEPHALUS AFFINIS.—Is a round worm found in ruminants. It is also called the "whip-worm," owing to its supposed resemblance to that article.

TRIPE.—This is the dressed stomachs of the ox, usually the first two—the rumen and reticulum. The methods of preparation are varied, but all are alike in the fact that the cleansing must commence as soon as possible after the stomachs have been emptied, otherwise the tripe will be stained and the quality depreciated. One method of preparation is to place the tripe in scalding water and scrape off the inner lining; then wash repeatedly, and cook by immersing in boiling water till tender. This renders them practically free from fat, and makes them white. The total quantity obtainable from a full-grown ox averages from 10 to 12 lbs. It should be perfectly fresh, thoroughly cleansed, thick, and as white as possible.

TROPÆOLUM.—A tuberous plant, not much cultivated in this country. The tubers are cooked and eaten in a similar manner to potatoes.

TROUT.—Several kinds of trout are sold for food, but the most delicious is said to be the common river trout. It seldom reaches a large size. The female is considered better in quality than the male. The most delicious in flavour are those which weigh $\frac{3}{4}$ to 1 lb. in weight. The back is of a yellowish or reddish-brown, cheeks and sides grey or a rich yellow, white below. The sides are studded with dark spots, and red spots along the lateral line, some below and some above. It is also covered with small scales. Trout is in season from May to September.

TROUVILLE CHEESE.—A soft cheese, made from fresh whole cow's milk.

TRUCKLE CHEESE.—A provincial term for any small, flat-shaped cheese.

TRUFFLE.—An edible fungi found underground ; they are largely exported from the South of France. The degrees of ripeness govern the colour, which is black, red, and white. The black truffles are the ripest and the best ; they should be used as fresh as possible, as they lose flavour when stale or preserved. They are in season from October to January.

TUB OF BUTTER.—Weighs 84 lbs.

TUBERCULIN.—The toxic properties of the tubercle bacilli, or a special liquid preparation of the poison generated by these bacilli, which is injected into animals to test whether they are infected with tuberculosis. The dose injected into cattle varies from 40 to 50 minims, according to the size of the animal.

TUBERCULOSIS IN CATTLE.—This disease is the most prevalent met with in food animals, and is characterized by the formation of tubercles in various parts of the carcass and organs. These tubercles vary very much in size, and when incised they may be caseous, purulent, or calcareous. Tuberculosis is most commonly found in the bronchial and mediastinal glands, the lungs, and pleura. It is also frequently seen in the peritoneum, mesenteric glands, liver, pharyngeal glands, udder, kidneys, diaphragm, and, more rarely, in the bones of the sternum and peritoneum. When the tubercles are caseous, they present a yellow cheesy appearance when cut ; but when calcareous the gritty nature soon gives an indication to the knife or fingers.

The Royal Commission on Tuberculosis recommend—

- | | | |
|---|---|--|
| <ol style="list-style-type: none"> 1. When there is miliary tuberculosis on both lungs, 2. When tuberculous lesions are present on both the pleura and peritoneum, 3. When the tuberculous lesions are present in the muscular system or in the lymphatic glands embedded in or between the muscles, 4. When tuberculous lesions exist in any part of an emaciated carcass, | } | <p>The entire carcass and all organs may be seized.</p> |
| <ol style="list-style-type: none"> 1. When the lesions are confined to the lungs and the thoracic lymphatic glands, 2. When the lesions are confined to the liver, 3. When the lesions are confined to the pharyngeal lymphatic glands, 4. When the lesions are confined to any combination of the foregoing, but are collectively small in extent, | } | <p>The carcass, if otherwise healthy, shall not be condemned, but every part of it containing tuberculous lesions shall be seized.</p> |

TUBERCULOSIS IN PIGS.—The indications of tuberculosis in the pig's carcass consist mainly of hard swellings in the glands around the throat, and the presence of white cheesy-looking deposits of tubercular material in the mucous membrane of the intestines, in the mesenteric glands, or in the lungs. In the pig the submaxillary, renal, lumbar, iliac, and inguinal glands should be inspected, these being the glands chiefly affected. When tuberculosis is present in the spleen, the nodules are found in the substance, while in the ox it is usually found on the surface membrane, and may be stripped off and its presence removed in this organ. The Royal Commission on Tuberculosis recommended that "in view of the greater tendency to generalization of tuberculosis in the pig, we consider that the presence of tubercular deposit in any degree should involve seizure of the whole carcass and of the organs." In practice this advice is not always acted upon, and consequently we find in one district the inspector judges the carcass on the same lines as he does cattle, while in another (often adjoining) he carries out the Commission's recommendations; consequently we find unpleasantness exists on this point. It is much to be regretted that these or similar recommendations have not the force of law, thus causing uniformity of action among inspectors.

TUBERCULOSIS IN POULTRY.—Tuberculosis is one of the most common diseases of fowls, turkeys, pheasants, and other birds. It is a frequent cause of loss to poultry owners in some parts of

this country. It has been spoken of as "liver disease," but is only one of *several* liver diseases. Avian tuberculosis is world-wide in its distribution.

Symptoms.—Affected birds become anæmic, thin, emaciated, and they lose weight. Their appetite is impaired, and erratic feeding is noticeable. The comb and wattles and mucous membranes become pale, and there is usually persistent diarrhœa. As a result of extreme emaciation, which is the most noticeable symptom, the bones become very prominent.

Post-Mortem Appearances.—The flesh is scanty and the muscles pallid. The liver is dotted all over with small pale spots or larger patches of a white, grey, or yellow colour. The spleen is usually enlarged and beset with small or large tubercles. The intestines and the lymphatic glands of the mesenteries may be also the seats of tubercular deposits. Tubercles may likewise occur on the skin. There are very rarely small tubercles in the lungs.

Cause.—The exciting cause of the disease is a bacillus, which may be considered a variety of the bacillus of mammalian tuberculosis. It gains entrance with the food, fouled by means of the droppings of affected birds. The most frequent source of infection is the poultry house or yard, which receives the droppings of the affected birds, these droppings containing bacilli. Damp, dirt, and absence of sunlight greatly favour the spread of the disease. It is necessary that there should be good ventilation and strict cleanliness in the runs and sheds.

TUBERCULOSIS IN RABBITS.—This disease is sometimes found in tame rabbits. The liver is the chief organ affected. In tuberculosis the nodules vary very much in size; they are usually in clusters or groups, and are often calcareous. If any doubt exists as to whether it is coccidiosis, it should be remembered that in the latter disease the nodules are fairly uniform in size, they are present singly, and are rarely, if ever, calcareous. If examined under the microscope, *Coccidium oviforme* will be found to be a parasitic disease, while tuberculosis is a bacterial disease.

TUFTED MUSHROOM.—This mushroom grows in tufts or clusters. The cap is hemispherical at maturity, the entire surface being broken up into large brown scales on a whitish ground, margin warty, 4 to 6 inches across; gills broad, brownish flesh colour, remaining dry; stem 4 to 6 inches high, stout, more or less

swollen at the middle, bearing a large ring that is warted on the underside. The flesh of the cap is about $\frac{3}{4}$ inch thick, and turns reddish-brown when cut.

This may be recognized amongst the true mushrooms by its tufted habit of growth.

It is found on the ground under the drip of trees, more especially under oak.

The flavour is excellent, and is considered to be superior to that of the common mushroom.

TUMOURS IN THE LUNGS.—When tumours are found in the lungs, it is the usual practice to condemn them, and the carcass and other organs are carefully inspected for similar defects.

TUNNY.—A delicate fish resembling a mackerel, caught in the Mediterranean, and sent to all parts of the world preserved in oil.

TUP LAMB.—A male sheep, before it is a year old, is known by this name.

TURBOT.—This fish is known as the “pheasant of the sea” and the “King of Lent.” It is the premier fish of the flatfish family, and was one of the famous dishes of ancient Rome and Greece. The distinctive feature is that the ordinary scales on the upper or coloured side are replaced by bony tubercles. The eyes are on the left side, and are smaller than in the brill, which closely resembles it. It is seasonable all the year round, but is best when in a half-roed condition. It is obtained from the coasts around the British Isles, but is more abundant on the eastern grounds off the German and Dutch coasts. The usual weight of the turbot is from 5 to 20 lbs., but the average fish is about 10 lbs.

Turbot contains little bone, and the flesh is deep and the flavour delicate. To the fishmonger they are known as the “cutting turbot,” which are large, and the “chicken turbot,” which are smaller. The underside is a pale yellowish-white colour, and should be convex in shape, and not flat. A bluish tint of the flesh is said to denote decomposition. The fish keeps well, and is better for keeping a few days. It is usually sold by the stone in the wholesale markets.

TURKEYS.—Large quantities of turkeys are now reared in the counties of Norfolk, Lincolnshire, and Cambridgeshire. The Norfolk turkey is black in colour, spotted white on the wings. The Cambridge turkey is a cross-bred bird. It is a bronze-grey in

colour, large, and heavier than the Norfolk. The American bronze and the white turkey are also reared. The latter is thought to be of a more delicate flavour.

The season for turkey poults is from July to October, and for turkeys from November to April. The larger the birds, the higher is their value per pound. Hen birds are preferred to cock birds, being more delicate in flavour. The cock birds often reach a weight of 30 lbs., and are not usually kept beyond their second year.

Large quantities of turkeys are imported from Ireland, France, Italy, Hungary, Russia, Servia, Canada, and Australia.

AVERAGE COMPOSITION OF TURKEY, BY H. W. ATWATER—
PERCENTAGES.

	Refuse.	Water.	Protein.	Fat.	Carbo- hydrates.	Ash.
As purchased ..	14.3	49.2	19.0	16.2	—	1.0
Edible portion ..	—	57.4	22.2	18.9	—	1.2
Dark meat	—	57.0	21.4	20.6	—	1.1
Light meat	—	63.9	25.7	9.4	—	1.3
Giblets	—	56.7	17.7	23.5	—	1.2
Dark meat (cooked)	—	53.7	39.2	4.3	—	2.2
Light meat (cooked)	—	58.5	34.6	4.9	—	1.8
Young, as purchased	32.4	44.7	16.8	5.9	—	0.9
Young, edible portion	—	66.1	24.9	8.7	—	1.3
Cooked	—	52.0	27.8	18.4	—	1.2
Heart	—	68.6	16.8	13.2	—	1.0
Liver	—	69.6	22.9	5.2	0.6	1.7
Gizzard	—	62.7	20.5	14.5	1.2	1.1

Age.—This is recognized in the cock bird by the well-developed red wattle and long spurs. Up to a year old turkeys have black feet. These gradually change colour, turning to pink, and at three years they begin to turn grey and dull, so that pale, rough legs and coarse, wrinkled skin denote age.

If young, the skin is soft and even, the spurs short and blunt, though these in an old bird are sometimes cut down and scraped to resemble a young bird and to deceive the public. Young turkeys have smooth scales on the feet, short delicate claws, black legs, and pliable breast-bones. Hen turkeys, if old, have rough red legs and coarse flesh.

Freshness.—When fresh, the eyes are full and bright, the feet moist and pliable.

When stale, the eyes are sunken and dull, the feet are stiff

and dry, the vent and parts near have a greenish appearance, as well as the neck and crop, and an unpleasant odour is perceptible.

Killing.—Several methods of killing are employed. One of the best is to stun the bird first by hitting it at the back of the head, then dislocating the neck. To give the flesh whiteness, an incision is made with a knife in the roof of the mouth. For the proper keeping of the birds it is essential that they should be kept without food for twenty-four hours before being killed.

TURKISH NUT.—See Hazel Nut.

TURMERIC.—This is the ground root of a plant which is grown in the East Indies, China, etc. It is largely used as an adulterant of other spices, also in the manufacture of pickles, etc., and as a colouring substance. It forms the chief ingredient of the various curry powders.

TURNING OF WINE.—Is a disease which attacks young wine; it arises from a decomposition of tartar. The colour of the wine grows darker, the taste gradually disappears and becomes disagreeable. The wine becomes turbid and acid. The disease seems to occur under special conditions of the weather.

TURNIP-ROOTED CHERVIL.—A plant grown for its roots, which are floury, sweet, and have an aromatic flavour. They are in season during the autumn and winter months.

TURNIP-TOPS.—The young leaves of the turnip and swede are cooked and eaten as a vegetable. They are very wholesome, though somewhat pungent and slightly bitter.

TURTLE.—The green turtle is considered the most highly prized, and is almost the only reptile used for food in this country. It is called "green" because of the greenish colour of its fat. Turtles often weigh 600 lbs. A regular supply of live turtles is always kept in this country. Sun-dried turtle is imported to a small extent from the West Indies. It is sold in pieces, and is considerably cheaper than the fresh reptile. It is generally made into soup.

TURTLE CUP.—A semi-liquid preparation, made of turtle, fresh beef, and the essences of selected vegetables. It is sold ready for use, and is prepared simply by adding hot water.

TUSCAN CREAM.—An olive oil of medium quality, used largely as salad oil.

TWIST LOAVES.—These are made in the shape of a plait, pointed at both ends.

TWOROG CHEESE.—A sour-milk cheese, made in Russia, and used in the manufacture of a peculiar kind of bread, called "notruschki."

TYMPANITIS.—See Hoven.

U.

UDDER.—The condition of this varies with the age of the animal. In an old cow this will be found to be very loose, spongy, and brown; in a young cow it will generally be solid; while in the heifer it is a smooth lump of solid fat. In old animals the udder is entirely removed, and the skin skewered back to hide its removal, but in heifers it is usually left on.

UNDERCUT.—See Fillet Steak.

UNDERPROOF SPIRIT.—Contains less than 69.24 per cent. of absolute alcohol.

UNION SALAD OIL.—A fancy name by means of which common or adulterated olive oil is sold.

URI CHEESE.—A hard cheese made from cow's milk in Switzerland. It weighs from 20 to 40 lbs., and has a diameter of 8 to 12 inches.

URTICARIA.—See Diamond Disease.

V.

VACUUM.—The empty space above the mercury in a barometer. The term is generally used in the canning trade. It may be created by boiling a liquid and condensing its vapour where air is excluded.

VANILLA.—This consists of the cured pods of several species of the vanilla-plant, which is cultivated extensively in Java, Seychelles, Mauritius, Ceylon, etc. The pods reach full size in about six weeks after flowering, and when ripe turn slightly yellow. The pods are cured after picking, and it is during this process that their characteristic odour is developed. It is used to flavour sweetmeats, chocolate, jellies, cakes, liqueurs, lemonade, ice creams, etc.

VANILLA EXTRACT.—This is usually made by treating vanilla beans with 50 per cent. of alcohol, but Tonka beans are used in making the cheaper extracts. Other adulterants are—Benzoic acid, coumarin, sugar, acetanilide.

VANILLIN.—An artificial flavouring product, extracted from oil of cloves, which is used by the confectioner instead of vanilla. It has approximately forty times the flavouring power of vanilla, and in consequence it is now being largely used.

VEAL.—Good veal is pale in colour and nearly white ; it is fairly firm and elastic when touched. It smells fresh, and is very moist, though not actually wet. A fresh-cut section has a smooth, silky feel to the fingers. The fat is plentiful, white in colour, and firm ; it is free from bloodstains. The rib bones should be pinkish-red in colour. Veal is best in the early part of the spring. It should be of fair size, weighing from 125 to 150 lbs.

VEGETABLE BUTTERS.—These are prepared from palm-nut oil, cocoanut oil, cotton-seed oil, etc. They have a variety of fancy names, such as lactine, cosealine, laureol, albine, vegaline, cottolene, electol, cocose, palmin, etc.

VEGETABLE MARROWS.—Like the cucumber, contain little nourishment, being chiefly composed of water. They are in season from July to the end of October, and in their best condition when approaching ripeness. They are grown out of doors largely in this country in many varieties, colours, shapes, and sizes. They should be gathered before attaining full size, and are then superior in flavour. They are usually sold by the tally, which equals five dozen.

VEGETABLES.—The importance of fresh vegetables in the daily diet is known to all, for when eaten in reasonable quantities

VEGETABLES.

Roots.	Tubers.	Stems and Leaves.	Seeds and Fruits.
Turnips. Carrots. Beetroots. Parsnips. Radishes.	Potatoes. Artichokes. <i>Leafbulbs.</i> Onions. Leeks.	Cabbages. Spinach. Lettuces. Celery. Cauliflower.	Peas. Beans. Tomatoes. Marrows. Cucumbers.

they form a good nourishing food. Green vegetables soon lose their delicate flavour ; the juices become dry, the leaves wither,

and decomposition sets in. The age and condition of most vegetables may be judged by breaking a piece off with the hand ; if it snaps readily and is not stringy, it is fresh and young, and consequently can be relied upon for flavour and tenderness. Vegetables may be divided up roots, tubers, stems or leaves, and seeds. See Compressed or Dried Vegetables.

VEGETABLES, TINNED AND BOTTLED.—The following are the chief vegetables preserved : Artichokes ; asparagus ; asparagus points ; beans—French, haricot, and black ; carrots ; celery ; endive ; jardinière ; lentils ; macédoine ; mushroom heads ; mushroom buttons ; peas—ripe, green, yellow, split yellow ; pimento ; sorrel ; spinach ; sugar corn ; tomatoes ; turnips.

VENDÔME CHEESE.—A soft cheese, made in the district of this name in France. It resembles Camembert and Thenay cheese in flavour.

VENISON.—The fallow deer is very common in England, the roe-buck is found chiefly in Scotland, and the red deer in Ireland. It is from these three species that most of our venison is derived. Of these three, the fallow deer produces the best venison, and this is the kind usually found in the fishmongers' and game-dealers' shops in England. The best class of venison is that which has been reared in the open or forest, as the stall-fed venison is often fattened on oilcake, and this detracts from the gamey flavour of the meat. Buck venison is considered better quality than that derived from the doe, and is in season from June to the end of September, while doe venison is in season from October to January only.

The carcass is cut up into the following joints : Haunch, neck, shoulder, and breast. The haunch is considered the prime joint. These joints are also again divided to suit the trade of the game-dealer.

Venison is usually hung for a certain time in order to bring out the gamey flavour for which it is noted. Care is necessary to prevent it from becoming stale or bad. In this respect there is a great difference in what is called "stale" and that which is gamey, and has been carefully treated and hung. The game-dealer usually hangs the meat in a cool, airy place, and dusts it over with powdered ginger in order to keep off the flies.

Young deer have the hoofs smooth and close. The fat should be bright, clear, and thick. To test it, force a clean wooden skewer alongside any bone, withdraw rapidly, and smell. If

any decomposition has commenced, it will be usually found near the bone. Care must be taken to close up the hole made by the skewer, or the flies will soon make the meat maggoty, especially if it is in the summer. The vein in the neck should be bluish, not green or yellow. If the fat near the kidney is smelt, decomposition is very quickly detected in this quarter.

VERJUICE.—This is the juice of green fruits, such as crab-apples, unripe gooseberries, etc. It is very acid in flavour. It is used in some sauces, etc., as a substitute for lemon juice, but it is very liable to undergo decomposition.

VERMICELLI.—This is manufactured in a similar manner to macaroni, to which it comes next in size, being made in smaller tubes. It is in the form of long threads, and derives its name from its wormlike appearance, as vermicelli means "little worms." It should be kept in a dry place, otherwise it may become musty, mouldy, grubby, or tainted. If it is old, it has a rather rancid taste. The drier and more brittle it is the better. The largest quantity comes into this country from Naples, in Italy.

VERMINOUS OR PARASITIC BRONCHITIS.—This is one of the most common maladies seen in lambs. It is caused by the presence of small threadlike worms, *Strongylus filaria*, finding their way into the trachea, and thence into the smaller tubes found throughout the lungs. The disease is most common towards the end of the summer, particularly when the weather is warm and moist. It chiefly attacks young animals up to two years of age. In the living animal the symptoms are difficult and hurried breathing, husky coughing, discharge from the nose and mouth, loss of appetite, together with diarrhoea.

VESICLE.—A small blister on the skin, containing a little fluid.

VICHY WATER.—A natural mineral water with a good reputation. It is obtained from springs near the village of this name in France. It contains carbonates of lime, soda, and magnesia, sulphate of soda, sodium chloride, etc. It is recommended in cases of gout, dyspepsia, disorders of the liver, etc.

VI-COCOA.—A preparation in which an extract of the kola nut is said to be added.

VIENNA BREAD.—This has a brown crust and is very spongy. It is made in a very large number of shapes, and is generally understood to mean fancy bread. The principal kinds of Vienna bread made in this country are known as cut or potato rolls,

seed shoes, crescent or horseshoe rolls, floured batons, kaisers, shells, seed rolls or salt sticks, twists, etc.

Some of the Continental shapes are also made, and these are known as—Salt, salt twist, month, white rolls, poppy-seed twists, extra bread, butter slices, Parisian crescents, Prague spike, crisp and soft crescents, dessert kaiser, potato, small dessert rolls, French batons, Bosnian loaves, Graham bread, whey, black, smooth shoemakers' bread, etc.

VILLIER'S CHEESE.—A soft cheese made in France. It is square in shape, and weighs about 1 lb.

VINEGAR.—Several kinds of vinegar are in use in this country, but the one chiefly utilised is known as "malt vinegar." It is made in a similar manner to beer, but without hops. It is generally stored for several months in order that it may improve in flavour. Genuine vinegar contains usually about 5 to 6 per cent. of acetic acid, but is sold in varying strengths, the cheaper being diluted with water. Acetic acid is also obtained from several other sources, and this is often watered down and coloured by the addition of burnt sugar or molasses. The adulterations are the addition of sulphuric, nitric, and hydrochloric acids, salts of lead, copper, zinc, etc. The presence of the latter depends upon the composition of the vessel in which it has been stored and been able to act upon.

Vinegar retards, and even prevents entirely, the putrefaction of animal and vegetable substances, and is consequently used largely for pickling.

VISCERA.—The name given to the internal organs.

VISCOGEN, OR CREAM THICKENER.—This substance is used for the purpose of thickening cream. It is made by mixing a solution of cane sugar and water to a mixture of fresh lime and water in certain quantities, thoroughly stirring these mixtures, and allowing to stand several hours. The clear liquid is drained off and bottled, and if used in too large quantities, produces a nasty taste and smell.

VISCOUS MILK.—See Ropy Milk.

VOLNAY.—A still red wine produced in the Burgundy district of France.

VORARLBERG SOUR-MILK CHEESE.—A hard cheese that is made from sour cow's milk. It is semicircular in shape, and varies in size. When ripe it is greasy, and has a very strong odour and flavour.

W.

WALNUTS.—These are grown in this country to some extent, but very large quantities come from France and Italy. The native-grown nuts are gathered in September, and are sold as “new” in the trade till the beginning of February. They are also pickled in vinegar before they are ripe, and served with cold meat. The shelled half-kernels are also largely used by confectioners to decorate cakes, chocolates, etc. To prevent decay of the kernel and to cleanse the shells, they are often exposed to sulphur fumes, while some are dried in kilns. The Bordeaux district has a big industry in the shelling and drying of this nut. The nuts are popular and wholesome. They contain about 15 per cent. proteid and 57 per cent. fat. They are apt to become rancid when old. The French and Italian walnuts arrive in this country from October to January, while large quantities are also sent from Holland, Belgium, and Germany. The total quantity imported annually is said to be about 70,000 bushels.

WARBLE FLY.—The damage caused by these pests is due both to the adult flies and to their larvæ or “bots.” The flies, when on the wing and on the lookout for a host on which to deposit their eggs, frighten stock, and frequently cause loss amongst “in-calf” cows by making them stampede about the fields. The galloping about is also bad for milch cows, not only because it affects adversely the secretion of milk, but also because of the bruising of the udders, due to their striking against the body. The maggots or “bots” living beneath the skin are a source of irritation to the cattle, while there is also loss from hides for tanning purposes being ruined by the perforations. They also cause loss to the butcher, who often finds the flesh beneath the “warbled” areas so altered by the inflammation set up by the parasites that the beef in that region is spoiled. This so-called “licked beef” has a straw-coloured, jelly-like appearance in a newly slaughtered carcass, but turns to a dirty green in a few hours.

WARP.—A measure used in the fish trade ; counts four fish.

WARTY CAPS.—This is an edible fungus of a dull brick-red colour, covered with whitish patches, that are easily rubbed off.

WASTERS.—See Piners.

WATERCRESS.—Two kinds of watercress are sold in this country, the green and the brown. Watercress is found in running streams, and is also largely cultivated in beds in many parts of the country. The danger with regard to the eating of this herb is, that the water in which it has been grown may have become polluted by sewage, or the effluent from some sewage works or farm may discharge into the running water and pollute the growing cress, and so spread disease to the consumers. Another danger is that it may be cut and picked by people who do not know the difference between the leaves of the water-parsnip and watercress, the former being slightly poisonous, and somewhat similar in appearance. This is not very likely to occur in the case of cultivated beds, but may when picked growing wild in streams, etc.

The difference between the two is told by the watercress leaf, which grows at the end of the leaf-stalk, being rounder and larger than the other leaflets, while in the water-parsnip the leaf-stalk is smaller than the rest. The brown-coloured watercress is thought to be better than the green, and it has been stated that the brown colour is caused by the greater amount of iron in the waters in which it is grown. Watercress, thoroughly washed, makes a valuable and wholesome addition to the garden salads.

WATERY MILK.—This may be caused (when natural) by the cow eating freely of watery or frozen food, or on too wet pastures.

WAXY DISEASE.—See Amyloid.

WEASAND.—This is the pipe or tube by which the air is conveyed to the animal's lungs. They are used for casings for various kinds of sausages, and are prepared from the inner skin or lining of the throat. In length they average 18 to 24 inches.

WEISSLAK CHEESE.—A soft cheese made in Germany from cow's milk. It is oblong in shape, being about $4\frac{1}{2}$ by 4 by $3\frac{1}{2}$ inches in size. It weighs about $2\frac{1}{2}$ lbs.

WENS.—A swelling or encysted tumour. Actinomyces tumours are often called "wens."

WENSLET.—Another name for the little Wensleydale cheese.

WENSLEY.—Another name for the little Wensleydale cheese.

WETHER.—A properly castrated male sheep.

WET-CURED COD.—The fish are treated and cleansed in a similar manner to the dry cod, after which they are pickled by placing

the cod face to face in pairs in salt. They are then weighted down, and kept in this condition for about two days, when they are taken out, washed in newly made pickle, sorted into sizes, and packed in barrels.

WET ONES.—A butcher's term for emaciated and badly fed animals.

WHEAT.—This is one of the most productive of cereals, and the greatest in demand in this country for food. The varieties of wheat are much more numerous than those of any other description of grain, but, generally speaking, two kinds are cultivated in this country, the bearded and beardless. These are again divided into red and white wheats. When in good condition, the grains should be long, fairly plump, without being round, semitransparent, even in size, clean, sweet, and dry.

WHEATEAR, OR ENGLISH ORTOLAN.—A bird about the size of a robin, distinguished by its white rump and throat and the black colour of the sides of its head. The birds should be eaten the day they are killed, and consequently are seldom seen at the game-dealer's. They are said to be delicious eating, and are in season from July to October. Generally sold by the dozen.

WHELKS.—A shellfish which is obtainable all the year round. Large supplies are sent from Harwich, Ramsgate, Whitstable, etc., and it has been stated that more whelks are landed at Sheringham than any other port in the kingdom. They are in the best condition in the spring of the year, but they are in the greatest demand during the summer months. The average size is about 3 by 1½ inches. They are largely eaten by the poorer classes, and when cooked are considered by many people to be a very nutritious and strengthening food. They are cooked for ten minutes or so, according to their size.

In their inspection practically the same points should be noticed as mentioned for periwinkles.

WHEY.—The watery part of milk; the part which separates when rennet is added to milk and forms curds. It is sometimes made into cheese on the Continent.

WHIP-WORM.—This is another term for the round-worm *Trichocephalus affinis*, which is found in the intestines of sheep and lambs.

WHITEBAIT.—These fish are composed of young fish of various kinds, but almost entirely of young herrings and sprats, though the proportion in which they occur varies according to the

season. In the summer the young of the herring generally predominate, while in the winter sprats may be 80 to 90 per cent. of the total. The young of other fish, however, are nearly always present in small quantities, such as sand-eels, weavers, smelts, gurnards, shrimps, etc. The fish are most seasonable from February to August, but are always on the market. The close season does not appear to be observed. The estuary of the Thames has perhaps the most important whitebait fishery, and the London market is supplied chiefly from Leigh-on-Sea, Southend, and the immediate neighbourhood. The fish are sold by the quart in the wholesale market. When perfectly fresh they are bright, silvery-looking, and smell sweet and pleasant. They are at their best in July and the early part of August.

WHITE CHEESE.—A skim-milk cheese made during the summer months. It is made in cylindrical shapes, and usually eaten fresh.

WHITE COMB.—See Favus.

WHITE HAKE.—See Dogfish.

WHITE PEPPER.—This has the same origin as the black pepper, but the berries are allowed to become nearly ripe. They are then soaked in water, and the outer skins of the fruits removed by rubbing with the hands.

WHITE SKIT.—A term used to denote diarrhœa in calves and lambs.

WHITING.—This is the invalid's fish, being a light, tender, and delicate food ; it is easy of digestion, and of delicate flavour. It is in consequence much in demand, on the recommendation of the medical profession. It is of great service as a food fish, but its flesh is easily damaged and rapidly deteriorates. The dishonest fishmonger (and there are some in this as well as other trades) often skins young haddocks and passes them off for whiting on the unsuspecting customer. The line-caught fish are the best. The fish is not injured so much as those caught in the trawl, and consequently it is plumper and in better colour and condition generally. To obtain the best flavour it must be eaten perfectly fresh. The whiting is distinguished from the haddock by the absence of the thumb-mark and barbel, and by the presence of a black spot at the base of the pectoral fin. The lateral line is not so distinct, and the colour is lighter. The fish attains a length of about 20 inches, and a weight of 4 lbs.,

but the average market fish is about 1 lb. to 1½ lbs. The whiting is in its best condition during December, January, and February, and is caught on the south coast of England. They are usually sold in the wholesale market by the box, and when perfectly fresh they have firm flesh, very bright eyes, and a clear, silvery skin; and when in this condition they are often called "silver whiting."

WHITLOEF.—A distinct variety of chicory, largely cultivated in the vicinity of Brussels, and noted for the quality of its leaves. It is imported to a small extent into this country.

WHOLEMEAL BREAD.—This is made from wheat of which the bran only has been removed, or from refined flour to which a quantity of pollards has been added to give it colour.

WHORTLEBERRIES.—See Bilberries.

WHORTS.—Another name for bilberry.

WIDGEON.—This is a very common bird in winter. It is considerably smaller than the wild-duck. It is distinguished by its dull blue bill and chestnut head, with cream-white forehead and crown. It has a greyish-pink breast and white underpart. It is largely a sea-feeding duck, but the flesh is considered very good.

WILTSHIRE CHEESE.—A cheese similar to Gloucester, but smaller in size and poorer in quality. The outside is usually coloured with a mixture of red ochre and whey.

WINDPIPE, OR TRACHEA.—This is the tube by which the air passes from the mouth and nose into the lungs. In cattle and sheep it has a sharp ridge running along it, while in the horse no prominent ridge is noticeable.

WINE.—This is generally understood to mean the pure fermented juice of the grape. A large number of wines are on the market. Some do not comply with the above definition. They are then called by some other name, such as "British wine," "raisin wine," etc. Wines are adulterated by the addition of water, saccharine matter, fermented liquors not distilled from the grape, antiseptics, colouring matter, alcohol, etc.

WINE VINEGAR.—This is also known as "French vinegar" and "white vinegar." It is yellowish-red in colour, and, as its name implies, is made from sour wine. It is manufactured in the wine districts of France, Germany, and Holland.

WITCH, OR POLE DAB.—This fish very closely resembles the lemon sole. The body is oval, thin, and flat. The colour of the upper side is pale brown, and the underside has a yellowish-white shade. The head and mouth are small, but the eyes are fairly large.

This fish is more abundant in the northern parts of the North Sea and on the west coasts of Scotland and Ireland. It is most seasonable from August to April. They are sold in the wholesale market by the stone.

WITHANIA CHEESE.—So called because it is made from rennet derived from the berries of this name. It is said to have an agreeable flavour while fresh, but when old it develops an acrid taste.

WOLFFISH.—See Catfish.

WOODCOCK.—Is a bird of the snipe variety. It has a long beak grooved from the nostrils. It is much esteemed as a table delicacy for its rich flesh. The general colour is brown above, varied with darker tints, while the underparts are marked with dark brown, and the tail is black, tipped with grey. The English bird is not very plentiful, but the birds are imported largely from France, Holland, and Continental countries, as well as China. The male bird weighs about 10 ozs., while the female averages from 10 to 13 ozs. They are in season from November to February. Woodcocks are in good condition for a long time after being killed. The belly of a woodcock should be hard and full if it is in a good and fat condition.

Age.—When the feet are soft and tender, they are young. Another test is, if the bones below the stomach will bend by easy pressure of the fingers, the bird can be relied upon for age. Old birds have thick, hard feet and unbendable bones.

Freshness.—A cook judges by holding the bird up by one tail feather. If matured enough, it detaches itself by its own weight.

Staleness.—When the throat is muddy and the bill moist, it will be found that the bird has been killed a long time, and that it is beyond the usual gamey condition.

WOOD EVIL.—A term used to denote redwater.

WORMWOOD.—This plant is grown for its aromatic and bitter-flavoured leaves. It is used largely in the manufacture of absinthe and in medicine.

Y.

YEAST.—This is the frothy mass of fungi produced during the alcoholic fermentation of beer, etc. It consists of minute cells, which under certain conditions multiply enormously. German yeast is a compressed kind largely used in this country. There are many varieties of yeast. If fresh and sound, it should have a pleasant, fruity smell, be moist to the touch, but not sticky, light brown or yellowish in colour, and when a lump is broken across it should produce a snapping sound, and show a clean fracture. If grey in colour, it probably contains starch mixed with it, and is therefore not strong. It should not be dark brown on the outside, nor white and crumbling in its interior, as both these are signs of age and deterioration.

YELLOW CARCASS.—The carcass of a beast which has been affected with jaundice.

YELLOW CRYSTALS.—These are usually ordinary sugar stained aniline dyes. They are often beet sugar coloured to resemble the genuine Demerara.

YELLOW MILK.—A disease which shows itself by means of yellow-coloured patches on the surface of the milk. It is caused by the action of the *Bacillus synxanthus*.

YELLOW.—A term used for jaundice.

YOGHURT.—A fermented milk, made in Turkey, etc., from goat's buffalo's, or cow's milk. It is thick, curdled milk, decidedly acid, with little or no alcohol.

YOLKINE.—A colouring matter used in the manufacture of cakes, etc. It produces a bright natural egg tint, and is guaranteed harmless, tasteless, and odourless.

Z.

ZIEGEL CHEESE.—A cheese made from whole cow's milk or whole milk, to which about 15 per cent. of cream has been added. It is made in Austria, and weighs about $\frac{1}{2}$ lb. In size it is about 3 by 2 by $2\frac{1}{4}$ inches.

ZIGER CHEESE.—A cheese made from whey obtained in the manufacture of other cheese. It is a cheap food product, made in Central Europe, and consists principally of albumin.



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