

Lawes' manures : analysis guaranteed / [Lawes' Chemical Manure Company Limited].

Contributors

Lawes' Chemical Manure Company Limited.

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FIFTIETH

1889

*** SEASON ***



**THE ANNUAL SALES EXCEED
46,000 TONS.**



LAWES' MANURES

**ANALYSIS
GUARANTEED.**



HEAD OFFICES:

59, MARK LANE, LONDON, E.C.

BRANCH OFFICES:

DUBLIN, SHREWSBURY, PLYMOUTH, LEITH & GLASGOW.

AGENTS:

Messrs J. & W. ATTLEE, Dorking.

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LAWES' CHEMICAL MANURE COMPANY, LIMITED.

Head Office : 59, MARK LANE,

LONDON, E.C.

January, 1889.

DEAR SIR,

WE have again the pleasure to submit our Annual Price List and Circular, and respectfully to solicit the favour of your esteemed orders.

It appeared in the early part of the past year as if Farmers were at last about to enjoy the unwonted experience of a favourable season, but the unusually heavy rainfall, together with the cold weather which prevailed during the summer, dispelled the hopes which had been formed, and the result, unfortunately, was that, so far as cereal crops were concerned, there was not only a deficiency in the yield, but the quality was inferior. On the other hand, root crops generally were good, and as usual some of the heaviest and best of these were grown with LAWES' TURNIP MANURE, which is admittedly one of the *best manures for Turnips known*, and for upwards of 50 years has invariably given the greatest satisfaction to those who have used it in all parts of the kingdom.

There has been during the past autumn an advance in the price of raw bones and phosphates, amounting to from 20 to 30 per cent., whilst for many years there has not been so great a scarcity of nitrogenous materials as exists at present, and the bags, also, in which the manure is sent out are much dearer than last year.

The consequence is that there has been a general advance in the price of manures; but we have endeavoured to make as little alteration as possible in the price of LAWES' MANURES, and even where it has been found absolutely necessary to do so the advance barely covers the increase in cost of production.

In addition to the increase in price of materials before-mentioned, Nitrate of Soda is about £2 per ton dearer than last year, and there is no doubt, looking at the low prices ruling for their products, many Farmers will think it desirable to use some cheaper manure for their cereal crops, and we strongly recommend to their notice LAWES' CORN and LAWES' BARLEY MANURES, both of which they can use with the utmost confidence that they will give good results.

We have, in compliance with the requirements of the Merchandise Marks Act, added the word "compound" to the designation of our DISSOLVED BONES and SPECIAL DISSOLVED BONES, but *their composition will remain precisely similar* to former years, that is to say, the ammonia and insoluble phosphates will be derived from Bone, a point which all purchasers of Dissolved Bone Compound Manures should insist upon.

We beg to call special attention to a paper by SIR JOHN LAWES on the subject of the "*Sale of Live Stock by Weight*," which will be found on page 3, and as the matter is one of the most vital importance to farmers, we have arranged to supply copies of the tables referred to, which will be found extremely valuable.

The greatest care and attention continues to be paid by the Company to the manufacture of LAWES' MANURES, and no expense or pains are spared to attain the object which has ever been steadily kept in view,—viz.: the production of none but the very best Manures, so that, as the Chairman said at the last meeting of the shareholders, the name of "LAWES" upon a bag of Manure shall be a warranty for its contents.

We beg respectfully again to solicit your orders, which shall have in every respect our very best attention.

We remain, yours truly,

LAWES' CHEMICAL MANURE Co., LIMITED,
T. ELBOROUGH, *Managing Director.*

THE SALE OF LIVE STOCK BY WEIGHT.

BY SIR JOHN LAWES, BART., L.L.D., F.R.S.

IT is exceedingly difficult to give up an old custom. In the first place it puts us out, in the second place it gives us trouble to change it for a new one. Further than this, we are apt to think that those who are persuading us to make the change have some interested motive in advocating it, and expect to derive some benefit for themselves.

I will not attempt to deny that I am strongly interested in the sale of stock by live weight, and I have published a "Ready Reckoner" to be used by those who place their stock upon the scales; the price is one shilling, and if every farmer will purchase one I shall hope to make some profit, which I will place at the disposal of the Agricultural Benevolent Society.

If we were not so accustomed to the fact as to disregard it, surely it would appear most strange that a trade amounting to millions a year should be carried on by a system of guesses, and without reference to the scales. The farmer's wife who goes into the butcher's shop to purchase a piece of beef cannot close the transaction until the weight has been ascertained, whilst her husband who may have sold the ox, containing perhaps eight or nine cwt. of meat, from which the beef was cut, is quite content to dispose of so much valuable property without attempting to ascertain the weight by the scales. During the last few years I have paid great attention to the subject of weighing live stock and ascertaining the dead weight, and I have satisfied myself that the prices we see quoted in the papers week by week are altogether fallacious. If we get the price per stone quoted we do not get the weight, and if we get the weight we do not get the price. Some friends of mine have been killing oxen on their farms and sending others of equal quality to various markets, having first taken their live weight, by this means they know very closely what the dead weight of the animal will come to. Oxen which gave 60 and 61 per

cent. of carcase only returned 54 per cent. if taken at the quoted prices. If, however, the seller received back the full weight of the carcase he found that he received very much less than the quoted price per stone. It has been said that by weighing animals alive you learn nothing which you did not know before. Such is not my opinion. The live weight, coupled with the character of the animal and the knowledge of the food he has consumed, is the key to his interior. For instance, a farmer sends some stock to market, he receives an account of the sale and he is disappointed with the price, which appears to be low compared with the quoted price, he remonstrates with the salesman, who assures him that they made fully the quoted price per stone; he may grumble but he can do no more. If I had fed my animals and had taken their live weight I should feel in a position to know much better than the salesman what price per stone my stock had made, and all his assurances to the contrary would produce but little effect.

I am glad to say that the purchase and sale of store stock by weight is making decided progress. In Ireland you can get quotations at per imperial stone live weight. This is a great advantage, as we often pay far too much for our stores. I knew an instance in which the butcher's meat on the store animal cost the purchaser 9*d.* per lb., when fat stock was making 6*d.*, the result of this was that after feeding the animals for 20 weeks they were worth just what they cost as stores. Store stock contains from 50 to 52 per cent. of carcase. Last autumn a good quality of Irish shorthorns cost me at home 4*s.* 1*d.* per live stone.

In conclusion I would advise any one who sends stock to market to have it weighed, and from the live weight to make the best estimate he can of the dead weight; and as often as he can let him test the accuracy of his estimate by getting the weight of the carcase, he will soon find that the scales are of great use to him, and will add considerably to his profits in the course of the year.

◀LAWES' MANURES▶

ARE

‡SOLD BY GUARANTEED ANALYSIS‡

On the following Conditions :

1. The sample to be fairly drawn from the bulk in the presence of the Company's Agent, and sent for Analysis before the Manures are used.
2. The Sellers guarantee no Analysis unless made by the following Chemists ; Messrs. Voeleker & Son, Dr. Sibson, Mr. John Hughes, or Mr. Bernard Dyer, London ; Dr. Cameron, Dublin ; or Dr. Stevenson Macadam, Edinburgh.
3. Should any discrepancies appear in the Analysis of a fairly-drawn sample of the bulk delivered, the variations in percentage of ingredients will be valued, and should any diminution of the value of the whole be ascertained, a deduction will be made to the full extent adjudged by the Analyst.
4. The cost of the Analysing is to be paid by the buyer when found in favour of the Manure ; when otherwise to be paid by the Sellers.

The Minimum only guaranteed.

List of Manures Manufactured and kept in Stock, and their Analyses.

LAWES' PATENT TURNIP MANURE

This Manure is rich in soluble and insoluble Phosphates and organic matter obtained from Raw Bones, and is well adapted for starting the Turnip plant, and producing large and healthy crops. Should be used at the rate of 4 to 6 cwts. per acre, and drilled in with the seed.

Soluble Phosphates, 22 to 24 per cent.

Insoluble Phosphates, 6 to 8 per cent.

Ammonia, 1 to 1½ per cent.

LAWES' DISSOLVED BONE COMPOUND MANURE.

For Top-Dressing Grass Lands.

This Manure is extensively used upon Grazing Pastures, and is well-adapted for strengthening and improving the herbage, Bone Phosphates having a lasting effect upon the crops. If used in the Autumn 4 to 5 cwts. per acre should be applied, but if it is intended to top-dress in the Spring 3 cwts. will be sufficient. Can also be used with great benefit for Turnips at the rate of 4 to 5 cwts. per acre. Application same as Turnip Manure.

Soluble Phosphates, 20 to 24 per cent.

Insoluble Phosphates, 8 to 12 per cent.

Ammonia, 1½ per cent.

LAWES' SPECIAL DISSOLVED BONE COMPOUND.

This Manure, which is a special preparation of Bone Phosphates and other materials containing a large per-centage of Ammonia, is specially adapted for soils deficient in nitrogenous matter. It has been used very extensively in England and Scotland upon Mowing and Grazing Lands, and found very beneficial in increasing the Hay Crops, and nourishing and strengthening the feeding pastures. Can be used in Autumn or Spring, at the rate of 3 to 4 cwts. per acre; but if used in the Spring, should be applied not later than February.

Soluble Phosphates, 20 to 22 per cent.

Insoluble Phosphates, 10 to 12 per cent.

Ammonia, 2 to 2½ per cent.

LAWES' SUPERPHOSPHATE OF LIME.

This Manure is made only from the best quality of raw material, and the Phosphates guaranteed are *all soluble in water*. Cheaper Superphosphates are frequently sold in which only a portion of the Phosphates are soluble, the remainder being precipitated, and when these low quality Superphosphates are required the Company can supply them as cheaply as any manufacturer in the Kingdom. Prices vary according to quality, and can be obtained on application.

LAWES' Superphosphate is, however, recommended as being really the cheapest and most economical to the Farmer.

Soluble Phosphates, 26 to 28 per cent.

LAWES' CEREAL MANURE.

FOR AUTUMN-SOWN WHEAT, should be sown broadcast at the rate of 3 to 4 cwts. per acre.

FOR SPRING WHEAT, should be used at the rate of 3 to 4 cwts. per acre, and harrowed in just before the seed is sown.

FOR BARLEY, should be well harrowed in before the seed is sown, and if after Turnips fed off the land, 3 to 4 cwts. will be sufficient, but if after a straw crop, 5 to 6 cwts. should be used.

FOR OATS, 3 to 4 cwts. per acre will be sufficient for this crop. Should be applied same as for Barley.

Soluble and Insoluble Phosphates, 20 to 23 per cent.

Ammonia, 3 to 4 per cent.

LAWES' MANGOLD MANURE.

If this Manure is used with the water drill, it should be sown down the rows upon the top of the dung, but if with the dry drill it can be drilled with the seed. If dung is used 3 to 4 cwts. per acre will be sufficient, but without, it should be applied at the rate of not less than 5 to 6 cwts.

Soluble and Insoluble Phosphates, 20 to 23 per cent.

Ammonia, 3 to 4 per cent.

LAWES' POTATO MANURE.

A bulky Manure is generally used for Potatoes, and when dung is applied the Turnip Manure will be found to answer. If dressed entirely by Artificial Manure the Company has prepared one for the purpose, which has given the greatest satisfaction in the Potato growing districts.

Soluble and Insoluble Phosphates, 20 to 23 per cent.

Ammonia, 3 to 4 per cent.

LAWES' GUANO.

This Guano will be found extremely valuable at the present time when there is such a very great difference in the quality of Raw Peruvian Guano. The greatest care is taken to ensure its being sent out always in a fine, dry and powdery condition, whilst the ammonia is non-volatile, and the phosphates have been rendered soluble. It possesses also the great advantage of being uniform in quality, and being sold with a guaranteed analysis, the buyer can rely upon obtaining the per-centage of ammonia and phosphates stated, which he cannot do when he buys without a guarantee.

Complete Analysis and all particulars on Application

LAWES' CONCENTRATED CORN & GRASS MANURE

This Manure is specially prepared for Top Dressing in the Spring, and is found very beneficial upon crops that have suffered from the frost. It is specially adapted for Wheat and Barley, and has given great satisfaction to all who have used it for many years past. It should be applied as early as possible. For Wheat it should be used at the rate of 2 to 2½ cwts. per acre. For Barley 1½ to 2 cwts. per acre, and harrowed in just when the blade appears above the ground.

Soluble Phosphates, 12 to 15 per cent

Ammonia, 7 to 8 per cent.

MANURES

MANUFACTURED BY

Lawes' Chemical Manure Company,

LIMITED.

	PRICE PER TON.
LAWES' PATENT TURNIP MANURE	5 10 0
„ DISSOLVED BONE COMPOUND MANURE	5 15 0
„ DISSOLVED BONE COMPOUND (specially prepared)	6 15 0
„ SUPERPHOSPHATE OF LIME	
„ SPRING WHEAT MANURE	7 10 0
„ BARLEY MANURE	7 10 0
„ OAT MANURE	7 10 0
„ GRASS MANURE	7 10 0
„ MANGOLD MANURE	7 10 0
„ POTATO MANURE	7 10 0
„ GUANO	10 15 0
„ CONCENTRATED CORN AND GRASS MANURE } Recommended as a substitute for Nitrate of Soda.	11 5 0

Delivered on Rail in London.

LAWES' CHEMICAL MANURE COMPANY

*are always in a
position to supply any of the following articles at the
lowest possible prices for Cash :—*

Nitrate of Soda. Best quality as imported.

Guaranteed 95 to 96 per cent.

Sulphate of Ammonia.

Guaranteed 24 to 25 per cent. Ammonia.

Ground Bones.

$\frac{1}{2}$ inch, $\frac{1}{4}$ inch, and dust.

Bone Meal.

*Containing 45 to 50 per cent. Phosphates,
and 4 to 5 per cent. Ammonia.*

} Guaranteed
perfectly
pure.

Genuine Kainit as imported.

23 per cent Sulphate of Potash.

Pulverised and prepared for immediate use.

Raw Peruvian Guano as imported.

Fish Guano. Best makes.

*N.B.—All quotations for above subject to reply per return
of Post.*

SEVEN GOOD REASONS FOR USING

LAWES' MANURES.

- FIRST.** BECAUSE LAWES' Manures have been in use for half a century, and have during all that time maintained their place as the **LEADING** Artificial Manures.
- SECOND.** BECAUSE the Company is the largest manufacturer of Manures in the world, and the extent of its trade, and the completeness of its plant, enable it to reduce the cost of manufacture to a minimum.
- THIRD.** BECAUSE the command of a large capital enables the Company to make the most advantageous contracts for raw materials, and to avail itself to the fullest extent of the benefits which large cash purchasers can always obtain.
- FOURTH.** BECAUSE the Company is guided in the composition of its Manures by the results of the experiments of Sir JOHN LAWES, who continues to give the Company the benefit of his invaluable advice.
- FIFTH.** BECAUSE LAWES' Manures are invariably sold by guaranteed Analyses; and, in order to ensure their being up to the required standard, are not only analysed by the resident Chemist at the Works during the different stages of manufacture, but also by Mr. JOHN HUGHES, F.C.S., before being finally sent out, thus affording to the buyer the most complete protection.
- SIXTH.** BECAUSE LAWES' Manures are manufactured only from the very best raw materials procurable.
- SEVENTH.** BECAUSE special attention is paid to the **CONDITION** in which the Manures are sent out, so as to ensure their being most readily available as food for the plant.

LAWES' CHEMICAL MANURE COMPANY,

59, MARK LANE, LONDON, E.C.

Reprinted from the "Industries of London."

IT would be difficult indeed to over estimate the value of the service rendered to the cause of agriculture in this and other lands by the world-famous house trading under the title specified above. Chemical manures are a mighty factor in agricultural progress and prosperity to-day, and with them in their earliest introduction, intermediate developement, and present high attainment of efficacy and esteem, the name of the Lawes' Chemical Manure Company, and that of its distinguished founder, Sir John B. Lawes, Bart., will be for all time identified with eminent credit. The researches and discoveries of the illustrious chemist, Baron Liebig, had much to do with the birth of a movement in favour of the more scientific preparation of fertilizing agents; but to Sir John Lawes belongs the credit of having imparted an irresistible impetus and onward impulse to that movement by means of his own investigations and the results thereof. After completing his education at Eton and Oxford Sir John Lawes returned to his home at Rothamsted; and it is upon record that he there, at the age of twenty, equipped one of the best bedrooms in the house with every requisite of a well-appointed chemical laboratory, and entered seriously into what he saw even then was to be the work of his life. From that time to this Rothamsted has been a kind of agricultural Mecca, to which the industrious tiller of the soil has made pilgrimage and to which he has always confidently looked as a centre of experiment and effort from which should come to him the very best and most carefully compounded aids to enable him to coax from an indifferent soil a plenteous harvest. In 1834

Mr. Lawes (now Sir John) commenced his occupation of the famous Home Farm, and what he accomplished there, and the use he made of his achievements, are matters of the widest familiarity in the circles they directly concern, and call for no word of comment here. As far back as 1839 he established himself as a manufacturer of chemical manures and special fertilizers, resolving to develop this branch of active undertaking to its utmost capacity, and in sixteen years he was controller and proprietor of a hundred acres of land lying along the Thames bank at Barking Creek. Here is now concentrated one the most remarkable industrial systems of its kind extant, and it is safe to affirm that there is not in the world an establishment devoted to this particular branch of chemical manufacture which equals in magnitude or influence that of the Lawes' Chemical Manure Company at Barking. Anything like a detailed description of these immense works is far beyond the capacity and scope of the present brief sketch; it is only possible here to mention a few salient points which serve to outline the general nature and plan of the operations there carried on. From all parts of the surrounding neighbourhood the position of these works can be accurately determined by the huge chimney stack that towers into the murky air of Barking to a height of 175 feet, and measures something like 28 feet in diameter. This great chimney, it is said, has played the *rôle* of general doctor and physician in ordinary to the district, and has done this in a peculiar manner. The manufacture of sulphuric acid is practically the basis of this industry, since that chemical product enters as an important ingredient into most of the preparations of the firm. In the production of this agent a small percentage of the acid fumes generated is allowed to escape by the lofty chimney referred to, and these fumes tend to purify the atmosphere of the neighbourhood from what was formerly a chronic tendency to the development of fevers and agues. The whole sanitary effect of the chimney upon the locality in which it stands appears, indeed, to have been remarkable; and even a case of small pox was condemned to loneliness and isolation, and speedily died out itself for lack

of a congenially infectious atmosphere. Thus the company's works are a distinct local benefit, as well as a source of universal agricultural profit. With regard to the manufacture of sulphuric acid—it is produced from Spanish pyrites, of which 10,000 tons are imported annually by the company, and the yearly output of acid amounts in all to about 23,000 tons. The immense size of the works, of which the sulphuric acid department is only one section, may be best understood from the fact that their *structural* parts alone—factories, warehouses, sheds and wharves—cover an area of nearly 35 acres. During 1887 the wages expenditure amounted to £24,000. The working staff consists of men and boys, who are well paid, the former earning twenty-two shillings, and the latter ten shillings per week and upwards, on an average. The engineering and mechanical equipment of the entire works can only be described as the perfection of a plant outfit for such an establishment. The specialities of the house consist in the following :—Lawes' Turnip Manure, Lawes' Dissolved Bone Compound Manure, Lawes' Mangold Manure, Lawes' Cereal Manure, Lawes' Dissolved Peruvian Guano, Lawes' Potato Manure, Lawes' Concentrated Corn and Grass Manure, and Superphosphates of all grades. Each of these is the outcome of Sir John Lawes' assiduous researches and investigations into the science of fertilizing by chemical influence, and each article has fulfilled its allotted mission with results that it is superfluous to say have been in the highest degree satisfactory. In the preparation of the above the firm employ the whole of their manufacture of sulphuric acid, in conjunction with various products of the earth, viz. : mineral phosphates, guano, bones, hoof and horns, dried blood, nitrate of soda, potash, and sulphate of ammonia. The manures themselves are used not only by most of the principal agriculturists of the United Kingdom, but large quantities are annually shipped to the Colonies, the Continent, and America, and the yearly sales now amount to close upon 50,000 tons. The stores at the Barking works are enormous, and in addition to these,

stocks are kept at all the principal ports in the United Kingdom, at all railway depôts in London, and at nearly every railway station and canal wharf in the United Kingdom. Agents are established every where. The head office for Ireland is at 22, Eden Quay, Dublin. The administration of the affairs of this distinguished and widely influential house is of the most capable and vigorous character ; indeed, it could hardly be otherwise in such thoroughly efficient and experienced hands as those of Mr. Elborough, the managing director ; Mr. J. Morgan, secretary ; Mr. Wilson, the works superintendent ; and Mr. McAllister, the superintendent of the sulphuric acid department. That Sir John B. Lawes has won world-wide fame and renown by the successful operation of the great concern he has founded and developed, goes without saying. That his great services to agriculturists have been amply recognised and well appreciated is evidenced in his possession of that fame and renown, and is appropriately marked in two other notable and special ways—one, his dignity as a baronet, conferred upon him in recognition of those services ; the other, the excellent working laboratory at Harpenden Common, near to his residence, equipped at a cost of £2,000, and presented to him as a testimonial from many prominent agriculturists who owed much of their success to the outcome of his labours. In fine, if there is to-day in this country a *bonâ fide* and well-developed science of agriculture (which hardly anyone will honestly deny), it is not too much to say that its practical rise, progress, present firm establishment, and bright future promise are largely, if not wholly, attributable to this eminent baronet, and the notable concern which exists to-day as a monument to his indefatigable will and energy.

TITHE COMMUTATION. AVERAGE PRICES OF WHEAT.

Tithe Commutation.

THE following table gives the average prices of Wheat, Barley and Oats per imperial quarter every year since the passing of the Tithe Commutation Act, 6 & 7 Will. IV. c. 71. The prices upon which the Act was based being: wheat, 7s. 0½d. per bushel; barley, 3s. 11½d.; and oats, 2s. 9d. or per quarter—wheat at 56s. 2d.; barley, 31s. 8d.; and oats, 22s. The average for the past seven years is computed to the Thursday next before Christmas Day; it is taken every year, and the result published in January.

The average Tithe Rent Charge for the first fifty years from 1836 was £102 9s. 9½d., and for the past five years is £90 1s. 0¾d.

Years.	Wheat. s. d.	Barley. s. d.	Oats. s. d.	Tithe Rent-charge.
1836 ..	48 6	32 10	23 1	£100 0 0
1837 ..	55 10	30 4	23 1	93 13 9¼
1838 ..	64 7	31 9	22 5	97 7 11
1839 ..	70 8	39 6	25 11	95 7 9
1840 ..	66 4	36 5	25 8	98 15 9½
1841 ..	64 4	32 10	22 5	102 12 5¼
1842 ..	57 3	27 6	19 3	105 8 2¾
1843 ..	50 1	29 6	18 4	105 12 2¼
1844 ..	51 3	33 8	20 7	104 3 5¼
1845 ..	50 10	31 8	22 6	103 17 11¼
1846 ..	54 8	32 8	23 8	102 17 8¾
1847 ..	69 9	44 2	28 8	99 18 10¼
1848 ..	50 6	31 6	20 6	102 1 0
1849 ..	44 3	27 9	17 6	100 3 7¼
1850 ..	40 3	23 6	16 5	98 16 10
1851 ..	38 6	24 9	18 7	96 11 4¾
1852 ..	40 9	28 6	19 1	93 16 11¼
1853 ..	52 3	33 2	21 0	91 13 5¼
1854 ..	72 5	36 0	27 11	90 19 5
1855 ..	74 8	34 9	27 5	89 15 8¾
1856 ..	69 2	41 1	25 2	93 18 1¼
1857 ..	56 4	42 1	25 0	99 13 7¼
1858 ..	44 2	34 8	24 6	105 16 3½
1859 ..	43 9	33 6	23 2	108 19 6¼
1860 ..	53 3	36 7	24 5	110 17 1½
1861 ..	55 4	36 1	23 9	112 3 4¾
1862 ..	55 5	35 1	22 7	109 13 6
1863 ..	44 9	33 9	21 2	107 5 2
1864 ..	40 2	29 11	20 1	103 3 10¾
1865 ..	41 0	29 9	21 10	98 15 10½
1866 ..	49 11	37 5	24 7	97 7 9¼
1867 ..	64 5	39 11	26 0	98 13 3
1868 ..	63 9	43 0	28 1	100 13 8
1869 ..	48 2	39 5	26 0	103 5 8¼
1870 ..	46 11	34 7	22 10	104 1 0¾
1871 ..	56 8	36 2	25 2	104 15 1
1872 ..	57 0	37 3	23 2	108 4 0¼
1873 ..	58 8	40 5	25 5	110 15 10¼
1874 ..	55 9	44 11	28 10	112 7 3
1875 ..	45 1	38 5	28 8	112 15 6¼
1876 ..	46 2	35 2	26 3	110 14 11
1877 ..	56 9	39 8	25 11	109 16 11½
1878 ..	46 5	40 2	24 4	112 7 5¼
1879 ..	43 10	34 0	21 9	111 15 1½
1880 ..	44 4	33 1	23 1	109 17 9¼
1881 ..	45 4	31 11	21 9	107 2 10½
1882 ..	45 1	31 2	21 10	102 16 2
1883 ..	41 7	31 10	21 5	100 4 9¾
1884 ..	35 8	30 8	20 3	98 6 2¼
1885 ..	32 10	30 1	20 7	93 17 3¾
1886 ..	31 0	26 7	19 0	90 10 3½
1887 ..	32 6	25 4	16 3	87 8 10
1888	84 2 8¾
1889

AVERAGE PRICES OF WHEAT, BARLEY, AND OATS PER IMPERIAL QUARTER FROM 1785 TO 1835 INCLUSIVE.

Yrs.	Wht.	Barl'y	Oats.	Yrs.	Wht.	Barl'y	Oats.
	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.
1785	43 1	24 9	17 8	1810	106 5	48 1	28 7
1786	40 0	25 1	18 6	1811	95 3	42 3	27 7
1787	42 5	23 4	17 2	1812	126 6	66 9	44 6
1788	46 4	22 8	16 1	1814	74 4	37 4	25 8
1789	52 9	23 6	16 6	1816	78 6	33 11	27 2
1790	54 9	26 3	19 5	1817	96 11	49 4	32 5
1791	48 7	26 10	18 1	1818	86 3	53 10	32 5
1792	43 0	27 7	16 9	1819	74 6	45 9	28 2
1793	49 3	31 1	20 6	1820	67 10	33 10	24 2
1794	52 3	31 9	21 3	1821	56 1	26 0	29 6
1795	75 2	37 5	24 5	1822	44 7	21 10	28 1
1796	78 7	35 4	21 10	1823	53 4	36 6	22 11
1797	53 9	27 2	16 3	1824	63 11	36 4	24 10
1798	51 10	29 0	19 5	1825	68 6	40 0	25 8
1799	69 0	36 2	27 6	1826	58 8	34 4	26 8
1800	113 10	59 10	39 4	1827	58 6	37 7	28 2
1801	119 6	68 6	37 0	1828	60 5	32 10	22 0
1802	69 10	33 4	20 4	1829	66 3	32 6	22 9
1803	58 10	25 4	21 6	1830	64 3	32 7	24 5
1804	62 3	31 0	24 3	1831	66 4	38 0	25 4
1805	89 9	44 6	28 4	1832	58 8	33 1	20 5
1806	79 1	38 8	27 7	1833	52 11	27 6	18 5
1807	75 4	39 4	28 4	1834	46 2	29 0	20 11
1808	81 4	43 4	33 4	1835	39 4	29 11	22 0
1809	97 4	40 7	31 5				

For continuation of this table, from 1836 to 1886, see "Tithe Commutation Table" in the preceding column.

ANNUAL AVERAGE PRICES OF WHEAT.

In the following table will be found the highest and lowest prices of wheat for every year since the passing of Sir Robert Peel's Corn Bill of 1846, with the annual average prices for the same years.

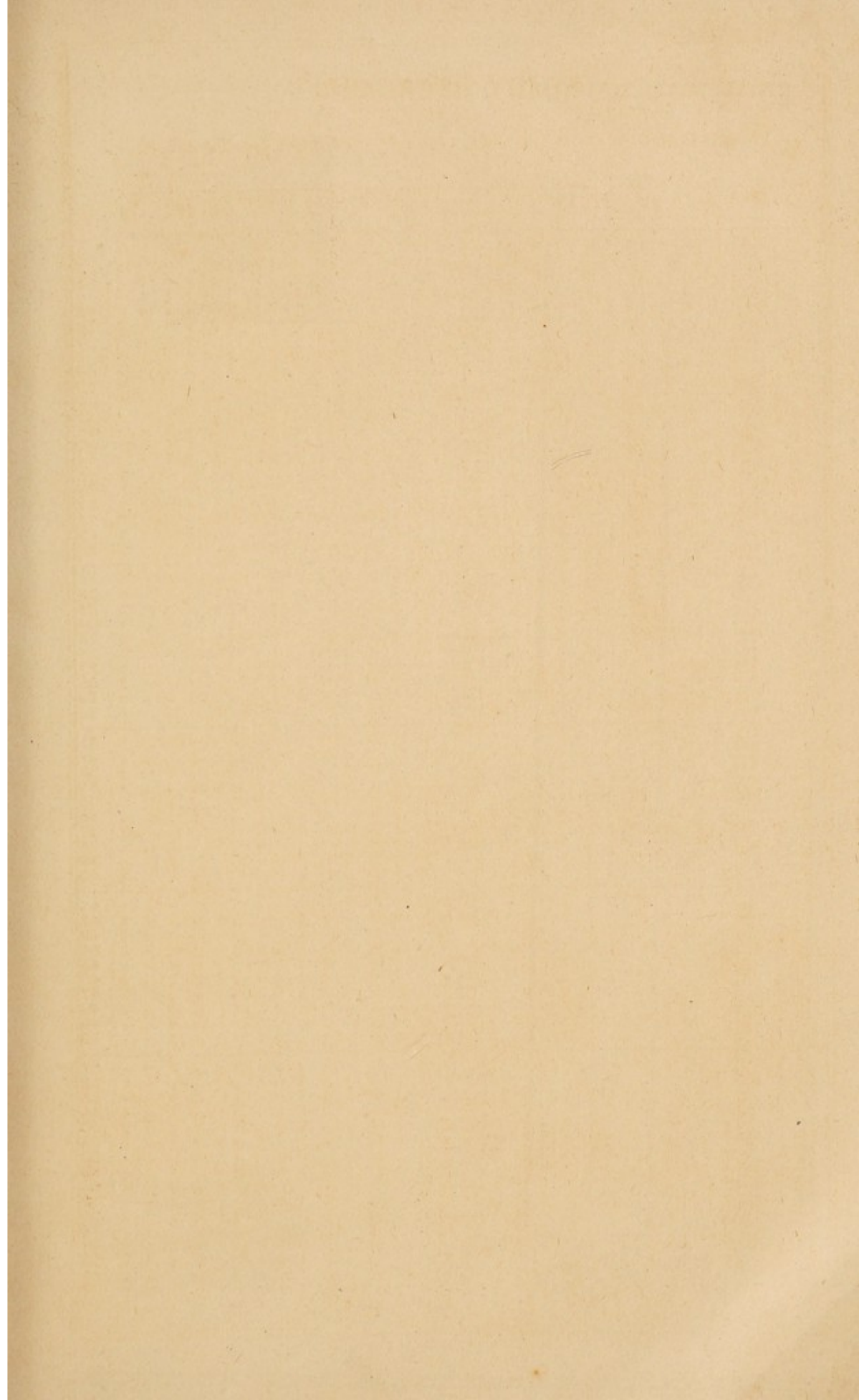
Yrs.	High.	Low.	Aver.	Yrs.	High.	Low.	Aver.
	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.
1846	60 1	45 1	54 1	1868	74 7	63 5	67 9
1847	102 5	49 6	71 3	1869	54 4	44 4	49 8
1848	56 10	46 10	51 3	1870	54 11	40 7	45 11
1849	52 3	41 9	46 7	1871	60 0	46 5	55 1
1850	44 1	36 11	40 3	1872	60 3	53 11	56 9
1851	43 6	36 7	39 5	1873	64 7	54 7	57 8
1852	44 9	35 6	39 10	1874	63 9	43 5	59 11
1853	59 5	37 10	45 7	1875	53 10	40 1	44 7
1854	83 3	52 2	72 10	1876	48 10	42 8	45 9
1855	78 2	56 7	71 10	1877	68 9	46 2	55 9
1856	83 1	64 4	73 1	1878	55 11	41 5	49 5
1857	66 4	53 0	59 2	1879	49 7	37 7	41 10
1858	56 3	42 6	46 10	1880	50 5	39 5	45 7
1859	54 4	39 10	43 6	1881	55 2	40 1	44 8
1860	62 11	42 5	49 9	1882	51 3	40 4	46 4
1861	61 1	50 0	54 9	1883	43 10	39 2	41 9
1862	62 1	53 2	58 3	1884	41 7	33 0	37 10
1863	51 1	43 9	46 8	1885	38 1	30 9	33 0
1864	44 1	38 9	40 9	1886	33 2	29 0	30 11
1865	46 7	37 10	40 3	1887	36 4	28 3	32 10
1866	55 10	40 10	46 10	1888			
1867	68 4	52 2	61 7	1889			

The averages completed in December are published early in January every year.

READY RECKONER,

MARKETING, OR HOURLY WAGES TABLE.

No.	$\frac{1}{4}d.$	$\frac{1}{2}d.$	$\frac{3}{4}d.$	1d.	2d.	3d.	4d.	5d.	6d.	7d.	8d.	9d.	10d.	11d.	No.
1	0	0 $\frac{1}{4}$	0	0 $\frac{1}{2}$	0	0 $\frac{3}{4}$	0	1	0	2	0	3	0	4	1
2	0	0 $\frac{1}{2}$	0	1	0	1 $\frac{1}{2}$	0	2	0	3	0	4	0	5	2
3	0	0 $\frac{3}{4}$	0	1 $\frac{1}{2}$	0	2 $\frac{1}{4}$	0	3	0	4	0	5	0	6	3
4	0	1	0	2	0	3	0	4	0	5	0	6	0	7	4
5	0	1 $\frac{1}{4}$	0	2 $\frac{1}{2}$	0	3 $\frac{1}{4}$	0	5	0	6	0	7	0	8	5
6	0	1 $\frac{1}{2}$	0	3	0	4 $\frac{1}{4}$	0	6	0	7	0	8	0	9	6
7	0	1 $\frac{3}{4}$	0	3 $\frac{1}{2}$	0	5 $\frac{1}{4}$	0	7	0	8	0	9	0	10	7
8	0	2	0	4	0	6	0	8	0	9	0	10	0	11	8
9	0	2 $\frac{1}{4}$	0	4 $\frac{1}{2}$	0	6 $\frac{1}{4}$	0	9	0	10	0	11	0	12	9
10	0	2 $\frac{1}{2}$	0	5	0	7 $\frac{1}{4}$	0	10	0	11	0	12	0	13	10
11	0	2 $\frac{3}{4}$	0	5 $\frac{1}{2}$	0	8 $\frac{1}{4}$	0	11	0	12	0	13	0	14	11
12	0	3	0	6	0	9	0	12	0	13	0	14	0	15	12
13	0	3 $\frac{1}{4}$	0	6 $\frac{1}{2}$	0	9 $\frac{1}{4}$	0	13	0	14	0	15	0	16	13
14	0	3 $\frac{1}{2}$	0	7	0	10 $\frac{1}{4}$	0	14	0	15	0	16	0	17	14
15	0	3 $\frac{3}{4}$	0	7 $\frac{1}{2}$	0	11 $\frac{1}{4}$	0	15	0	16	0	17	0	18	15
16	0	4	0	8	0	11	0	16	0	17	0	18	0	19	16
17	0	4 $\frac{1}{4}$	0	8 $\frac{1}{2}$	0	12 $\frac{1}{4}$	0	17	0	18	0	19	0	20	17
18	0	4 $\frac{1}{2}$	0	9	0	12 $\frac{1}{2}$	0	18	0	19	0	20	0	21	18
19	0	4 $\frac{3}{4}$	0	9 $\frac{1}{2}$	0	13 $\frac{1}{4}$	0	19	0	20	0	21	0	22	19
20	0	5	0	10	0	13	0	20	0	21	0	22	0	23	20
21	0	5 $\frac{1}{4}$	0	10 $\frac{1}{2}$	0	14 $\frac{1}{4}$	0	21	0	22	0	23	0	24	21
22	0	5 $\frac{1}{2}$	0	11	0	14 $\frac{1}{2}$	0	22	0	23	0	24	0	25	22
23	0	5 $\frac{3}{4}$	0	11 $\frac{1}{2}$	0	15 $\frac{1}{4}$	0	23	0	24	0	25	0	26	23
24	0	6	0	12	0	15	0	24	0	25	0	26	0	27	24
25	0	6 $\frac{1}{4}$	0	12 $\frac{1}{2}$	0	16 $\frac{1}{4}$	0	25	0	26	0	27	0	28	25
26	0	6 $\frac{1}{2}$	0	13	0	16 $\frac{1}{2}$	0	26	0	27	0	28	0	29	26
27	0	6 $\frac{3}{4}$	0	13 $\frac{1}{2}$	0	17 $\frac{1}{4}$	0	27	0	28	0	29	0	30	27
28	0	7	0	14	0	17	0	28	0	29	0	30	0	31	28
29	0	7 $\frac{1}{4}$	0	14 $\frac{1}{2}$	0	18 $\frac{1}{4}$	0	29	0	30	0	31	0	32	29
30	0	7 $\frac{1}{2}$	0	15	0	18 $\frac{1}{2}$	0	30	0	31	0	32	0	33	30
31	0	7 $\frac{3}{4}$	0	15 $\frac{1}{2}$	0	19 $\frac{1}{4}$	0	31	0	32	0	33	0	34	31
32	0	8	0	16	0	19	0	32	0	33	0	34	0	35	32
33	0	8 $\frac{1}{4}$	0	16 $\frac{1}{2}$	0	20 $\frac{1}{4}$	0	33	0	34	0	35	0	36	33
34	0	8 $\frac{1}{2}$	0	17	0	20 $\frac{1}{2}$	0	34	0	35	0	36	0	37	34
35	0	8 $\frac{3}{4}$	0	17 $\frac{1}{2}$	0	21 $\frac{1}{4}$	0	35	0	36	0	37	0	38	35
36	0	9	0	18	0	21	0	36	0	37	0	38	0	39	36
37	0	9 $\frac{1}{4}$	0	18 $\frac{1}{2}$	0	22 $\frac{1}{4}$	0	37	0	38	0	39	0	40	37
38	0	9 $\frac{1}{2}$	0	19	0	22 $\frac{1}{2}$	0	38	0	39	0	40	0	41	38
39	0	9 $\frac{3}{4}$	0	19 $\frac{1}{2}$	0	23 $\frac{1}{4}$	0	39	0	40	0	41	0	42	39
40	0	10	0	20	0	23	0	40	0	41	0	42	0	43	40
41	0	10 $\frac{1}{4}$	0	20 $\frac{1}{2}$	0	24 $\frac{1}{4}$	0	41	0	42	0	43	0	44	41
42	0	10 $\frac{1}{2}$	0	21	0	24 $\frac{1}{2}$	0	42	0	43	0	44	0	45	42
43	0	10 $\frac{3}{4}$	0	21 $\frac{1}{2}$	0	25 $\frac{1}{4}$	0	43	0	44	0	45	0	46	43
44	0	11	0	22	0	25	0	44	0	45	0	46	0	47	44
45	0	11 $\frac{1}{4}$	0	22 $\frac{1}{2}$	0	26 $\frac{1}{4}$	0	45	0	46	0	47	0	48	45
46	0	11 $\frac{1}{2}$	0	23	0	26 $\frac{1}{2}$	0	46	0	47	0	48	0	49	46
47	0	11 $\frac{3}{4}$	0	23 $\frac{1}{2}$	0	27 $\frac{1}{4}$	0	47	0	48	0	49	0	50	47
48	0	12	0	24	0	27	0	48	0	49	0	50	0	51	48
49	0	12 $\frac{1}{4}$	0	24 $\frac{1}{2}$	0	28 $\frac{1}{4}$	0	49	0	50	0	51	0	52	49
50	0	12 $\frac{1}{2}$	0	25	0	28 $\frac{1}{2}$	0	50	0	51	0	52	0	53	50
51	0	12 $\frac{3}{4}$	0	25 $\frac{1}{2}$	0	29 $\frac{1}{4}$	0	51	0	52	0	53	0	54	51
52	0	13	0	26	0	29	0	52	0	53	0	54	0	55	52
53	0	13 $\frac{1}{4}$	0	26 $\frac{1}{2}$	0	30 $\frac{1}{4}$	0	53	0	54	0	55	0	56	53
54	0	13 $\frac{1}{2}$	0	27	0	30 $\frac{1}{2}$	0	54	0	55	0	56	0	57	54
55	0	13 $\frac{3}{4}$	0	27 $\frac{1}{2}$	0	31 $\frac{1}{4}$	0	55	0	56	0	57	0	58	55
56	0	14	0	28	0	31	0	56	0	57	0	58	0	59	56
57	0	14 $\frac{1}{4}$	0	28 $\frac{1}{2}$	0	32 $\frac{1}{4}$	0	57	0	58	0	59	0	60	57
58	0	14 $\frac{1}{2}$	0	29	0	32 $\frac{1}{2}$	0	58	0	59	0	60	0	61	58
59	0	14 $\frac{3}{4}$	0	29 $\frac{1}{2}$	0	33 $\frac{1}{4}$	0	59	0	60	0	61	0	62	59
60	0	15	0	30	0	33	0	60	0	61	0	62	0	63	60
61	0	15 $\frac{1}{4}$	0	30 $\frac{1}{2}$	0	34 $\frac{1}{4}$	0	61	0	62	0	63	0	64	61
62	0	15 $\frac{1}{2}$	0	31	0	34 $\frac{1}{2}$	0	62	0	63	0	64	0	65	62
63	0	15 $\frac{3}{4}$	0	31 $\frac{1}{2}$	0	35 $\frac{1}{4}$	0	63	0	64	0	65	0	66	63
64	0	16	0	32	0	35	0	64	0	65	0	66	0	67	64
65	0	16 $\frac{1}{4}$	0	32 $\frac{1}{2}$	0	36 $\frac{1}{4}$	0	65	0	66	0	67	0	68	65
66	0	16 $\frac{1}{2}$	0	33	0	36 $\frac{1}{2}$	0	66	0	67	0	68	0	69	66
67	0	16 $\frac{3}{4}$	0	33 $\frac{1}{2}$	0	37 $\frac{1}{4}$	0	67	0	68	0	69	0	70	67
68	0	17	0	34	0	37	0	68	0	69	0	70	0	71	68
69	0	17 $\frac{1}{4}$	0	34 $\frac{1}{2}$	0	38 $\frac{1}{4}$	0	69	0	70	0	71	0	72	69
70	0	17 $\frac{1}{2}$	0	35	0	38 $\frac{1}{2}$	0	70	0	71	0	72	0	73	70
71	0	17 $\frac{3}{4}$	0	35 $\frac{1}{2}$	0	39 $\frac{1}{4}$	0	71	0	72	0	73	0	74	71
72	0	18	0	36	0	39	0	72	0	73	0	74	0	75	72
73	0	18 $\frac{1}{4}$	0	36 $\frac{1}{2}$	0	40 $\frac{1}{4}$	0	73	0	74	0	75	0	76	73
74	0	18 $\frac{1}{2}$	0	37	0	40 $\frac{1}{2}$	0	74	0	75	0	76	0	77	74
75	0	18 $\frac{3}{4}$	0	37 $\frac{1}{2}$	0	41 $\frac{1}{4}$	0	75	0	76	0	77	0	78	75
76	0	19	0	38	0	41	0	76	0	77	0	78	0	79	76
77	0	19 $\frac{1}{4}$	0	38 $\frac{1}{2}$	0	42 $\frac{1}{4}$	0	77	0	78	0	79	0	80	77
78	0	19 $\frac{1}{2}$	0	39	0	42 $\frac{1}{2}$	0	78	0	79	0	80	0	81	78
79	0	19 $\frac{3}{4}$	0	39 $\frac{1}{2}$	0	43 $\frac{1}{4}$	0	79	0	80	0	81	0	82	79
80	0	20	0	40	0	43	0	80	0	81	0	82	0	83	80
81	0	20 $\frac{1}{4}$	0	40 $\frac{1}{2}$	0	44 $\frac{1}{4}$	0	81	0	82	0	83	0	84	81
82	0	20 $\frac{1}{2}$	0	41	0	44 $\frac{1}{2}$	0	82	0	83	0	84	0	85	82
83	0	20 $\frac{3}{4}$	0	41 $\frac{1}{2}$	0	45 $\frac{1}{4}$	0	83	0	84	0	85	0	86	83
84	0	21	0	42	0	45	0	84	0	85	0	86	0	87	84
85	0	21 $\frac{1}{4}$	0	42 $\frac{1}{2}$	0	46 $\frac{1}{4}$	0	85	0	86	0	87	0	88	85
86	0	21 $\frac{1}{2}$	0	43	0	46 $\frac{1}{2}$	0	86	0	87	0	88	0	89	86
87	0	21 $\frac{3}{4}$	0	43 $\frac{1}{2}$	0	47 $\frac{1}{4}$	0	87	0	88	0	89	0	90	87
88	0	22	0	44	0	47	0	88	0	89	0	90	0	91	88
89	0	22 $\frac{1}{4}$	0	44 $\frac{1}{2}$	0	48 $\frac{1}{4}$	0	89	0	90	0	91	0	92	89
90	0	22 $\frac{1}{2}$	0	45	0	48 $\frac{1}{2}$	0	90	0	91	0	92	0	93	90
91	0	22 $\frac{3}{4}$	0	45 $\frac{1}{2}$	0	49 $\frac{1}{4}$	0	91	0	92	0	93	0	94	91
92	0	23	0	46	0	49	0	92	0	93	0	94	0	95	92
93	0	23 $\frac{1}{4}$	0	46 $\frac{1}{2}$	0	50 $\frac{1}{4}$	0	93	0	94	0	95	0	96	93
94	0	23 $\frac{1}{2}$	0	47	0	50 $\frac{1}{2}$	0	94	0	95	0	96	0	97	94
95															





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