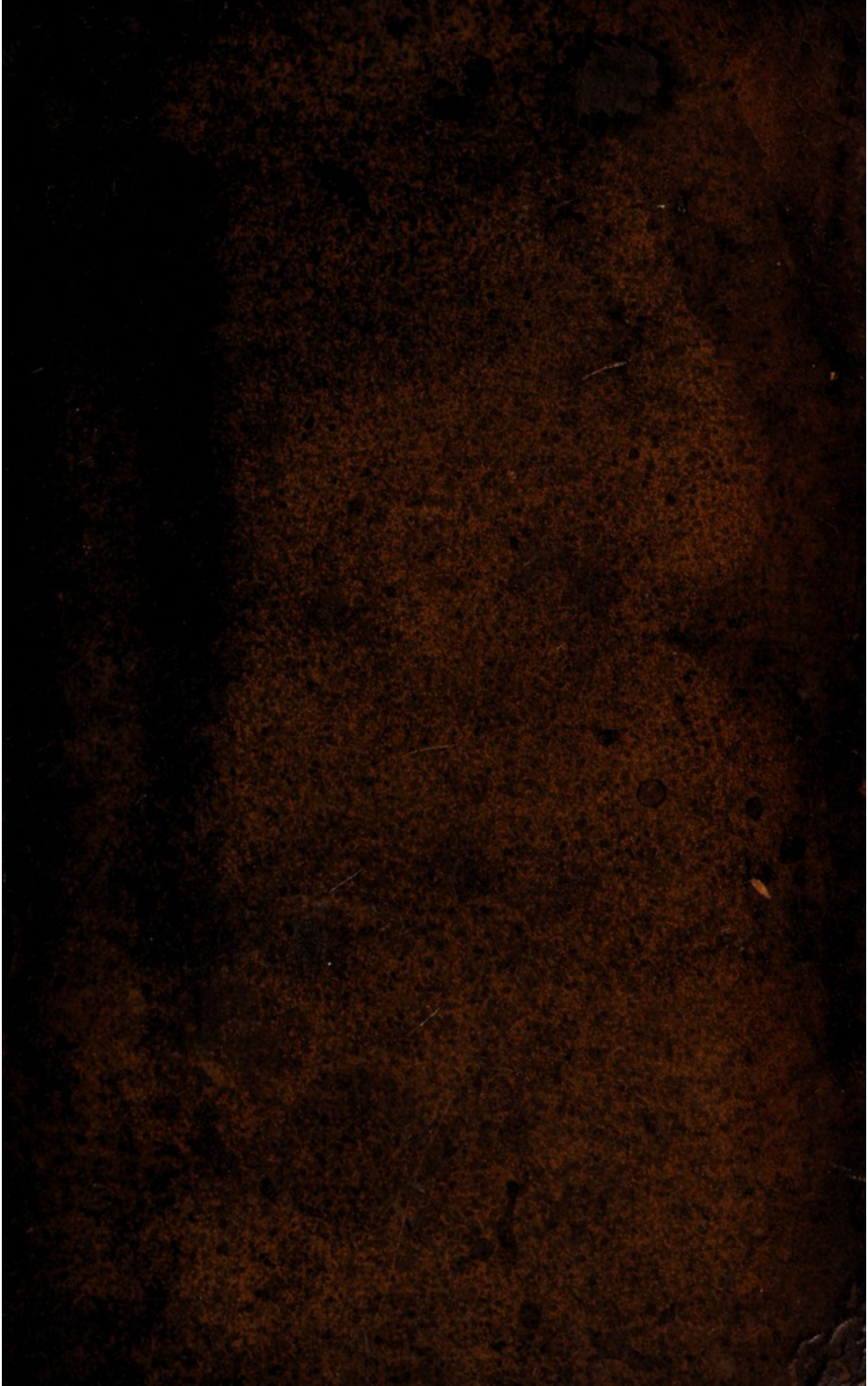
The practical farmer, or, the Hertfordshire husbandman containing many new improvements in husbandry ... / by William Ellis.



THE

Practical Farmer;

OR, THE

Hertfordſhire Husbandman:

Containing many New

IMPROVEMENTS in HUSBANDRY.

I. Of MELIORATING the different SOILS, and all other Branches of Buſineſs relating to a FARM.

II. Of the NATURE of the ſeveral Sorts of WHEAT, and the SOIL proper for each.

III. Of the great Improvement of BARLEY, by BRINEING the SEED, after an entire new Method, and without Expence.

IV. Of increaſing Crops of PEAS and BEANS by HORSE-HOUGHING.

V. Of TREFOIL, CLOVER, LUCERNE, and other Foreign Graſſes.

VI. A new Method to IMPROVE LAND at a ſmall Expence, with BURNT CLAY.

VII. Of the Management of COWS, SHEEP, SUCKLING of CALVES, LAMBS, *&c.* with Means to prevent, and Remedies to cure ROTTENNESS in Sheep.

VIII. How to keep PIGEONS and TAME RABBITS to Advantage.

IX. A new Method of PLANTING and IMPROVING FRUIT-TREES in *Ploughed-Fields.*

By *WILLIAM ELLIS,*

Of *Little Gaddeſden* in *Hertfordſhire.*

PART I.

The Fourth Edition.

LONDON:

Printed for T. ASTLEY, at the *Roſe*; and S. AUSTEN at the *Angel* and *Bible*, in St. *Paul*'s *Church-Yard.* MDCCXLII.

(Price Two Shillings, Stitch'd.)

Of whom may be had, The Second Part.

PREFACE.

AS no Profeſſion is more uſeful in the World, than this of Agriculture; ſo does it require the greateſt Care, Study and Pains to manage its many depending Branches, ſo as to make them anſwer ſucceſsful Ends. For this Purpoſe ſeveral elaborate Tracts have been writ, to forward Improvements in this boundleſs Science; which has brought about and effected ſuch beneficial Alterations in Farming, as to cauſe both Landlord and Tenant to rejoice in their plentiful Productions.

In the further purſuance of which, I have here humbly thrown my Mite into the Publick Treaſury: And, for the Sake of my good Intention for the common Weal, I hope the Generous will excuſe the Deficiencies that may have accompany'd my Ruſtick Pen; which hereafter I ſhall ſilence or employ in further Enlargements of this Kind, as the following TREATISE *ſhall more or leſs meet with Encouragement from the Publick.*

THE

Practical Farmer:

OR, THE

Hertfordſhire Husbandman.

PART I.

Of the MELIORATION *of* SOILS.

MELIORATION of Soils may be otherwiſe called an Alteration of Earths, or Improvement of them, by mixing their ſeveral Sorts of Bodies, with Dungs, Chalks, Lime, Sand, *&c.* or elſe by manuring them with

Hand-dreſſings; as with Soot, Aſhes, Horn-ſhavings, Coney-clippings, and Rags, at proper Seaſons; or elſe by the ſeveral Sorts of ſowed Graſſes, which gives the Earth an Opportunity of enjoying a Reſt, a longer or ſhorter Time, as the Owner thinks fit; but the longer it lies under ſuch Reſt, the more mellow it becomes, by obtaining in that Time a certain Cruſt or Graſs-Clover, which prevents the Ground being exhauſted by the Sun's attracting Heat and Power, or by carrying off the Stover. For when theſe foreign Graſſes are fed by Cattle, there is a Dung and Stale returned and left behind, whoſe Quinteſſence or Virtue gets into the Ground, which ſo mellows and enriches it, with their ſaline, nitrous and ſulphureous Qualities, as to cauſe a very great Improvement to the Land. And therefore it is, that Lands are capacitated to produce the great ſucceeding Crops of Corn that we annually perceive: So by Dung, that we plough in, which, like Yeſt in Dough, hollows and ferments the Earth in ſmall or greater Degree, with its ſaline and warm Particles, that will in one Sort of Soil laſt a great deal longer than in others; as in Clays, two or three Years, when in Gravels hardly a Year. And therefore it is certainly judicious Huſbandry to adapt each Dreſſing to its proper Soil; alſo by Chalks, which is ſo great a Mellower of Land, that the Effect thereof will remain in ſome

Ground

Ground twenty Years after: And this is more efficacious, as it is better or worſe. Therefore it is of conſiderable Importance what Sort of Chalk is made uſe of; for above all others, the fat Chalk is as much to be ſought after, as the lean ſtony Chalk is to be rejected; wherefore ſeveral Farmers are ſometimes obliged to try more than one Place in their Field to ſearch for the beſt Sort; for there are in the Earth, and I have known it even in one Field, that a hard and ſoft Chalk has been found, which has obliged the Owners to cut thro' a hard, ſtony, rocky Sort, before they could come at the right fat Sort.

By Lime and Sand are Clays vaſtly altered, and their tough Bodies reduced both by the Chalk, and theſe into a delicate Mediocrity of Earth, that is capable of far greater Improvements afterwards than before; for as the Clay is tough and ſour, the Chalk, Lime and Sands ſhorten and ſweeten its Body; and ſo the Clay is no leſs beneficial to the Sand, by the reverſe Nature of each other's Body. This is true Melioration, and indeed it is pity more of this Sort of Huſbandry is not practiſed; if it was, greater Quantities of Grain and Graſs might be had, than we now generally have. Some indeed I have known of the better Sort of Huſbands, that have ſent their Carts ſeveral Miles for this valuable Dreſſing, when others that are more ignorant and ſlothful, will not fetch it,

tho' it is to be had even in the very Field where it is moſt wanted. Lime alſo is a moſt potent Mellower and Improver of cold, ſteril Earths, and eſpecially thoſe Sorts that are of the cold and wet Nature; becauſe this Sort of Manure is full of fiery and alkalous Salts, which ſo warm the Parts of any cold Soil, that it will cauſe the Grain which is ſowed therein to flouriſh and look with a dark Green in a cold wet Spring, when others yellow and die thro' the Extremity of Wet and Cold.

Horn-ſhavings, Hoofs, Coney-clippings and Rags are all great Mellowers of Earths, by warming and hollowing their Parts in the froſty or watry Seaſons, and oftentimes prevent the Ruin of whole Crops of Grain that are ſown in the Earths where theſe are mixed. They who live within ten or twenty Miles of *London*, have certainly a great Opportunity of buying Rabbits and Fowls Dung, which I am ſure are very great Succours to cold ſpewy Grounds, be they either Arable or Meadow: And I could not but regret to ſee ſuch Quantities thrown away there, that would be worth at leaſt Sixpence the Buſhel here *.

WHEAT.

* See farther Mr. *Switzer*'s Method of Improving Land by burnt Clay, *&c.*

WHEAT.

OLD red Lammas has a red Straw, and a red Ear: This is reckoned the beſt of Wheat, becauſe it makes the fineſt Flour. It anſwers better in the Vale and on rich Lands, as in *Bucks*, *Northamptonſhire*, &c. than in the Chiltern or high dry Grounds; becauſe it will be larger body'd, and commonly exceed all others in Bigneſs, when ſown in the beſt Grounds.

Yellow Lammas has a red Ear and white Straw, and is reckoned the ſecond beſt.

Pirky Wheat is the moſt convenient for our chiltern Lands, and will proſper, either in our ſtiff or gravelly Ground, ſells almoſt as well as Lammas, and is more hardy: This Wheat is the thinneſt ſkin'd of any, and is beſt ſold in Winter, becauſe it will part with its Flour eaſier than any other; and therefore the Wheat Buyers had rather buy the Lammas in Summer; for that it is thicker ſkin'd, and holds its Flour tougher, which in ſome meaſure is cured by lying all Winter in the Mow. This Wheat when ſown on gravelly Ground, often obtains ſuch a Colour, that it is hard to know it from

from Lammas, and frequently deceives the Buyer; it yields beſt in Ear, but won't return ſo much, nor ſo good Flour as Lammas. It is not ſo ſubject to Mildew as the two former, and is now more and more ſowed, for its returning above one Buſhel upon five more than the Lammas, and will proſper on our gravelly and whitiſh Grounds when the other fails.

Dugdale Wheat has a four-ſquare Ear, is a hardy Wheat, will grow on ſour Tilth the beſt of any; and therefore, ſome ſay, it's beſt to ſow on a Clover-Lay: But the Wheat-buyers don't care to deal in it, unleſs in a dear Time, becauſe it makes harſh Flour; ſo that it generally ſells for 2 *s.* in five Buſhel cheaper than others, and is moſtly uſed by the Country Bakers. This Wheat, by its long Beard, receives the Mildews, and ſo eſcapes that Damage which others are ſubject to; its Fibres keeping the Grain unhurt.

Theſe four Sorts are what they chiefly ſow in *Hertfordſhire*, where they run upon this Grain, as being a County beſt furniſhed of any others, with Water-Mills for grinding the ſame.

Wheat is the propereſt Grain to follow Clover of any, becauſe it will beſt bear with ſour Tilth; and now it's become almoſt a general Practice here to harrow in Wheat upon

upon only one ploughing up of Clover, thus: Plough up one Land at a time, ſow that, and fold it; then plough up another, and do the like, and ſo on till the Field is done, the larger the Fold the better, for the Field will be ſooner finiſhed; and by that Means the Sheep will be gone from thence, before the Wheat is much up. This Dreſſing with the Fold has ſeveral Conveniencies; it not only enriches the Land, but treads the Grain in, and ſo preſerves it from dying, and makes it ſtand faſt againſt the Winds. Now as to the proper Time of ſowing in this Manner, ſome do it from the Beginning of *Auguſt*, to the End of *October*, according to the Nature of the Land, on Clays and wet Grounds firſt; and on Gravels, Chalk, and dry Grounds later. Thoſe that have a great deal to do, ought to begin early, becauſe this Method is ſomething tedious; and the Quantity on broad Lands ſhould always be more than on Stitches, becauſe on them the Grain is more covered, when the other is more expoſed to the Beak and Feet of Fowls; ſo that it is generally adjuſted to three Buſhels an Acre on broad Lands, and two Buſhels and an half on Stitches. Others again dreſs with rotten Dung, by putting on about fifteen or twenty Load upon an Acre, immediately after the Wheat is ſown and harrowed in; and I take this to be much

pre-

preferable to the dunging about *Candlemas*, for this Reaſon: The Blade will make its Way thro' the Dung, if it be but tolerably ſpread before it ſpires; whereas by laying it on in the Spring, the Blade is cruſhed down, and ſo by the Heat of the Dung becomes yellow and dies. Others again will ſoot it quickly after ſowing, and ſome about *Candlemas:* The firſt, becauſe it helps to deſtroy the Worm, which often gnaws the Root of the Wheat, even to the almoſt Deſtruction of a Crop; and this red ſmall Worm is apt to be more than ordinary in the Ground after ſow'd Graſſes, and moſt in that after *Ray* Graſs, *St. Foine*, and leaſt after *Clover*; and that white Ground, Gravels, and light, are moſt ſubject to it. About *Berkhamſtead*, ſome dare not ſow Wheat on Ground that has laid down two Years with Clover, for fear of the Worm, and therefore inſtead of Wheat, ſow Oats; and they ſometimes are ſpoiled by the Worm in their Gravels, and gravelly Loams; but wet Grounds are not ſo ſubject to them. Sooting Wheat about *Candlemas* has been an ancient Practice; becauſe by that Time it was ſuppoſed the Danger of great Snows was moſtly over, which otherways might waſh it too haſtily from the Roots of the Grain, and ſo impoveriſh it the Summer following.

A

A great Farmer at *Dagnal* lying near *Dunſtable-Down*, ſowed a thirty-Acre Field with Wheat on one Ploughing, after Clover, and dreſs'd it with Soot about the Middle of *November*, ſaying, he believed forward Dreſſing beſt, becauſe it killed the Worms before they damaged the Roots of the Wheat: In the next Place, it brought the Wheat under ſuch a great Head, that it would be as good as half a Crop of Graſs, which would be ſuch a Subſiſtence to his Sheep, that they would return a ſecond Dreſſing by their Dung; but this Method, he ſaid, he dared not practiſe on any other Field he had, becauſe this was a clean Ground, and did not throw up Weeds like the reſt, being a chalky, gravelly Loam. Another old Farmer by him, ſaid, he dared not feed his Wheat down in a cold wet Soil; for that, if *May* ſhould be cold and wet, the Weed would get the ſtart of the Wheat, and ſo ſpoil the Crop. And this I have known to be true, and fatal to my next Neighbour, who fed down two of his Wheat Fields bare; the one was dreſs'd by a Fold directly on the Wheat, as ſoon as ſown on a Clover Lay, the other firſt fed, and then ſooted: But the Spring 1730, proving cold and wet, and the Ground being of that Nature too, he had but a poor Crop.

Another

Another Way is this: After Clover has been fed near two Summers, give it one Ploughing the Middle of *July*, or the Beginning of *Auguſt*; the longer the Clover is, when you plough it in, the better; then let it lie about a Fortnight to rot, and after ſome Rain has fell to mellow the Ground, harrow in your Wheat: If the Ground lie even, you only need harrow the Wheat in at once, but if uneven, twice in a Place long-ways, and once a-croſs; and when it is come up, roll it, and not before, becauſe by rolling it too ſoon, it will faſten the Ground, and hinder ſome of the Kernels from coming out: Thus rolling Wheat after it is come up, new-moulds it, faſtens the Root, and forwards the Growth of the Grain. And about *Harrow the Hill*, in their pebbly gravelly Ground, they plough in their ſecond Crop of Clover when it is fit to mow, on which they harrow in their Wheat, and ſay they find no Dreſſing like it. And on Gravels and other poor Soils, they commonly ſow thicker than on rich Loams, for this Reaſon, becauſe the Grain does not gather and branch on poor Land as on rich; ſo that no more, nor even ſo much comes up, as what you ſow. Likewiſe in white Grounds they ſow three Buſhels on an Acre, when brought under a Tilth; becauſe, ſay they, the Wind often in

a dry Time blows away the Earth from the Roots, and ſo kills much of the Wheat. Now in caſe the Clover is eat bare when you plough it up, I take it the beſt Way to harrow in the Wheat immediately, while the Ground is freſh and hollow, leſt the Buck Rains (as the Farmers call them) fall faſt and harden the Ground, and ſo make it more unfit to receive the Seed; but here I would be underſtood, only where the Clover is ſo eat or mowed, and not where it is ploughed in. And, 'tis certain, that Gravel in particular has a great Benefit from Clover, eſpecially when laid down two Years, for in that Time it obtains a Cruſt or Turf, which being turned over to the Bottom, lies and nouriſhes the Wheat, and will not be devoured by the hungry Gravel like other light Dreſſings: Then by folding on the ſame, the Sheep tread and tumble on it, ſo as to faſten the Earth and hinder the Worm, and by ſowing early, the Root enlarges it ſelf, and the Worm has not ſo much Power to deſtroy it; then leſs Seed will do, but later more. And in Gravels, I have heard of Wheat ſown at *Lady-Day* on a Tilth, was as forward as others at Harveſt, and a middling Crop. A Farmer alſo by me ſowed Wheat in Harveſt, and about *Michaelmas* following eat it down with Sheep, and folded upon it; this

this proved a great Crop. Again, the ſame Perſon ſowed Wheat after Clover, that had been mowed upon one Ploughing only, and it proved a good Crop; and for ſo doing I have heard this Reaſon aſſigned, that when the Clover is fed by Horſes in particular, they will eat the ſweet Parts of it, and the other that is ſour they meddle not with, but ſtale and dung on the ſame; ſo that when Wheat grows on this Ground, it generally comes in Tuſſocks and uneven, becauſe ſome Parts of the Field are dreſſed as aforeſaid, and others not: For indeed the Clover by ſtanding till it is fit to mow, gets a-head, which attracts and holds the nitrous Dews that enrich the Ground, cover it, and kill the Weeds; inſomuch, that I have often proved it to be the beſt Cleanſer of the Ground, and Killer of the Thiſtle, and many other Weeds, of any known Thing elſe. And after this Mowing of Clover, your Crop will come even, and the Wheat be all alike, and often produces a good Return; eſpecially if folded, ſooted, or Cart-dung'd at top, with the help of the Clover Roots, which alſo is a Sort of Dreſſing. And the next Neighbour to this Man, on a gravelly Soil, mowed his Clover in one Field, and fed another; by this he proved the mowed Field to return the beſt Crop of Wheat. But another Farmer ſaid, that if a Piece of

Clover

Clover be fed with large Cattle, it will be more hollow than that which is mowed, and therefore better for harrowing in of Wheat on one Ploughing. And this I have experienc'd on a gravelly Loam, where nine Horſes grazed on about four Acres and an Half ſome Time. The Reaſon I take to be this; that as the Stale and Dung of a Horſe is of a hot fiery Nature, and the Beaſt of the largeſt and heavieſt Size; they, by their Weight and Agility, ſo compreſs the Earth upon their Stale and Dung, that it cauſes a Fermentation in the Ground, which, like Yeaſt in Dough, ſwells and hollows it, eſpecially where Horſes graze to the laſt.

Another Way is, that of a Farmer at *Penly* that rents three hundred a Year, who a few Years ſince came out of *Berkſhire*; *viz.* He ſows a Field with Peas in Drills, which the Plough makes; and after two ſeveral Hoeings, the Ground is pretty well clear'd from Weeds. This fits it for the Reception of Wheat the *Michaelmas* following, when he dreſſes it over with Dung, and either ſows it on Stitches, or gives it one Ploughing, and harrows in Wheat on broad Land. This Way ſeldom fails of a good Crop, for Wheat loves to follow Peas; and when they are a good Crop, that not only kills the Weeds, but hollows, meliorates and enriches the Ground by their Roots, and the nitrous

Dews that their Haulm peculiarly contracts, beſides the great Cover it affords the Ground. But Dung either ploughed in before the Wheat is ſowed, or ſpread, or immediately after, or ſooted, is perfectly neceſſary.

Another Method is, after three Ploughings, that the Ground is got into a good Tilth. In the Morning a Gentleman by me ſent to the Kiln for ten Quarters of Stone-Lime, in two Carts, and ſhot each by it ſelf; then immediately three Men fetch'd Water and ſlack'd it to a Powder: which as ſoon as done, the Men took each a Pair of Gloves and his Seedcot, and ſowed it over the Ground as thin as they could (for it muſt be ſown hot;) this was on about three Acres, which brought the Ground under a Ferment, and about a Week after they ſowed the Wheat in Stitches as uſual. This is a good Way of Manuring on Clays and wet Loams, by Reaſon of the great Heat of the Lime in Oppoſition to the cold Ground, and the Plenty of Salts with which it abounds. This alſo ſuſtains and preſerves the Wheat under a good Head in the Spring, when the cold Chills of Froſt and Rain cut off and ſpoil others.

Another Way is, what is often done, as follows: A Farmer having a good Crop of Barley on broad Lands, gave it one Ploughing, and harrowed in Wheat, and dreſs'd it with

with Cart-dung on the Top, but he ſowed it too thick, even above three Buſhel on an Acre, and ſo had but an indifferent Crop, for it was hopper-ear'd; tho' the ſame Man told me, had he ſowed leſs Seed, it would have been a good Crop: This was on a loamy Gravel, and provided it is a dry Time when you plough and ſow, this Way may be ſucceſsful; but the beſt Way (if you have Time enough) is to give it two Ploughings, and ſow the Wheat on Stitches. This Way faſtens the Wheat in, whereas Wheat ſown on one Ploughing after Barley is hazardous, becauſe it is apt to ſtand looſe, and ſo liable to be hurt by Winds: And there is another Inconveniency in this Method; for by running one Crop on the Back of another, it is apt to ſour the Ground; which his did, and obliged him to chalk it after the Wheat was off, in order to ſweeten and hollow the Land.

Brining and Liming of WHEAT, BARLEY, *&c.*

BRining and Liming of Wheat was firſt invented for preventing its being ſmutty in the Ear; and notwithſtanding the following various Opinions and Methods are now amongſt the Farmers, they ſtill ſeem to be at a loſs to account for the true Cauſe of the Smuttineſs of Wheat: But the beſt Reaſon I have heard, is from the next Farmer to me, who has been a conſiderable one theſe thirty Years; he ſays, that it is the damaged, imperfect, light Kernels that produce ſmutty Ears; and theſe, as well as other Trumpery, ſwim on the Top of the Brine, by ſtirring the Wheat often about, and ſo are ſkimm'd off: And what defective Seeds may chance to eſcape, I preſume the Salt and Lime ſo deſtroy the ſmutty Part of them, and invigorate the better Part, as to hinder any Prejudice from them afterwards. And therefore, the uſual Saying, That if a Man ſows ſmutty Seed, he'll be ſure to have Smut again, I am of Opinion, is not certain. To prove which, the ſame Farmer happening to buy a ſmutty Crop of Wheat as it ſtood on the Ground, ventured to ſow the ſame for the next Year's Crop, and had as ſound Wheat at Harveſt as ever he had in his Life; but

but he obſerved, that the Seed that produced the ſmutty Crop, was not brined and ſkimm'd, but that he ſowed was.

A Farmer that uſed to ſow about twelve Acres of Ground, bought half a Buſhel of Salt, Part of which he put Water to, till an Egg ſwam; then the Evening before, he put the Wheat that was to be ſown on the Morrow (about two Buſhels and a Peck) into a Tub to the Brine (in which is a Tap and Tap-Wips) and lets it lie an Hour, and ſkims the Rubbiſh off, then draws off the Brine, and lets it lie all Night on the Ground in a broad Heap. The next Morning he limes, and ſows the Wheat; this he ſays ſurely prevents all Smut, when Liming and Staling can't be depended on.

Another makes his Brine not ſo ſtrong as that above by a fourth Part, lets his Wheat lie in it all Day, and takes it out at Night, which he ſpreads on the Ground, and limes it next Morning.

A Farmer told me, that they made the Brine that an Egg would ſwim, and let Wheat lie in it all Night, and ſowed it the next Morning; but the Wheat almoſt peeled, and there was hardly any at Harveſt. I ſuppoſe this Brine was made too ſtrong; for I never underſtood, that Wheat ſuffered in this Manner by any other than him; for this is reckoned to be the good, ſure, old

Way of managing the Seed, by letting it lie all Night in Brine that will juſt ſwim an Egg, and the next Morning to ſift Lime over it, and ſow it. But one informed me, he committed a great Miſtake in this Way; for having expended the greateſt Part of his Brine, to make it good on a ſudden, he threw in ſome Chamber-lye, which ſo flea'd and ſtript the Skin of his Wheat, that it ſpoil'd the Crop, and he had not above twenty Ears on half an Acre of Land: This Perſon ſays, he never knew Brine alone do this.

One alſo ſays, that he only puts Urine on the Seed, about enough to juſt wet it all, then ſifts Lime on it, and ſows directly; by this he ſays, he never has ſmutty Wheat. He ſays farther, that ſome have ſmutty Wheat, by uſing old powder'd Lime, inſtead of Stone Lime; and he is of Opinion, that there is more Security in the Lime than the Stale.

Another Farmer of about forty Years Experience, has left off Brining, and follows this Way as beſt: He threw five Buſhels of Wheat on the Ground, and then run one large Garden-Pot of black Ditch-Water, and as much Urine mix'd together, over the ſame; then ſifted about a Peck of Lime, and mix'd it with the Shovel, and ſowed it on about two Acres of Clover-Lay, thus: Firſt, on the rough Ground as the Plough left it in broad Lands, half the Seed, which he

he harrowed once in a Place; then he ſowed the other Half, and harrowed the ſame Way once in a Place; then he harrowed it overthwart or acroſs, twice in a Place.

There is a certain Author recommends this: Pour into quick and unſlacked Lime, as much Water as ſufficeth to make it ſwim above the Lime, and unto ten Pounds of the ſaid Water poured off, mix one Pound of *Aqua Vitæ*; and in that Liquor ſteep or ſoak Wheat or Corn twenty-four Hours; which being dried in the Sun, or in the Air, ſteep again in the ſaid Liquor twenty-four Hours more, and do it likewiſe a third Time. Afterwards ſow them at great Diſtances one from another, above the Diſtance of a Foot between each Grain; ſo one Grain will produce thirty, forty, and fifty Ears, and thoſe very fruitful, with the Stalk equalling the Stature of a Man in Height.

The next Account is taken out of the *Philoſophical Tranſactions.*

On the 22d of *March* was ſteep'd,

A Pea, Barley, and Wheat, in *Brimſtone* Water.

The ſame Kind in *Allom* Water.

Ditto in old Diſſolution of *Sal Tar.*

Ditto in *Cap. Mort.* of *Sal Armo.* diſſolved in Urine.

Ditto in the Diſſolution of Salt of Walls.

The ſame in the Diſſolution of *Nitre.*

Ditto in Urine.

After the ſteeping them five Days or Nights, he ſet them in a good Garden Soil, againſt a Wall full expoſed to the Sun, on the 27th of the ſame Month, after a rainy Night, with a Pea, Wheat, Barley, and Oat unſteep'd.

On the 10th of *April*, the Pea, Barley, and Wheat ſteep'd in the *Brimſtone* Water, all were up together.

The Pea in *Allom* Water ſwell'd, but did not ſprout; but the others ſteep'd in the ſame were above Ground.

The Pea in *Solut.* of *Sal Tart.* half came up; the Wheat ſcarce ſprouted, but the Barley and Oat quite up.

The Grains ſteep'd in *Cap. Mort.* of *Sal Armoniac* diſſolved in Urine, were all up together; as alſo the others that were ſteeped in Solution of Salt of Walls. The Pea and Wheat in the Diſſolution of *Nitre* were about half up, the Barley and Oat quite up.

The Barley and Oat ſteep'd in Urine, were come up, but the Pea and Wheat ſcarce ſprouted.

From whence the Gentleman that firſt made the Trial, who was Monſ. *de la Prime*, obſerves, that *Allom* Water is not agreeable to the Nature of Peas, and retards their Growth; becauſe the Pea unſteep'd was up as ſoon as any of the other Grains: And that Salt of *Tartar* is not friendly to Peas or Wheat, but is concordant to the Nature of

Oats

Oats and Barley. He further obſerves, that the Wheat, Barley, and Oat unſteep'd, were up as ſoon as any of the reſt; ſo that he concludes, ſuch Brines as he uſed, rather retarded ſome of the Grains, ſteep'd in them, in point of Quickneſs of Growth, than brought them forward: But then he remarks, that three Spires of the Barley which he left to grow, at a Foot or two Foot Diſtance, increaſed ſo exceedingly, that one had 60, another 65, and the other 67 Stalks a-piece from their ſingle Grain or Root, with every one an Ear on, and about 40, or more, Grains a-piece on them.

Digby mentions a Plant of Barley, that by keeping firſt the Grain in Salt-Petre, diſſolved in Water, and keeping the Plant watered with the ſame Kind of Mixture, brought forth 249 Stalks, and above 18000 Grains.

A prepared Liquor to ſteep BARLEY, *&c. for* SOWING.

TAKE a Quantity of the Grain you are to ſow, a Buſhel, more or leſs, and boil it in a Copper (to a Buſhel put five Pails-full of Water) till the Grain burſts, and the Water thereby becomes impregnated with the eſſential Salt of ſuch Grain; ſtrain your Liquor, and give the Corn to the Poultry, that

that there may be no Waſte. While the Liquor is hot, put three Pounds of *Nitre*, that it may diſſolve, and add four or five Pails-full of Water which drains from the Dunghill, or Urine of any Sort. And in this prepared Liquor, ſteep the Grain about twenty-four Hours. Let the Liquor be four Inches above the Corn in the Fat, becauſe the Corn will ſwell and imbibe it. Then take the Grain, and let it dry in the Shade, or ſift Lime over it, which will dry it ſooner, and ſow one Third leſs than uſual, and you will aſſuredly find the Benefit by twenty-fold; I having actually tried it with Barley, and had commonly thirty Ears from one Root. The Liquor that is left, will ſerve again with freſh Addition, or is admirable to water a Garden. About three Pounds of *Nitre*, as above, is ſufficient for as much as will ſow an Acre or more; and what is left is ſtill the ſtronger by being the Ground-work of the next Addition of *Nitre*. You muſt pour your prepared Liquor warm upon the Corn, and ſtop all as cloſe as you can, for that cauſes the Salts to be put in Motion. Imbibe the Corn one Evening, and take it out to dry the next, and by Morning it will be fit to ſow; and at the ſame Time you may prepare more Corn for the next Day, and ſo on till the Seaſon is over.

The Excellency of this Receipt is obvious in ſeveral Caſes. 1. It ſaves Seed. 2. It

in

in ſome Meaſure ſupplies the Defect of full dreſſing the Land, by the Seed being full of Riches when ſown. 3. It produces a greater Quantity than ordinary. Laſtly, By this Steeping, the Grain will make its Way out of the Ground, if Drought ſhould ſucceed; whereas that ſown dry, and eſpecially that which lies neareſt the Surface, will continue ſometimes till *Midſummer*, in a dry Summer, before it grows, and thereby often occaſions the Loſs of great Part of the Crop; for when one Part is ripe, the other is green, at Harveſt, which was the very Caſe almoſt all over the Nation this laſt Summer 1731; and I was ſo fortunate as to ſow, for the firſt Time, the Barley after this Receipt, which brought my Crop up more even than my Neighbours, to the Admiration of the Beholders, and had more on an Acre than ever I had; I believe I may ſay, as much again.

A great Farmer by me urines his Wheat but once in three Years; alledging, that as he always ſows his own Seed, he thinks it ſufficiently often to retrieve it from any Degeneracy that may accrue to it, by ſowing it naked and unbrined two Years together.

BARLEY.

THIS Grain is much ſowed in *Hertfordſhire*, and chiefly about *Baldock*, *Hitchen*, *Royſton* and *Ware*, by Reaſon of the great

great Conveniency of Water-Carriage from the latter to *London*; and alſo for the Swell which the Water cauſes in the Meaſure. There are but two Sorts generally ſown here, that is, the common Barley, and the rath-ripe Barley, which latter commonly is ripe with the Wheat, and equally good with the other; and moſt of our curious Farmers hereabouts ſend their Waggons to *Fulham* to buy the ſame every third Year, it declining its Virtue after twice ſowing.

Barley is a Grain that delights in a fine Tilth and a rich Soil, and will do as well with three Buſhels on an Acre, on ſuch Ground, as four Buſhels on a rough and ſour Soil. With this Grain many People ſow Clover, which generally gets a-head, and keeps down the Barley, even to the Loſs of ſometimes half a Crop, eſpecially in a wet Seaſon. Now the ſafeſt Way, that I have experienced, is to ſow Clover on Barley, about a Fortnight or three Weeks after, and roll it in about twelve or ſixteen Pounds to an Acre, according as the Ground is more or leſs in Heart, and of a Nature for it; for by this Means ſome Part of the ſevere Weather is paſt, and the Clover ſomewhat ſheltered from the Froſt and Sun. At *Dagnal* a Man that has but one Acre of Land, has ſown it ſeven Years together, and never leſs than five Quarters and an half of Barley

grew

grew on the ſame. Another that folded on his Turnips, had nine Quarters on five Roods of gravelly, loamy Ground.

To make Ground ready for Barley, after Wheat, I ploughed the Wheat-Stitch into four-thorough'd Lands, preſently after Harveſt; let it lie all Winter, and in *January* bouted it up: In *March* I bouted it down again, and harrowed it, then ploughed into broad Lands, and ſowed my Barley; this was on a wet Loam, and it proved a Tilth as fine as a Garden, being a dry *March.*

Again, to ſow Barley after Turnips, the Way that is practiſed here is to run a Row of Hurdles croſs a Field, the Out-ſide of which may feed as many Sheep ſo fat as your Judgment will allow of; then every Night fold as many of your Store-Sheep on the Turnips pecked up as they will eat by Morning: This continue till the Field is finiſhed; then give it one Ploughing, and harrow in your Barley. By this Method vaſt Crops have been obtained.

Some give the Ground two Ploughings, after the Turnips are eaten off, as believing it beſt: In this Caſe the firſt ſhould be as ſhallow as poſſible, and the ſecond a little deeper, which turns up again the Sheeps Dung for the Barley to root in. But there often happens a great Misfortune by ſowing Turnips too early, in conſequence of which they ſoon become old; and this obliges the

Farmer

Farmer to eat them off betimes in the Winter; for by the Length of Time between that and Sowing, and the frequent Rains together, much of the Quinteſſence of the Sheeps Dung is loſt, and ſo deceives the Owner's Expectation; ſo that the beſt Cure for this latter Misfortune, is to plough the Ground as ſhallow as may be, as ſoon as the Turnips are eaten off, and the ſecond when you ſow as aboveſaid.

A Farmer that ſowed his white Ground with Barley, the latter End of *January*, had the beſt Crop in the Neighbourhood, for that he enjoyed the Rains, when theirs were overtaken with a dry Summer, and Miſt. Another ſowed his Barley on a Gravel, and loſt, he believed, 60 *l.* by being too late with his Seed, and ſo miſſed the Rains, and thereby his Crop. A good Time in this County is reckoned the Beginning of *March*.

Barley, by ſome, is ſowed to the Quantity of five Buſhels on an Acre; and, as I heard one ſay, it ought to be ſo thick, that only an Awl could juſt be put between: For this is not like Wheat, which has a long Time to gather; but both this and Oats being ſown on the Edge of warm Weather, muſt have Head enough to ſhelter its Root from the too powerful Influence of the Sun, or elſe ſuffer by Heat and Drought: Which plainly ſhows the Excellency of this new Method of ſteeping Barley, that cauſes it to

get

get a-head in a little Time, and powerfully helps it forward even in the moſt dry Weather: And in a cold wet Time in the Spring, this Way is moſt ſerviceable, becauſe the ſaline Particles of the Ingredients being of a warm Nature, enable it much better to withſtand thoſe Severities.

Some there are that roll their Barley when they ſow it; but that is wrong, for by rolling it after it is up, it is new earthed, and grows the faſter: Although too late Rolling is juſtly condemned; becauſe it is apt to break the Blade, when it is too long.

After a Crop of Barley was got off, the Ground (which a little before had been an Orchard) was ploughed up, and Turnips ſowed thereon; which proved an extraordinary good Crop. Others have ſown Beans amongſt their Barley, in order to keep them up, in caſe it ſhould be too rank; but this has its Inconveniency: For the Beans are ſeldom ſo ripe and dry as the Barley when it is mowed, therefore is apt to damp it; ſo that it muſt be longer in the Mow before it is thraſhed.

Barley is commonly up in a Week after it is ſown, and it is a late Practice about us to carry it to the Mill, and have it juſt broke for our Plough-Horſes: And it is the Opinion of ſeveral that have tried it as well as myſelf, that it is more hearty than Oats. Their Price of grinding at the Water-Mill, at

Great

Great Barkhamſtead, is 3 *d. per* Buſhel, and take no Toll. The Conveniency of this, is when Barley is about 14 *s. per* Quarter.

Amongſt the ſeveral Methods that I have practiſed in dreſſing of Barley-Ground, I do not approve of laying long Litter, or Dung, on the Top of new-ſown Barley, on no Sort of Ground; for that if dry Weather ſucceeds, then it lies, heats, and parches the Roots; and if wet, it has not Time to waſh in and rot, becauſe it lies not a great while; and when the Barley is draft-raked, Part of the Dung rakes up with it: So that I conclude, it is beſt ploughed in with Barley, and there, between the Mold, it will retain the Wet, and rot quickly. But I do not diſallow it on Wheat, for there it's right, by Reaſon it has a longer Time to rot and waſh in, and then there is no Occaſion for the Rake.

Alſo Pigeons-Dung, Hens-Dung, and Rabbits-Dung, are harrowed in with the Barley, becauſe it has been proved to be much better than Sowing, and leaves them on the Top of the Ground, where they will remain if dry Weather ſucceed; whereas, by incorporating them with the Earth and Seed, the latter has a more immediate Benefit of their Salts.

OATS.

OATS are a very profitable and neceſſary Grain in moſt Parts of *England*; they are the principal Grain Horſes affect, and commended for that Uſe above any other, being of an opening Nature, and ſweet; other Grains being apt to ſtop, which is injurious to labouring and travelling Horſes; although, on the other Hand, Oats newly houſed and threſhed before they have ſweated in the Mow, or be otherwiſe thoroughly dried, are too laxative. On ſuch Lands, as by Reaſon of the Cold, no other Grain will thrive, yet Oats grow there plentifully; as many Places in *Wales* and *Derbyſhire* can witneſs. There is no Ground too rich, nor too poor, too hot, nor too cold for them; they ſpeed better than other Grain in a wet Harveſt, the Straw and Huſks being of ſo dry a Nature, that although they are houſed wet, yet will they not heat in the Mow, nor become mouldy, as other Grains uſually do; but they are ſuch a Pealer of the Ground, that I have heard a Gentleman ſay, who owned a fine Eſtate in *Bucks*, that he would never ſuffer an Oat to grow on his Ground, for that very Reaſon; and of the two, the white Oat is the greater Impoveriſher. The beſt Seaſon for ploughing of Wheat-ſtubble up, or other Ground for them, is in

January; and for ſowing and harrowing them on the ſame broad Lands, is in *February* and *March*. The white Oat is the beſt and heavieſt Grain, and has this good Property belonging to it, that in caſe your Pea, Bean, or Barley-Crop ſhould miſs, then this Sort of Oat will often do very well, though ſown in *April* and *May*. And for this Reaſon I have known this Sort of Oat kept by way of Reſerve, in order to ſow after the before-mentioned, if they ſhould fail. Again, this white Oat is preferable to the other, on account of its large and more ſpreading Blades, with which they cover and ſhelter their Roots, and the Ground about them; ſo that Clover ſown amongſt theſe, has much the better Chance of taking the Ground, and becoming a good Crop. The Meal of them makes good Bread, and is much uſed for that Purpoſe in many Places, and alſo good Pottage, and ſeveral other Meſſes, and is in great Requeſt towards *Scotland* and *Wales*. Oaten Malt alſo makes good Beer. But the black Oat makes the beſt Oat-meal.

I am informed there is a new Sort of Oat growing like unto whole Oat-meal, and is in great Requeſt about *Durham*, where they have been yearly ſown above theſe fifty Years; after they are ſown, they come up like Oats, but with a ſmaller Blade; when they are ripe upon the Ground, they are like Oats, and not eaſily diſtinguiſhable from them;

them; the greateſt Difference between them being, that in the Thraſhing, theſe came out of the Huſks clean, like unto *Dantzick* Rye, which this very much reſembles both in Shape and Bigneſs; and need not be carried to the Mill, as other Oats, to be made into Oat-meal or Grouts. The Taſte of them is more ſweet and fleſhy than Grouts made of common Oats. They are moſt naturally boiled, as Rice in Milk. An Acre doth not yield ſo many Buſhels of theſe, as of common Oats, by Reaſon the Grain is ſmall and naked, and ſo near in Meaſure, that what is wanting in Meaſure, is ſupplied in the Value. The Huſbandry uſed about them is the ſame as with other Oats.

Bullimon is Oats and Peas, or Oats, Peas, and Vetches, or Peas harrowed in together; which produces good Horſe-Meat, and being a mixed Grain, the Crop becomes more certain. The Quantity together is about four Buſhels on an Acre. Some ſow Oats and Beans, which does well, for they are eaſily ſeparated after being thraſhed.

Oats are a Grain that Poultry alſo love to feed on, and it makes them lay ſtore of Eggs above what other Grain doth. The Land on which Oats is to be ſown, needs only one Ploughing, into broad Lands, and harrowed in; but in caſe Clover is to be ſown with them, the Ground ought to be brought into a fine Tilth by two or three Ploughings.

The Quantity of Seed ſhould be three Buſhels, if Clover is ſowed amongſt them, and four without it: And I think the beſt Way is to ſow the Clover, or other Graſs-Seeds, a Fortnight or three Weeks after the Oats; *i. e.* when you roll them; for the Benefit is the ſame with this Grain as with Barley, or Peas. Becauſe by this Method it will come up later than the Oats, which by conſequence will keep it under; whereas in a dripping Year, I have known the Clover grow ſo faſt as to keep under the Oats, Barley, or Peas.

BUCK, BRANK, *or* FRENCH-WHEAT,

IS a Grain exceeding advantageous on barren, ſandy Ground. It is much ſown in *Surrey*; much leſs ſows an Acre of this Grain than of any other, even one Buſhel has been found to be ſufficient. It is uſually ſown as Barley, but later; it is alſo ripe late, and yields a very great Encreaſe, and is excellent Food for Swine, Poultry, *&c.* After it is mow'd, it muſt lie ſeveral Days, till the Stalks be withered, before it be houſed, neither is there any Danger of the Seed falling from it; nor doth it ſuffer much by Wet.

Buck-Wheat makes as good Lay for Wheat as any other Grain or Pulſe, eſpecially if it be not mowed, but ploughed in. But the

beſt

beſt Way is, when it is in Graſs, before it bloſſom, to feed it with Milch-Cows, who will tread it down, and make an excellent Lay for Wheat. Moreover, poor Cows will give great ſtore of Milk, it happening at that Seaſon when uſually other Graſſes are burnt up, in a dry hot Summer; ſo have you a double Advantage by your Buck-Wheat.

A Gentleman in *Suſſex* ſaid, he ſowed the Buck-Wheat the *May* before he intended to lay down his Land with Lucern, which Buck-Wheat he ploughed in, and the next Year he had ſuch a Crop of Lucern that he was amazed at it. Vetches, and even Turnips, no doubt, ſowed with this View, and ploughed in, would do extremely well. And as *French* Wheat will grow on the pooreſt Land you have, a better Piece of Huſbandry cannot be; for it is the greateſt Improver of poor ſandy Ground, and the beſt Preparation for Lucern-Graſs, which loves to be ſown on this Sort of Ground.

This *French* Wheat, when ſowed to dreſs the Ground, muſt have a fine Tilth, and be ſown in *May*; and when it is knee-high, about the firſt of *Auguſt*, and in full Bloom, roll it well, then plough it in, in broad Lands. When this is done, there will ſome appear above Ground, between the Furrows that the Plough did not cover. This muſt be ſtruck down with an Iron Inſtrument, like a Paddle or Paring-ſhovel, and ſo let it lie

three Weeks or a Month. In this Time it will ſmoak, ſo as to be ſeen a great Way, like a Dung-hill; and as it is a green Dreſſing, will quickly rot in the Ground. The next Thing is to harrow it; then plough and ſow Wheat in broad Lands, under thorough, as the Vale-Men do. This Way will dreſs the Ground for three Years, when Clover, Thetches or Turnips ploughed in, will but for half the Time.

It is generally ſold at the Seed-ſhops, in *London*, for about half a Crown a Buſhel; of a triangular Shape, like the Kernel of Beech-Maſt, and about half its Bigneſs.

Buck-Wheat either ground and made into Paſte, or whole, (the former Way is better) is the beſt ſingle Fatner of Fowl, and with this Food they will lay more Eggs than with any other Sort of Grain; Hemp-Seed, as they ſay, giving an ill Savour to the Fleſh of the Bird; but this only upon Report: If it prove otherwiſe, it would be one great Encouragement to the planting and ſowing of Hemp, that the Seed ſhould be of ſo great Uſe.

Objection. It is ſaid to rot Horſes, Cows, and other Beaſts, if fed too long on it. Otherways, it is ſaid to be one of the quickeſt Fatners that is.

Anſwer. If given for ſome Time conſtantly, and in large Quantities, it may be of ill Conſequence, and rot the Beaſt; but this I

ſhould

ſhould think might be prevented by giving other Meat amongſt it, or ſometimes one Sort, and ſometimes another; as Brewers do by their Grains, mix ſometimes Salt with them, to prevent their rotting the Horſe; and alſo by mixing Bran with them.

RYE,

IS a Grain generally known, and delights in a dry warm Land, and will grow in moſt Sorts of Land, ſo that the Earth be well tempered and looſe; it needeth not ſo rich a Ground, nor ſo much Care nor Coſt beſtowed thereon, as doth the Wheat, only it muſt be ſown in a dry Time, for Rain ſoon drowns it. They uſually ſay a Shower of Rain will drown it in the Hopper, Wet is ſo great an Enemy to it; therefore dry, gravelly, or warm Land is uſually termed Rye-Land, being more proper for that than for any other Sort of Grain. It is quick of Growth, ſoon up after it is ſown, and ſooner in the Ear, uſually in *April*, and alſo ſooner ripe than other Grain; yet, in ſome Places it is uſual to ſow Wheat and Rye mixed together: But the Rye muſt needs be ripe before the Wheat; neither can I diſcover where a greater Advantage lies in ſowing them together, than in ſowing them apart. The principal Seaſon of ſowing Rye is in Autumn, about *September*, and after, accord-

ing as the Seaſon permits, and the Nature of the Ground requires. And in this Country it is frequently ſown at this Time, for the feeding of Sheep early in the Spring.

Rye, its general Uſe is for Bread, either of itſelf, or mixed with Wheat; it makes Bread moiſt, and gives it a very pleaſant Taſte to moſt Appetites. It is alſo reported, that it yields great Store of Spirits, or *Aqua-vitæ*.

PEAS and BEANS.

OF all Pulſes that are ſown or propagated, Peas claim the Pre-eminence, not only for their general Uſe, both by Sea and Land, both for Man and Horſe, but alſo for the Diverſity of their Kinds almoſt for any Sort of Land; and for every Seaſon, a different Sort of Peas; ſome are white, ſome grey, green, *&c.* not neceſſary here to be enumerated, every underſtanding Huſbandman knowing what Sorts beſt thrive with his Land. In a ſtiff fertile Ground they yield a very conſiderable Crop, without much frequent Fallowings, as other Grain require, and deſtroy the Weeds, and fit and prepare the Land for an After-Crop; being an Improver, and not an Impoveriſher of Land, as Huſbandmen uſually obſerve. Thus far *Worlidge* has wrote on Peas; but how far ſhort of the true Practical Method, will appear by what follows, *viz.*

Here

Here we ſow the Maple-Pea, which is a large Pea of a Hazle Colour, and a ſweetiſh Taſte, much loved by the Swine, and ſeveral of our Farmers keep wholly to this Sort, as finding by it the beſt Succeſs. They are often ſowed on the Wheat-ſtitch, by ſtraining them in after the Plough, about the firſt of *March*, and in Quantity about four Buſhels to an Acre, and I have found them to grow very well on both gravelly and loamy Grounds. Others ſow the *Windſor* and Horn Grey-Peas, as finding them to be the moſt hardy: Therefore ſow them in *January* and *February*, nay ſometimes at *Chriſtmas*, upon your chalky Ground. Others again ſow the *Dutch* Admiral-Pea, which is a large whitiſh Pea, and ſucceeds well, chiefly in moiſt Ground. But nothing is ſo much a Friend to the Pea as Chalk; and at *Kenſworth*, by *Dunſtable*, a few Years ſince, they knew nothing of the Benefit of it as to Peas, till a Farmer from another Place came among them, went to Chalking, and kept a great Flock of Sheep at the ſame Time, by which he obtained vaſt Crops; and his Method is now purſued, for it keeps the Roots dry and warm, and prevents the Ground binding them in; which often is done, eſpecially when great Rains preſently ſucceed their Sowing, and that particularly on Gravels; and for that Reaſon we are obliged to ſow the Peas ſo much the ſhallower.

A great Farmer by me moſtly gives his Ground two Ploughings, if not three, for Peas, and ſays, he finds this the beſt Way; *i. e.* he firſt bouted the Wheat-ſtitch, afterwards back-bouted it, and harrowed down. Upon this Ground he ſowed half his Peas, by broad Caſting, and ploughed them in under thorough. When this was done, he ſowed the other Half upon the Ground, and harrowed them in. This is allowed to be the ſureſt Way; for if one miſſes, the other hits. Again, by bringing the Earth into a Tilth, the Ground is looſened to let them out, the Weeds are ſome killed, and moſt checked, and the Peas, thereby growing the faſter, overcome them, and keep the Ground moiſt and hollow, and in a Tilth, againſt the next Wheat Crop; which often is ſown as ſoon as the Peas are off. And indeed, where there happens to be a good Crop of Peas, there is no fear of a good Crop of Wheat after, if the Ground be but dreſſed. This Farmer, they ſay, had about 100 *l.* with his Wife, and laid it out moſtly in chalking the Ground, and, though ſeveral Years ago, has great Crops every Year.

Some get a forward Crop by ſowing the *Eſſex Reading*-Pea, and ſelling them in Peaſcods, and then ſow Turnips; after that, Wheat, or Barley: A very good Way, and is more and more in Practice about us, on the warm and dry Grounds.

But

But above all Methods, I know of none that comes up to that made uſe of by a *Penly* Farmer, who rents about 300 *l.* a Year, and was the firſt that brought the Method into theſe Parts, from *Berkſhire.* The Way I have practiſed, and got after the Rate of nine Buſhels for ſowing one of blue Peas in a moiſt, flat, loamy Ground. Firſt, they plough the Wheat-ſtitch acroſs, into large Furrows; afterwards, about *Chriſtmas*, they harrow it down; then, in the Spring, they plough it the contrary Way, into broad Lands; and as they plough it, at about two or three Foot Diſtance, a Man follows, and ſtrains in Peas, in Furrows that the Plough makes, which is covered after by the Harrows; ſo that here are but two Ploughings, in all, after Wheat. Then, when the Peas are up, about four Inches, hoe for the firſt Time; and when about ten Inches high, hoe them a ſecond Time, which two Hoeings are performed here for 2 *s.* 6 *d.* each Time. By this Way your Pea-roots are ſecured againſt the Summer Drought, the Ground kept hollow and in a pure Tilth, and the Weeds ſo deſtroyed, that it is ready for Wheat, at the next Seaſon, beſides having generally vaſt Crops when your Neighbours fall ſhort. His Peas are call'd by the Name of Poplar, that he generally ſows in the drilling Way, and are of a large Sort. Another, of late, ſows Horſe-Beans and Horn Grey-Peas,

mixed together in Drills, and hoes them; and I am of Opinion, that any Sort of Pea will beſt increaſe in this Faſhion.

Horſe-Beans are generally ſown about *Candlemas-Day*, either in Stitches or broad Lands, on one Ploughing, and harrowed in, and theſe chiefly on the wettiſh Loams; and being more hardy than Peas, ſucceed where Peas will not, and are often ſown together, becauſe the Beans will help to keep up the Peas.

Peas are more ſown in the Vale of *Ayleſbury* than in this our Chiltern Country, becauſe their Land being a black clayey Mould, produces vaſt Crops, which they generally ſow for their *Lent* Grain, all under thorough, and harrow down as they do their Wheat: And alſo for the great Conveniency they enjoy in ſubſiſting their Sheep in ſome Meaſure with the Weeds that grow among them, which the Sheep will eat and cull, without Prejudice to the Stalk, till they bloſſom; but the Dolphin-Fly I have known one Year almoſt deſtroy them, and another Enemy as bad, is the hairy Bind, which ſo twiſts about the Stalk, as to hinder it from growing. This Horſe-Bean will not do in Sands, or Gravels, nor in light Grounds. They are alſo proper to be ſown on Land, at the firſt breaking up, where you intend to ſow afterwards other Grain; becauſe they deſtroy the Weeds, and cauſe

the

the Ground to be hollow, and ſo fit it for following Crops of other Grain; and are on ſuch Land, in ſome Parts, ſet by poor People, which ſaves Seed, and they come the truer. This Sort of Improvement belongs to all Cod-Ware.

The Citch and Vetch, whereof there are ſeveral Sorts, but two of moſt principal Note, the Winter and the Summer Vetch, though one ſown before Winter, and abiding the Extremity of the Weather; the other not ſo hardy, and ſown in the Spring; are much ſown in ſome Places, to a very conſiderable Advantage. They are good, ſtrong and nouriſhing Food for Cattle, either given in Straw, or without, and are propagated after the Manner of Peas.

Tares are not uſual in moſt Places of *England*; but where they are ſown, they as much benefit the Land as other Pulſes, and are to be preferred for Fodder, and feeding of Pigeons.

A certain Author affirms, that if Peas be taken and ſteeped in as much Water as will cover them, till they ſwell and come, and be ſo ordered as Barley is for Malting, only with this Difference, that for this Work, if they ſprout twice as much as Barley doth in Malting, it is the better; the Peas thus ſprouted, if beaten ſmall, which is eaſily done, they being ſo tender, put into a Veſſel, and ſtop'd with a Bung and a Rag, as

uſual,

uſual, theſe will ferment, and after two, three, or four Months, if diſtilled, will really perform what before was promiſed; and of one Buſhel of Peas may be extracted two Gallons of *Aqua-vitæ*, as ſtrong as Anniſeed-Water, uſually ſold in *London.* And thus a Spirit may be got from Rye, Oats, and ſuch inferior Grain; alſo Roots, Berries, Seeds, *&c.* which are not oily. Alſo, that the Spirit, or *Aqua-vitæ*, made out of Grain not dried into Malt, is more pleaſant than other; but I confeſs, I am not a Judge of the Certainty hereof. Beans are now more in Requeſt in the Chiltern, than ever; for in the wet Loam where Peas generally fail by the Water and Cold, there Beans will better anſwer. Beans are ſown on the Wheat-ſtitch on only one Ploughing; for if the Ground was oftner ploughed, the Bean would be apt to fall; and ſometimes they are ſown in broad Lands, on one Ploughing: And my Neighbour had ſuch a Crop, on a Wheat-ſtitch, on a loamy Gravel, that he was forced to reap and bind them, but his Ground was in very good Heart. Now in the Vale, where there are no Stones, they mow them very cloſe, and after the Mower a Man follows and wads them; but we in the Chiltern cannot mow them ſo cloſe by Reaſon of the Stones: Therefore in a dry Year, when the Beans are ſhort, they have the Advantage of us. Neither Wet nor Cold hurts us in the Chiltern, as

to our Beans, unleſs a very ſevere Froſt happens, when by the former, they often ſuffer in the Vale, becauſe they lie ſo low to us. Now, beſides the hale, hell, or hairy Bind, as ſome call it, that often ſpoils both Bean and Pea, both in Chiltern and Vale; there are ſeveral others that are fatal or pernicious, as that called here Langley-Beef. This I cannot ſay will utterly deſtroy the Pea-Crop, but will ſo cripple it, as not to be a quarter Value. It comes up thick, and blows like a Sow-Thiſtle, that when the Peas are mowed, or hooked, the Weed generally diſturbs the Workmen with its Flew, or Down, that they are forced to drink much; and what is very particular, this Weed comes perhaps but once in a Man's Life, and ſometimes often, ſo that the Farmers are at a Loſs to account for it; but it is remarkable, that it never hurts the Bean. Again, another Weed is the Curlock, which when thick, often deſtroys the Crop of Peas, and this takes them in a Tilth, or not in a Tilth; and ſome ſay, it is cauſed by Seed being mixed among Turnip-Seed: But this hurts not the Bean.

Another is a Weed called by us Cat's-Tail, with a blue Flower. This comes but once in three Years, roots like a Dock, and runs deep, which hurts all Grain it runs amongſt, but is hardly any where except in light, gravelly, chalky Grounds, as about

Dunſta-

Dunſtable, &c. Here indeed we have a green Sort, but does little Harm.

Beans are ſaid to deſtroy the Twitch-Graſs even of themſelves; but I cannot ſay they are proper to ſow Clover amongſt, becauſe the Sheep and Lambs, that feed among them, even till the Bloſſom comes, may poſſibly pull up the young Clover, and ſo ſpoil it; nor may they be ſown on a Tilth, for the Reaſons aforeſaid.

A Farmer ſowed five Buſhels of Beans amongſt his Peas and Thetches on one Ploughing of the Wheat-ſtitch, in a very dry Time; the Peas and Thetches fail'd, but the Beans ſtood it, and he had twenty Load, or an hundred Buſhels on three Acres of Ground. This happen'd on a loamy Soil.

Winter-Thetches are ſown about *Michaelmas*, in warm, light gravelly Chalk or Sand, and by their great Burthen of Haulm and Grain, they ſo kill the Weeds, and ſweeten and hollow the Earth, as to make it a fine Tilth for Wheat; which very much delights to follow theſe, or Peas. This has encouraged ſeveral Farmers to continue the ſowing of the Winter-Thetch, as being more ſucceſsful in this hardy Grain than either in Peas or Beans.

The Fin on the Share of the Plough is of great Service, in the ſowing of Peas, Thetches, or Beans, becauſe by the Help of it, the Ground may be ploughed much the thinner,

thinner, and the Harrows will the eaſier let out the Peas, Thetches or Beans that are ſown under thorough.

And ſowing ſome under thorough and ſome above, as I ſaid before, is the beſt Way of all in all Sorts of Grounds.

In the Vale they hold it as a Maxim, That if they can get a good Crop of Oats, they are ſure the next Time they ſow Lent-grain, to have a good Crop of Beans; which I ſuppoſe happens by ſowing the Ground with different Seed.

GRASSES *.

THE vaſt Improvements that are made by ſowing Land with Graſs-ſeeds, do more and more encourage the Uſe thereof, and eſpecially that of Clover, which daily obtains a ſingular Eſteem amongſt the Chiltern Farmers; becauſe the late Method of harrowing in Grain after it upon only one Ploughing, does ſave a great Expence and Time, and produce large Crops; and the ſeveral Sorts of Graſs are all moſt requiſite to be ſown on ſuch Lands as are fit for them: For there are many Farms in this Country, that have not any Meadow wet or dry belonging to them, that may by the Help of theſe Graſſes be able to make Hay enough of their own, without fetching it at a dear Price many Miles from Home. And many

* See Mr. *Switzer* on improving Land by Graſs Seeds.

dry Farms are ſo improv'd at this Time, that it has reduced the Price of Meadow-land in many Places; and the Value of them has in ſome Places been raiſed very conſiderably.

Clover-Graſs hath been the Name a great while, both for the great Improvement it brings by its prodigious Burthen, as alſo for its excellent Sweetneſs both in Graſs and Hay, and the Riches with which it impregnates the Ground, by the Stalk and Root; the former by receiving the nitrous Dews, which deſcend by them to the Roots and Ground about them; the latter alſo affords a Sort of Dreſſing to the Ground after 'tis ploughed up, and above all ſaves that great Expence which many have been yearly at for weeding their Ground; which is by this Graſs entirely got, and alſo the Damage prevented that the Corn generally ſuſtains by the Weeders treading amongſt it: So that it may be depended on, nothing better clears the Ground of Trumpery and Weeds than a good Crop of Clover, as I have often experienced.

The late Practice with us, is to ſow Clover but for one Year, and feed it with our Sheep by way of baiting them; that is, about Four or Five we let them out of the Fold in the Summer-mornings, then feed them on the Common till about Nine or Ten, when we bait them in the Clover an Hour or two, ſo fold them about Twelve, and let them

them out of the Common about Three in the Afternoon, and ſo bait again at Night in the Clover. This Way may be practiſed where the Common is nigh, and good Clover to bait them with. Then about a Fortnight before *Michaelmas*, on one Ploughing we ſow our Wheat in Broad-lands; but this Way will not do often without Chalking, Liming or Turniping the Land, or Fallowing, becauſe that Clover lying but one Year, ſours the Ground more than if it had lain two or three Years down, which then rather ſweetens and enriches it. Now by chalking the Land, it hollows, ſweetens, and keeps it dry and warm, and ſo prevents in ſome Meaſure the Ground being ſoured, clung and heavy. And it is certain, that the ſecond Summer's Crop is not near ſo good as the firſt; but to make it anſwer, the beſt Way is to dung it, or to dreſs it with Street-dirt, Mud, Soot, or Aſhes: This alſo prepares it the better for the next ſucceeding Corn-crop, which is alſo much help'd by the Chalk, eſpecially in wet loamy Land; ſo that Ground will be a Tilth, and ſweeten better by one Ploughing, than with two or three if there had been no Chalk.

Clover is often ploughed in to dreſs the Land about the Beginning of *Auguſt*, before it comes to ſeed, and you may turn in ſome fatning Cattle to eat the Head of it; in this Caſe, about twelve Pounds ſhould be

ſown on an Acre. The longer the Clover is, the better when ploughed in; or if you will, you may roll it, in order to the more eaſy ploughing it into the Ground; this being green, will ſoon rot, and after ſome Rain has fell on it, harrow in your Wheat. If the Ground lies even, you need only harrow the Wheat in at once; but if uneven, then harrow the Ground once before you ſow, and when ſowed, harrow two or three Times long-ways, and once acroſs; and if that won't do, harrow twice overthwart: They ſeldom dreſs on this; only drive a Flock of Sheep over it, to tread it in.

Again, Clover mowed, according to ſome Opinions, will produce as good or better Crop than that which is fed; the Reaſon aſſigned is this, becauſe the Cattle that feeds on Clover, always bites the ſweet, and leaves the ſour Part, taking care not to dung or ſtale where they bite, but on the ſour Part; ſo that there, when the Corn is up, 'tis generally in Tuſſocks. Clover, if fed cloſe, is ſometimes ſpoiled by the Cattle's biting through the Knot juſt within the Ground, which hinders its Growth afterwards, nor will a careful Farmer let his Clover be fed late in Winter; ſo have they the earlier and better Crop the following Spring.

To have a Crop of Clover, take under Peas: The Way is to get the Land ploughed twice

twice or thrice in Winter, ſo that it may be got into a Tilth by Spring, (for it is mere Folly to ſow Clover without a fine Tilth.) Then at the ſame Time you ſow your Peas on broad Lands, harrow in your Clover, twelve Pounds on an Acre, and by this Means you have this Chance, that if you have a great Crop of Peas, perhaps they may ſmother and kill the Clover; but if a middling or poor Crop, then have you a good Crop of Clover. And this preſent Year 1731, I had a pretty Crop of both Peas and Graſs; the Peas were Horn-Grey and Maples, with a few Horſe-Beans mixed amongſt them; and the Graſs-ſeed was ſix Pounds of Clover, and a Buſhel of Trefoil-ſeed in Huſk ſow'd on an Acre. Clover amongſt Barley or Oats muſt not be ſown till after two or three Weeks, that the Corn in that Time may get a-head, then ſow from ſix to fifteen Pounds on an Acre. The finer your Tilth, the leſs Seed will do; this is an excellent Way, becauſe the Barley or Oats will then keep the Clover under, ſhade its Roots, and prevent the Froſt and Sun hurting it, and alſo the Fly from eating it: Whereas if you ſow Clover at the ſame Time you ſow the Corn, and wet Weather preſently ſucceeds, it's in my Opinion ten to one if it does not ſpoil the Crop of Corn by getting the Maſtery of it, as it has done many a one for want of knowing this: Immediately on the

ſowing of the Clover, roll it in, and it is ſufficient. Clover is beſt ſown among blue Puffins, or other forward Peas, which being ſown late, even in *April*, they do not continue in the Ground long enough to choak the Clover. Clover, if fed the firſt Year with Sheep, will be ſure to fail the ſecond Year; for they ſo venom it by their Bite, as to hinder its Recovery, and thereby give Opportunity to the Growth of Twitch-Graſs and Weeds to ſupplant it.

Clover is beſt ſown amongſt Wheat in *April*, either on the Stitch or broad Lands, for theſe Reaſons; firſt, becauſe this Month is generally attended with Showers, which helps the Clover to take Root. Secondly, the Air being warmer than in the preceding Months, the Froſts and cold Weather have not that Power to hurt and ſpoil the young Graſs. Thirdly, becauſe the Wheat being now high, and under quick Growth, ſhelters it the better from the Severities of the Weather. To know the true uſeful Seed of Clover, obſerve if there be a good Quantity of the purple and brown-colour'd Seed amongſt it; for that ſhows the Ripeneſs of the Seed, when the white brighter-colour'd is that which was not come to its full Maturity. When it is thorough ripe, and well got in, the Seed will hold good five or ſix Years, as I have known a Farmer experience. Others again will buy half old and half

new

new Seed, to be more ſure. It is ſown by ſome in *February* and *March* amongſt Peas, Barley, and Oats; but in *April* amongſt Wheat, as I ſaid before. If it is ſown to ſeed, it ſhould be thick; if to mow, thin.

Clover for Seed, muſt be mown the firſt Crop for Hay, then let the ſecond be mowed for Seed, which will all come even: Whereas if the firſt is fed, there will be Tuſſocks left, and the Crop won't be true for Seed. Clover, if ſown for a Crop by itſelf, is more luxuriant than in the former Caſes; and it may then be cut in ſome moiſt rich Grounds three Times in a Summer, and leave a rich Crop for Winter to feed Cattle before the Froſt comes, (for that generally cuts it off.) We may judge of the right Time for cutting it by examining when it begins to knot, and then we may ſurely go to Work, if the Weather be good; and the beſt Way of making it Hay with us is found to be thus: After it is mowed, put it up with the Fork or Rake in little ſeparate Parcels, about the Bigneſs of a Buſhel, then turn it Bottom upwards ſeveral Times, ſo that you never ſeparate it till it be carted Home; by this Means the Leaf is kept on, which otherwiſe would be moſtly loſt. And if we let it ſtand for Seed, we may make it in this Manner: It muſt firſt ſtand till the Heads are very brown and full ripe, known by rubbing them between your Hands. An Acre is ſaid

to afford two or three Buſhels, and is a Seed that is hard to get out by Threſhing; therefore *March* is the beſt Time for this Work, when the dry Winds blow, and ſhould be let into the Barn as much as may be.

Clover is a Plant that will bloſſom, and bring ripe Seed the ſame Year it is ſowed. Clover is ſaid to feed as many Cattle on one Acre, as three Acres of natural Graſs will do; and it fattens Cattle faſt, provided they are ſhifted. I know a Butcher by me that mowed an Acre and an Half twice in one Summer, and had ten Two-Horſe Jogs off it. It is alſo related, that eight Acres have fed twenty Plough-Horſes moſt Part of the Summer; yet notwithſtanding theſe good Properties, Clover has been fatal to others in hoveing many a good Cow and Sheep. One Man by me has loſt two Cows by it, and a third forc'd to be ſtabb'd with a Penknife into the Paunch near the Loin, and juſt behind the backward Rib; which is the laſt Remedy, and ſaved the Cow's Life. And I my ſelf loſt a very good Cow that was hoved in the Night. This put me upon Enquiry for Prevention for the future; and amongſt the ſeveral Informations, I met with one that has anſwer'd my Purpoſe for theſe ſix Years paſt; *viz.*

The ſame Day you intend to turn out, firſt give them as much Hay as they will eat; then directly put them into natural

Graſs,

Graſs, and there feed them till they will eat no longer; forthwith after this turn them into Clover.

By this Method, the Cow having as it were glutted herſelf with two Sorts of Meat, is rendred uncapable of feeding in the Clover; but as her Belly empties, and her Hunger comes gradually on, ſhe feeds leiſurely, and ſo eſcapes being burſt with Wind, which a haſty Belly-full of Clover generally occaſions. But here I muſt be particular. If after this the Drift is long, or that the Cow is kept too long out of the Clover, ſo that ſhe has Time to empty herſelf, and become hungry; then, I ſay, that this Receipt may become ineffectual, and expoſe her as if ſhe had never been managed. There are ſeveral Ways that have been practiſed when a Cow is hoved; as to give her a Quart of Butter-Milk; another Remedy is to give her immediately ſome Urine, with a Handful of Salt in the ſame, and drive her about; another, that driving her haſtily, will generally do alone: But the laſt Remedy, as I ſaid before, is, when ſhe is ſo ſwell'd as to fall, immediately to ſtab her.

Others, to prevent it, will, at the firſt Turning in, give a Cow an Egg-Shell full of Tar; others a Red Herring (the Head and Tail cut off) dipt in Tar. One Farmer throughout the Summer ſet one to watch the Cows till they had their Belly-

full, and then brought them out for ſeveral Hours.

Another turn'd them in for about Half an Hour at firſt, then an Hour, and ſo gradually, till they thought the Danger was over.

Others ſay, it is the only Way to turn them in upon a ſhort Bite, for then they ſay the Cow can't fill her Belly ſo ſoon as to hove. As no Ground can be too rich for Clover, ſo can no one expect a good Crop without the Ground is in good Heart; and for that very Reaſon I take Barley-Ground to be the beſt for Clover, as being dreſſed for that Grain, in particular when Oats, Peas, or other Pulſes are ſown without.

Clover, I am of Opinion, is like other Seeds in the Ground, which being often ſucceſsfully ſown, by Conſequence muſt tire it; and this I have heard aſſerted by an eminent Man, according to the Maxim amongſt us, That if Peas are ſown twice after Wheat or other Grain, tho' in ſix Years Time, there will be no Crop of Value; for as Change and Variety is moſt natural in the vegetable Kingdom, ſo it is the Farmer's Buſineſs to follow Nature in this Point. But when Ground, by often ſowing of Clover, is become clung and ſour, the beſt Way is to plow it up the Beginning of Winter into four-thorough'd Lands, or otherwiſe, and get it into a fine Tilth the next Summer, and ſow it with Turnips. This Method will ſave the Charge of dreſſing the

the Land, your Crop more ſurely take, and the Turnips be more ſweet than if the Ground had been dung'd; then let a Crop of Barley follow them.

Clover-Seed being ſown in *April*, or the Beginning of *May* upon the Wheat-ſtitch, is by ſome rolled at the ſame Time to faſten it; but hereabouts it is generally ſown without it: For at this Sowing, ſays an Author, there is no Need of covering the Clover-Seed, it being ſmall, and ſo ready for Vegetation, will find its Way into the Ground; as we may obſerve of many other Seeds of the like Nature, which will bury themſelves into the Earth they are laid upon, without Help.

That ſix Acres of Clover by cutting and feeding Cattle in Racks, from the Middle of *April* to the Middle of *October* following, maintained thirteen Cows, ten Oxen, three Horſes, and twenty-ſix Hogs; which after the Rate of 1*s.* *per* Week for each Kine and Horſe, and 2*d.* *per* Week for each Hog, comes to upwards of 30*s.* a Week, or 40*l.* for twenty-ſix Weeks: The Summer Profit then of each Acre is 6*l.* 13*s.* 4*d.* beſides the Latter-Math. Forty Pounds Weight of Clover-Seed was ſowed on four Acres, which at twice mowing brought twelve Loads of Hay, and twenty Buſhels of Seed. The firſt Crop was mow'd the 19th of *May*, the After-Paſture, as much as three Times the Ground of common Graſs.

Alſo

Alſo, that at another Time Clover was mowed twice in a Summer for Seed; but the laſt Time it was beſt Seed.

Alſo, that Clover-Seed ſowed by itſelf is better than if ſowed with any other Seed or Grain.

On a great Crop of Peas, juſt before they were hooked, they ſowed Clover over them, which being ſtirred in by the Hook's ſtriking on the ſame, and the Mens Feet, on a very hollow Earth, here became a ſpecial Crop; nor did the Severity of the next Winter hurt it.

This Clover-Graſs, as well as other Graſſes, is a Friend both to Landlord and Tenant; as I heard one ſay who liv'd in a large Farm, that they could afford to pay more Rent, and yet live better than ever: For the Smith's Bill, Wheeler's Bill, Horſe-Meat, Mens Labour and Time are ſaved by harrowing in Wheat upon one ploughing up of a Clover-Lay. And indeed it is no Wonder that the *Ayleſbury-Vale* Men about forty Years ago (as I have been told) ſtrove with great Might to ſuppreſs the Sowing of the Graſs in the Chiltern or hilly Country, and to that Purpoſe diſputed it at Law with thoſe few, who at that Time of Day made uſe of it in the contiguous Part of *Hertfordſhire*; but the Defendants caſt them, by making it appear how great an Enricher it was to their poor Grounds. Now what raiſed the Envy of the Plaintiffs, was, that they

they apprehended it would ſink the Value of their Lands, by lowering the Price of Corn, Fleſh, Butter, *&c.* Nor are their Lands capable of this great Improver, nor of the Turnip, by reaſon they are chiefly common Fields, and of ſuch a deep, hollow, marly and wettiſh Nature, that both the one and the other would be moſtly deſtroy'd by the Cattle's ſtolching; nor will they apple in their rank, moiſt Grounds, as with us, but rather run into Leaf.

Objection 1. Clover begins to leſſen in the Eſteem of ſome of our Farmers, on Account of that pernicious Quality it has of hoveing Cows and Sheep; and therefore ſeveral, as well as myſelf, have this Year laid our Grounds down with Clover and Trefoil mixed together, which prevents any Damage from that Quarter. *Object.* 2. It is alſo not ſo valuable ſown alone as with Trefoil, becauſe both theſe Graſſes are Sweetners of the Ground, and Killers of Weeds, and are more potent in anſwering their Ends when mixed, than if they were ſingle; the Trefoil being ſmaller leaved and ſtalked, and a greater Brancher, fills up thoſe Vacancies which otherwiſe the Clover would miſs, and ſo leaves leſs Room for Twitch Graſs and other Weeds to grow. *Object.* 3. That ſome make Butter and Cheeſe from Clover-Graſs, but neither is ſo good as from other Graſſes;

Graſſes; for the Cheeſe is apt to hove, and the Butter not ſo ſweet.

To this I anſwer, That Clover has theſe Inconveniencies with it: But for Horſes, Hogs, Hay, or being ploughed in for dreſſing, it has its Excellencies; and where there is a thick Crop of it, it will ſell on the Ground beyond moſt other Graſſes.

REY-GRASS.

THE Rey-Graſs when young, as in the Spring, is proper for the Fatning of Horſes, and is of very great Advantage for Milch Cows, in that it cauſes Abundance of Milk, making excellent Butter and Cheeſe, and is of great Service for Ewes and Lambs, or to feed any large Cattle in thoſe early Seaſons of the Year, eſpecially if the Spring be warm, and the Wet does not lie too long, and before Clover or other Graſſes come in, it being more quick than they: For in hot Weather, ſuch as in the Months of *June*, *July* and *Auguſt*, it grows harſh and dry, and is fit for nothing.

As for the Soil; Clay, or any other ſour and uncultivated Land, is proper for it, nor doth it take up ſo much Tillage as other Graſs-Seeds do, growing well amongſt the moſt ſtubborn Clods that lie in the Way: On which Account, where any Gentleman has any cold Lands, they can't be better em-

employ'd than in ſuch a Way; it being always obſervable, that thoſe Lands which are not fit for Clover, Saint-Foin, Trefoil, or other Graſſes, may be much improved by Rey-Graſs. It will laſt ſome Years, and what is of great Moment, the Feeding of Cattle is of mighty Advantage to it, becauſe it will in the Spring ſuſtain double the Quantity that other Lands will do, Acre for Acre; but then it is of no Manner of Service in Autumn, except it be a dripping one, or for Hay.

Being ſown in Autumn, it will be fit to graze the next Year for Horſes and other black Cattle, without Danger of making it bleed.

If this Seed be ſown on Land entirely devoted to it, and on which in all Probability no Corn, at leaſt but little, will grow, then two Buſhels is the leaſt that can be ſowed there.

Upon the Whole, tho' Rey-Graſs is an Herb proper to be ſown upon cold, coarſe, auſtere Ground only, yet I have often been ſorry to ſee it admitted into Lands which are warmer, and conſequently of too great a Value for it: For whoever would lay down any Land that is tolerably good, can't do it better than with the common Hay-Seed which comes from the fineſt upland Meadow, and a proportionable Quantity of Trefoil with it.

We here commonly ſow it mixed with Clover-Seed, in the Spring with Barley or Oats, thus: When the Grain has been harrowed in, then ſow the Graſs-Seed; if Rey-Graſs alone, then harrow in two Buſhels on an Acre; but if with Clover, then one Buſhel harrowed in as before, and about a Fortnight after roll ſix Pounds of Clover on an Acre.

Rey-Graſs ſeldom wants any Aſſiſtance till after it has been ſown a Year or two; but when it does, you may allow twenty or thirty Load of the Shovelings of Streets, or Earth dug out of the Highway, and mixed with ten or fifteen Load of Dung, and five or ſix of Sea-Sand, Lime, or Coal-Aſhes. And this is indeed a ſolid Improvement for any of the Graſſes before or after mention'd. Some mix it with Fowls Dung, which adds very much to the Fertility of Graſſes.

Objection. Many refuſe to ſow this Graſs on Account of its being one of the greateſt Sourers of Ground; for by its ſtringy, tenacious Roots, it lays ſuch ſtrong Hold of the Earth, that it thereby becomes clung, heavy and ſour. Secondly, It is a Graſs very hard to deſtroy, notwithſtanding the Ground is often ploughed.

To this I anſwer, That in clayey Grounds, or any other, this Graſs is moſt ſerviceable, becauſe early in the Spring, it may be fed before the Clover or Trefoil comes up, with which

which it is ſown; but certainly it is hard to clear the Ground of it. And to do it, I think the beſt Way is to plough up the Ground, and give a Winter's, then a Summer's Tilth, for two or three Months, and ſow Turnips. Gravels are eaſier clear'd of it than clayey Loams.

TREFOIL.

LANDS naturally kind for Corn, ſays a modern Author, and unkind for Graſs, are undoubtedly kind for Trefoil; and tho' it be much impoveriſhed by long ſowing, that it will bear Corn no longer, yet ſuch Land, being ſown with Trefoil-Seed, will become worth 20 or 30*s.* *per* Acre. As for the Soil in which it will grow, Experience tells us, that even clayey, ſtiff Ground, or chalky, rocky, gravelly, or hilly Ground of a very ſmall Value, may be improved by this Graſs: But if the Land be a Clay, that then it muſt be laid as dry as you poſſibly can: That the Paſture for Trefoil is as good, and much better than any for Cattle, and eſpecially for Cows; for it will not only cauſe them to give more Milk in Quantity, but alſo better in Quality, and likewiſe makes Butter and Cheeſe of a delicate yellow Colour: That the Hay thereof is nouriſhing, and will make Oxen or other Cattle as fat as any other Hay, if it be

made in a good Seaſon, that is, whilſt it is full of yellow Bloſſoms, and not over-dry, (for it is ſoon made.) It does not loſe its Colour, nor ſhrink in the Making, as Clover-Graſs does; but is much finer, greener, and in all Points better for Cattle than Clover is: That it is particularly good for fatning of Ewes and Lambs, and free from breeding Rottenneſs, which other Paſtures are apt to do. And whereas Clover-Graſs doth daily make ſick, and kill many Cattle, this is free from any ſuch Danger; and the Cattle are ſo ſenſible of it, that they will not willingly feed on the Clover until they have eat the Trefoil to the very Earth, as may be ſoon ſeen, if one Half of the Field be ſown with one, and the other with the other: Therefore if you are reſolv'd to ſow Clover, the ſafeſt Way is to mix one Half of Trefoil with it. That (in Competition to Clover) Trefoil will endure much the longeſt, if it ſtand not for Seed; for that is deſtructive to the Root, and the Sap is gone that ſhould nouriſh it, becauſe it muſt be cut late, and in the Heat of Summer. The next Year after the Crop of Corn is taken off, you may paſture or mow it; but if it ſtand till the Seed is ripe, the Hay is ſpoiled, and the Cattle will not eat it. The Time and Manner of ſowing it, is, when you ſow Oats or Barley, which ſhould be done after the following Manner: The Ground being ſowed

and harrowed in with Corn, then ſow the Trefoil-Seed, and harrow it once in a Place, and then roll it. Two Buſhels, if in the Hull, is often ſown on an Acre; but if the Seed is naked and clean, then ſow twelve Pounds on an Acre, and only roll, and not harrow in: But if mixed with Clover, then ſix Pounds of each. The proper Time of ſowing is from the Middle of *March* to the latter End of *April.* I ſowed this Year ſix Pounds of Clover-Seed and a Buſhel of Trefoil in the Hull on an Acre of Ground, and it cover'd it full thick: This was amongſt Barley.

Trefoil muſt be cut for Hay whilſt in Bloſſom; it is ſoon made, and need not be dried ſo much as common Hay or Clover. Oxen are greatly nouriſhed by it green, and by this Fodder they will grow fat in a ſhort Time. Trefoil is of ſuch Advantage to Land that is over-run with Twitch-Graſs, that as it grows quickly and branches much, it will ſo over-ſhadow the Couch-Graſs, that in a little Time it will ſmother it. Again, this Graſs, no more than Clover, draws not any Nouriſhment from the Earth, which is proper for Corn, as an Author writes; and being ploughed in when we have a Mind to ſow Corn upon the ſame Ground, it makes a very good Manure, and prepares the Ground very properly for Corn. This, like Clover ploughed in when almoſt Knee-high, is

called half Dreſſing, as *French* Wheat is whole, becauſe the latter manures the Ground for three Years, and Clover and Trefoil but half the Time.

This Trefoil has a peculiar Quality belonging to it, different from all other Graſſes that I know of, and what neither Authors in their Books, as I can find, nor Seedſmen in their Shop-Bills take the leaſt Notice of: And as it is of great Advantage, I ſhall be the more particular. This Graſs then is ſown by itſelf, either naked, or in the Hull, to the Quantity aforeſaid. Now if the Trefoil is let grow to a good Head before you turn in your Cattle, it is a great Chance if ſo much does not eſcape their Mouths as to ſeed the Ground, for this Sort parts with its Seed ſooner and eaſier than any other.

Again, if it ſtands to be mown for Seed, then it ſurely leaves ſo much Seed behind on the Ground as will ſeed it next Year, and thicker than before. But as there are two Ways of preſerving its Seed by ſhedding, ſo there are as many to hinder it; for mowing it for Hay, and after that feeding it cloſe, prevents its taking the Ground for the next Year. The other Way is by giving the Ground only one Ploughing on broad Lands latterly, and harrowing in Wheat. Again, this is to be remark'd, that the more you plough any Ground, and the finer Tilth you make for Wheat, the ſurer this Graſs comes

the

the following Year; and by this Method it may be continued a great many Years, that is, by having Wheat and Graſs for Seed or Food alternately; as one does at *Barkhamſtead* on a gravelly Ground, to his great Profit, who is a Seedſman.

Trefoil is now in great Vogue for its ſeveral good Qualities, and is of late ſown with Clover-Graſs, to prevent its hoveing Cattle.

Object. Notwithſtanding what is publickly over and over again writ by ſome of the learned Gardeners, and others, in their Tracts of Huſbandry and Farming, and alſo in the Seed-Shop Bills, that Clover and Trefoil draw their Nouriſhment from the Earth in ſuch a different Mode as not to offend the Growth of the Grain among which it grows; I here aver the contrary, and which I can prove by ſeveral Inſtances, *viz.* The Clover and Trefoil at firſt ſowing, with the Corn, muſt in its Infancy draw its Subſiſtence in the ſame Manner as the Corn does, and from the very Earth, that otherwiſe would be ſpent in nouriſhing the Grain, by reaſon they both at firſt take their Growth from almoſt the Surface, as they are harrowed in together; and afterward as the Graſs-Roots ſtrike their pecked or ſpreading Roots down, (which ſometimes deſcends to the Depth of ſix or eight Inches) the uppermoſt Fibres have ſtill their Proportion of Suction from the Ground

near the Surface; which very Reaſon, by the Help of frequent Rains in the Summer, has occaſion'd the Loſs of vaſt Quantities; nay, I may ſay near whole Crops of Corn. As a great Farmer at *Studham*, near me, ſuffered, he proteſted, the Loſs of half his Crop of Barley by the Clover's luxuriant Growth. And in *Northchurch* Pariſh, upon a gravelly Soil, the Farmer mowed his Trefoil for Seed, then ploughed it into broad Lands; after that, hack'd or comb'd it, then ſowed it in Stitches. The Wheat thus ſowed on a fine Tilth, flouriſhed to Admiration; but before the next Harveſt, the Trefoil grew ſo faſt, that it crippled the Wheat, and made it hardly worth reaping. And the very Perſon that ploughed the Ground on which the Wheat-Crop was ſet that Year, lives Ploughman at this Time with the Duke of *Bridgwater*. And however ſome may ſucceed by letting Trefoil grow amongſt their Wheat, I am ſure they run a great Riſk of loſing their Crop; and where they do ſucceed, it may be owing to the Defectiveneſs of the Seed, a dry Summer, or that their Ground when ſowed with Wheat was clotty and ſouriſh, which impedes as much the Growth of this Graſs, as a fine Tilth facilitates it. Now, therefore, the ſureſt Way to be ſafe in obtaining this moſt ſerviceable Graſs, is to ſow and harrow it in with Barley in the Hull or Huſk, which keeps it from

from taking Root longer than if ſown naked, by which Means the Barley or Oats get the Start; or if ſown naked, then let it be a Fortnight after the Barley is ſown, as is before mentioned. But ſeveral ſow it and harrow it in the Huſk with Peas, as I did this Year, and it took well: And I am of Opinion, it is of ſuch a hardy Nature, as not ſo ſoon to be ſmothered by the Pea-haulm, as Clover is.

SAINT-FOIN,

IS an extraordinary Improver of dry, gravelly, ſandy, chalky Grounds, even tho' they have been over-run with Heath, Ling, or Fern, or Brakes; for this takes deep Root in the Ground, which being large, ſupports itſelf in the drieſt, hotteſt Seaſon, and will produce a great Burden when there is little Graſs to be had elſewhere. The moſt barren Land will produce this without much Manuring, and that ſhould be Soot, about fifteen Buſhels on an Acre every third Year; ſome put more, and ſeldomer; but that is wrong, as being an Extream: And when it has ſtood twenty or more Years, the Ground will produce valuable Crops of Corn. In the ſowing this Seed, as well as all other foreign Graſſes, it muſt be obſerved, that the Ground be brought into a very fine Tilth, elſe it will not anſwer. It is com-

monly ſown amongſt Oats or Barley, but the latter is beſt; and at the ſame Time ſow your Soot over the Corn and Graſs-Seeds. The Quantity of Saint-Foin Seed is at leaſt four Buſhels on an Acre, and the Barley three. But this Sort of Graſs-Seed muſt be harrowed in at the ſame Time the Corn is harrowed; ſo that one Harrowing will ſerve both, becauſe the Seed is large, and requires to be well covered. The greateſt Care that is to be taken, is the not feeding it at all the firſt Summer, nor very early the next Spring, becauſe it will be apt to bleed itſelf to Death: For the Sweetneſs is ſuch, that it will provoke Cattle to bite into the Knot in the Ground, and ſo ſpoil it.

Lucern-Grass, *otherwiſe called* Medic-Clover, Snail-Trefoil, *or* Burgundy-Fodder. *

THIS Plant is a moſt valvable Graſs for its excellent quick Growth and Duration, and has raiſed ſome of the greateſt Improvements in *England.* It is of a ſucculent or juicy Nature; it makes Cows abound in Milk more than any other Fodder, whether they eat it green or dry: Oxen are very ſpeedily fattened by it, and Horſes are no leſs advantaged by feeding on it. Its Crop for

* See Mr. *Switzer* on this Subject.

for the moſt Part is double the Quantity of Saint-Foin, and may, if it likes the Ground, be mowed three Times in a Summer. But let it grow where it will, it may bear two Cuttings, the one in *May* and the other in *Auguſt*, and carry a ſtrong Paſture for Winter.

The Soil moſt proper for it is light Ground, ſuch as Sand, Gravel, or Hazle Mould; or if the Ground be very ſtiff, then burn the Surface, which is called Denſhiring, and by that Means the Soil will become fit for it; but it has been tried in ſtiff Soils and moiſt Land, and has ſucceeded very well; this has been done in my Neighbourhood on a clayey Bottom under the Mould on a cold Hill, and proved well; but on ſuch Sort of Ground it ſhould be ſown late, as in *April* or *May*.

When we make Hay of it, we muſt dry it well before we houſe it, and it ſhould be given to Cows with Barley or Oat-ſtraw, like Clover. But certain it is, that ſandy, chalky, or gravelly Ground will beſt agree with this valuable Graſs, when it is well till'd; and undoubtedly the richer the Earth, the leſs Seed will ſerve, and the more it will fill and increaſe. Eight or ten Pounds will be ſufficient on rich Land, but twelve or thirteen on Land which is poorer. On ſome poor ſandy Land that would not bear

com-

common Graſs, there have been prodigious Crops.

Stony Land indeed is without Probability of Succeſs; becauſe the Seed being very ſmall, is in courſe buried in ſuch Ground. The Dreſſing is the ſtrewing by Hand, out of a Seedcot, Wood or Coal-Aſhes, Sea-Sand, Malt-Duſt, Clay, Peat, Fern, or Brick-kiln Aſhes, which will cauſe a new Fermentation in the Ground, if ſown with or immediately after the Seed, and cauſe it to ſpring up apace, tho', in my Opinion, Soot exceeds them all. This Graſs is ſomewhat tender, and may as well be ſown in *February* and *March* in a warm dry Soil and Situation, as in *April* and *May* on a Clay, wet, or cold Ground. And in caſe the Lucern, when old, ſhould be cut off a little by the cold Weather in the Months before mentioned (which is the only Misfortune of it) what can be better for it, than to mow off the dead Graſs, and give it a ſprinkling of Soot or Aſhes? If the Nature of the Ground will admit of it, it ſhould be ploughed ten Inches deep; for the Root of this Graſs runs like a Dock, a pretty Way into the Earth. It ſhould be ſown amongſt Oats or Barley, and after the very ſame Method as Clover is ſowed, not harrowed in, but rolled about a Fortnight after the Corn is ſowed; and if thick ſown, will deſtroy Weeds to the purpoſe, and laſt twenty Years. An Acre will keep

keep three Horſes a Year, and fats them in ten or twelve Days.

Object. They ſay it is dangerous turning in Cows to feed on this Graſs, becauſe it is apt to hove them.

To this I anſwer, It is ſo, for either Cow, Sheep, or Ox; but if the Directions are obſerved, as mentioned in the Account of Clover, there is not ſuch great Danger *.

PLOUGHING, SOILS, DRESSINGS.

IT is evident, that Earth often digged and ſkreen'd in a Garden, produces the beſt Tillage; ſo is it the principal Reaſon, that ploughing and harrowing of Land makes it the more fruitful; and this by ſome is called as good as a ſorry Dreſſing: For by this Means the Spirit of the Earth, or the *Sal Terræ*, is collected, as alſo that of the Air and Rain; which ſeveral vegetable Salts being put into a Condition to act, by the Fineneſs and Sweetneſs of the Earth, are the Life and Nouriſhment of all Things that grow therein; and for the Want of theſe two Qualifications, many Crops have been loſt. So that upon the due Knowledge of Ploughing, and the right Practice thereof, depends chiefly the right Benefit of Farming. Beſides, a light Earth is capacitated to receive the nitrous Dews and celeſtial Influences, which coagulate and fix on the ſame; when a heavy, ſour Earth

* For a farther Account of Graſs Seeds, ſee Mr. *Switzer*'s Compendious Method, *&c.*

Earth miſſes, and goes without that Benefit. And therefore I ſhall here endeavour to ſupply in ſome Meaſure, I believe I may ſay, what moſt Authors have been hitherto chiefly wanting in; and the main Reaſon for their Omiſſion, I preſume, is, their not being acquainted with the practical Part of Ploughing, although it is certainly the moſt neceſſary Branch of Farming.

Strong clay Grounds can't be too often ploughed and expoſed to the Sun and Froſt. Gravels, Chalk, Sand, and ſuch light Grounds, are much ſooner brought into a Tilth with leſs Ploughings; for frequent Ploughings in theſe Sort of Grounds are of very ill Conſequence, becauſe, as we ſay, they are ſoon worn out by it, *i. e.* the heavy Rains falling on the Gravels, waſh the Mould away, and leave the ſtony Part too naked; and ſo on the Sands and Chalks, it waſhes away the beſt, and leaves the groſſer, worſer Part behind. And therefore 'tis the modern Practice to ſow theſe Lands with Clover, Trefoil, Lucern, or other Graſſes, which by being laid down one Summer, will in that Time obtain a graſſy Cruſt, which the Gravel will feed on ſome Time after; then about a Month before *Michaelmas*, or later, give it one Ploughing, and harrow in Pirky or Dugdale Wheat.

But 'tis the Expreſſion of a great Farmer, That as ſure as he ploughed ſuch a Lay deep,

deep, ſo ſure he was to loſe the greateſt Part of his Crop. Therefore he ploughs ſuch graſſy Cruſts in as ſmall narrow Thoroughs as poſſible, and as ſhallow as he can, then ſows his Wheat and harrows it in; and if any Graſs or Twitch appears, he and his Man uſed to rake it up, and carry it away.

Wet Grounds that have a clayey Bottom, are not ſo proper for this Sort of Culture, becauſe the Water, Froſt and Winds are apt to chill and kill the Wheat; and this Sort of Land being naturally ſour, is very apt to run with Twitch-Graſs and other Weeds, and ſo choaks the Wheat as to make it a very thin Crop at Harveſt. Yet where ſuch wet, flat Land can be drained, or well chalked, or limed, there Allowance muſt be given; and poſſibly there then may be good Crops of Wheat ſucceed, but it muſt be under ſuch particular Advantages: For I have known the Farmers in the Vale, that lie flat and wet, to forbear ſowing Wheat, and prefer a Barley Crop, becauſe the former lies and ſuffers by the Winter's Extremities, when the latter only by the Summer.

For this Reaſon, Stitches or Ridges are beſt to ſow Wheat on, becauſe it prevents in ſome Meaſure the blaſting of it: For Wheat is eaſily overcharged with Water either in Winter or Summer, and they defend it from the Extremities of Weather, eſpecially cold

Winds;

Winds; for the more uneven any Piece of Land is, the better it bears the Violences of Winter: Therefore in the Champain Countries where they do not plough and ſow in Ridges, they harrow not their Wheat in, but ſow it under thorough, and leave it rough, becauſe it breaks the fleeting Winds. And in Imitation of this, the Gardeners now-a-days, lay their Gardens ſhelving, not only the better to ſhelter their Seeds from the cold Winds, but alſo to give them the Advantage of the Sun: And therefore it is a Notion entertained here, that Wheat on the broad Land is more apt to ſtrike or blight, than on the Ridge or Stitch.

I have been inform'd, the following Method is made uſe of in ſome Places to drain Land: If on a flat Piece of Ground, they dig down at Diſcretion three or four Feet wide at Top, and ſo narrower till they come to the Bottom; which Trench being cut to a Fall or Deſcent, they at ſmall Diſtances leave Shelves on each Side from the Bottom upwards, perhaps two or three, according to the Depth, which are cut on each Side in the Earth; then fill the Bottom with Stones, or Beech or Buſh Faggots, and lay on till within a Foot or two of the Top; when they throw on the Mould, and plough it, as if no Digging had been.

Where ſuch flat and wet Ground is ſown with Wheat on one Ploughing up of Clover

or Trefoil, a good Way is to let a Crop of Turnips follow the next Summer, to ſweeten the Ground and kill the Twitch and ſour Graſs: And in order to this, I plough the Wheat-ſtitch down preſently after Harveſt. This, with ſome more Ploughings, prepares the Ground for any Grain or Graſs the next Spring or Summer.

In all Grounds that are infeſted with Weeds, and where a Fin on the Share can be uſed; there it will do a great deal of Service by cutting off the Heads of the Hog-weeds, bruiſing and crippling others, and wholly extirpating the ſmaller Sort.

After a Crop of Turnips are eaten off, and you deſign to ſow the Land with Barley, let the firſt Ploughing be as ſhallow as poſſible, and the ſecond more deep, then harrow and ſow: By this Means you have the Benefit of the Sheep-dung; but if you plough too deep the firſt Time, you loſe Part of it.

Plough all Sorts of binding Ground, eſpecially Gravels, very ſhallow when you ſow your Grain; otherwiſe a great deal of it will not come thorough.

Chalk that is yellow without Side, and fat and moiſt within, is the right, and pays better than Soot or any other Dreſſing; but hurlocky, ſtony Chalk does a great deal of Harm inſtead of Good, and will lie ſix or ſeven Years without ſhattering. And the beſt

Way

Way to enjoy Chalk, is to put on a Wheat-ſtubble or a Barley-ſtubble, and ſow it with Peas on one Ploughing for the firſt Time; but be ſure plough it in very ſhallow, becauſe it naturally deſcends, and is often loſt by indiſcreet Ploughings. Chalk does moſt Service on wet clayey Grounds, and of late Years they chalk their Gravels to keep them from Binding. It is ſaid that Chalk is in its Nature cold and dry, will ſweeten the Earth, make it hollow, and keep it dry, and thereby fits it for Improvement by other Dreſſings. Small Chalk-ſtones ſcratched up by the Sheep in Summer, will turn to Flint; therefore Chalk muſt not be dug in Summer againſt Winter, becauſe it will harden by the Sun and Weather, and not be ſo good; ſo that the beſt Time is between *Allhallontide* and *Candlemas* to lay it on.

Horſe-Hoeing: This is a pretty ingenious Contrivance to ſave the Expence of Men-Hoeing, (which generally is 7 *s.* an Acre in all) if managed accordingly; which cannot be done, unleſs a right Plough is made uſe of. The Author of a late Book, I know, deſcribes the Invention of one; but a Perſon near me, committed a Miſtake in uſing the common Wheel-plough of *Hertfordſhire:* Firſt, he made two Thoroughs cloſe together, and drill'd in Horſe-Beans by the Hand; then at eight Feet Diſtance he did the ſame, and ſo on throughout the Field;

Field; but this did not anſwer to above half a Crop; for the Wheels kept the Share-Point from coming near enough the Rows of Beans to turn up the Mould on their Roots, and ſo kill the Weeds; ſo that they were in a great Meaſure choaked at Harveſt. I took a Neighbour with me, and viewed their Proceedings more than once, and obſerved, that our Vale Foot-Plough is proper for this Way, provided Wheels are faſtened to it; which is a Piece of Iron, about twelve Inches long, with Notches: By this you may ſet the Plough nearer the Rows or further from them, and ſo turn up the Earth cloſe to the Stalks, and alſo all between the Rows. And it is alſo thought, that the Rows of Beans at four Feet Diſtance, are better than at eight, becauſe there then will be a double Crop, and the Ground altogether clean'd as well for the next Wheat-Crop, by two or more Horſes drawing length-ways in the Foot-Plough. The Deſign of this Practice is to employ the fallow Ground, and get a Crop off it, and at the ſame Time prepare the Land for Wheat the *Michaelmas* following, as well as if no ſuch Crop had been, (for Peas or Beans hurt not the Ground as other Grain does:) By which Method you have the Earth every Year under Crops, ſometimes by this Cod-ware, and ſometimes it may be done by foreign Graſſes; ſo that the third Sum-

mer is here got, which formerly uſed to be loſt, to the great Damage of the Farmer.

Lime, being a calcined Chalk, abounds with alkalous Salts, and is a great Friend to Vegetation, uſed in the before-mentioned Manner in the Account of Wheat. Lime ſlack'd, and ſow'd on a wettiſh Ground, did a great deal of Service in a cold wet Spring, by keeping the Wheat growing, when others yellowed and died. Lime makes Wheat gather, and become more thick. Lime mix'd with Earth and Dung together, is a very excellent Compoſt for any Land, as likewiſe is Chalk mix'd with Bottoms of Ponds, or Parings of Commons, or Balks of Fields, and let lie a Year, two, or three, being ſeveral Times well incorporated: This will be ſhatter'd by the Froſt, and become fine Dreſſing, eſpecially for Graſs-Ground. Some will chalk Graſs-Ground about *Michaelmas*, ſaying, it will ſoon devour and eat it up; that it thickens the Ground, keeps it dry and warm, and kills Moſs. Others will chalk over Clover that has lain a Year or two, and it will hold longer. A Perſon harrowed in ſlack'd Lime with his Turnip-ſeed, on a wettiſh loamy Ground, about forty Buſhels to an Acre; this kept the Fly off, when others were eaten up, and had a good Crop; the Quantity was two Pounds of Seed on an Acre. The Lime having lain in the Field till the Weather ſlack'd it on

an Heap, then ſowed and harrowed in twice in a Place, then the Seed was ſown and harrowed once in a Place. The black Caterpillar had juſt taken a new-hoed Piece of Turnips and eaten a few Yards ſquare clean up, and would have quickly deſtroy'd the whole Field; but the Owner throwing ſome powder'd Lime over, kill'd them all: So that Lime kills Slug, Caterpillar, Fly, and Worm, as does Soot, Aſhes, Brine, or Chamber-lye.

Stale, or Chamber-lye, if kept a Week, two, or three, will be ſufficient Dreſſing without any Thing elſe, poured on the Wheat-Stitch through a Garden-pot Spout, the Man walking with it in his Hand all the Time he ſprinkles it on; a little nouriſhes, but too much kills. This may be done in Winter, even till the Wheat ſpires, or longer, and will ſoon recover the ſalt burning Heat by the Roots being ſhaded; but on Graſs-Ground it ſhould not be put on after *February*, becauſe it's longer coming up before the Root is ſhaded. Its Virtue ſometimes may be ſeen in four or five Days after it's put on. Uſed right, as one ſaid, 'tis the beſt of Dreſſing for every Thing that grows from the Tree to the Shrub. A Horſe-keeper uſed to take the Stale out of the Hole in the Stable, and throw it on the Wheat-ſtitch, and it made it ſo rank, that tho' they cut it ſeveral Times, yet it became

all Straw at Harveſt, and no Corn. I knew a Vine at the Back-Door of a Publick-Houſe that had a little Bank raiſed about the Root; in this the Gueſts frequently piſs'd, and it produced more Grapes every Year than any one Vine in theſe Parts. And the like Succeſs, in Proportion, I find by throwing Stale on the diſtant Roots of my young Apple and Pear-Trees. I ſave it in two Kilderkins, which increaſed in Strength by longer keeping.

Dungs. Cow-dung is the worſt Dung to endure Wet of any other, but kept in Cover, and mix'd with ſhort Horſe-dung, Aſhes and Chamber-lye, is excellent Manure, ſowed out of the Seed-cot with the Hand, for any Graſs or Grain. Others ſave this ſhort by itſelf, or put it under Fowls. If Dung is to be laid on Wheat or Barley after it is ſowed, it is beſt done immediately, becauſe then the Blade will eaſily make its Way through; but if this is done any thing late, it burns up and yellows the Blade, and rots it. Dung was put on Wheat the 6th of *April* by a negligent Farmer, but did little Service. Wheat on other Straw put every Night into a Fold on Graſs-Ground in Winter, will be trod in by the Sheep, and do Service. Another ſows Malt-duſt on new-ſown Barley, and is a good Dreſſing; and ſo are any Sort of Aſhes. But above moſt is Soot, about twenty Buſhels, or more, on an

Acre

Acre of Wheat or Barley; if on Wheat, it ſhould not be ſown before *Candlemas*, becauſe the Cold, long Rains and Snows are apt to waſh it in too ſoon; nor is it ſafe to ſow it much later, leſt a Drought ſucceed, and inſtead of aſſiſting the Wheat, will help to burn it up, as a great deal did this Summer, 1731, eſpecially on the Gravels and Sands. I think him in the right that won't put his Dung on the fallow Ground till a little before he ſows, becauſe it is apt to breed Weeds, and waſted by the Sun, Rain, and Air. Dungs ought to be well rotted, turn'd and mix'd, before they are laid on the Ground, that the Seeds of Weeds may be ſpoiled and hindred propagating. The Mud of a Pond not emptied before in thirty Years, was put on Sward, and it being of a greaſy tenacious Nature, was allowed by the Country-men to be Dreſſing for the ſame for ſeven Years to come; but a gravelly or clay Mud rather preys on than nouriſhes the Ground. A Perſon I knew dreſs'd his ſharp Gravels with Coney-clippings, Horn-ſhavings, Hoofs, *&c.* which does not benefit the Ground preſently. He left his Farm about two Years after, when the ſucceeding Tenant had the chief Advantage thereof. Beſides, as an ingenious Farmer ſaid, long Horſe-litter will anſwer as well, either ploughed in, or immediately laid on the Wheat or Barley after it is ſown. Theſe Gravels being of a hungry Nature,

will feed on it, or draw it all in by the next Harveſt. This long Horſe-litter preſerves this Sort of Ground from ſhoaling in froſty Weather; for it being a light looſe Earth, is apt to ſhatter, and leave the Wheat uncover'd, as will alſo the Chalks and Sands. I know a great Farmer that calls Gravels the *Land of Forgetfulneſs*, as being of a hawky, voracious Nature, devouring a ſingle Dreſſing too ſoon, and then the Crop dwindles and complains; ſo that where it can be done, the preſent Practice is to fold, and cart-dung on this, as well as Chalk and Sands; and then, as they are kerning Grounds, will return often the beſt of Crops. Turnips footed about twenty-four Hours after they are up, will be entirely ſecur'd from the Fly. Sheep-Dreſſing by the Fold is one of the beſt of Dungs, and agrees with all Sorts of Earth. It's true, that Summer-folding is certainly the beſt; but when Conveniency will allow, I am for Winter alſo: As they do in ſome Parts of *Surrey* fold none in Summer, only in Winter; this is where they have a Crop on the Ground every Year, and where the Earth will allow of it; for their greaſy Wool, the Heat of their Bodies, their Dung and Stale will nouriſh the Ground at all Times. And for this Purpoſe I have Racks thatch'd or boarded in the Winter to keep their Straw or Hay dry, and moved daily with their Fold. I know two Farmers

mers have attempted the folding of Hogs with ſtrong Hurdles, but were tired with the Miſchiefs they otherwiſe did. One had a Crop of Turnips bitten by Cattle that broke in; the Owner finding they were like to rot, ploughed them in, and had a great Crop of Barley on the ſame, which enriched the Ground. Some Time after, another folded on his Turnips as ſoon as ſown, and had an excellent Crop.

Burnt Clay. With three or four Pecks of a Mattock, the whole Ant-hill will come out like a Core. A few Wheel-barrows full of this Earth may be eaſily fired with the help of a little Bruſh-wood or Sticks; but Care muſt be taken that Vent is not given to the Fire, which is done by throwing Earth on where the Smoke comes through; ſo may you increaſe it into a round Body in the Summer-time, till as big as you pleaſe. When you have fired about three Loads, you may put on your Clay, a little at a Time with the Shovel, and the Fire by Degrees will bring a red or other Clay, or Flint-ſtones, into an Aſh or Powder; which certainly is a moſt excellent Dreſſing for any Grain or Graſs. About forty Buſhels ſows an Acre by the Hand out of a Seed-cot; and harrowed in with Barley and Graſs-Seeds, does vaſt Service. I had it burnt for a Half-penny a heap'd ſingle Buſhel. Others get ſix or eight Loads of Clay cut into Spits, about as thick as a Brick; let it be pretty

well dried in the Sun, and having made a Heap of Furze-Faggot, Billets, Coal, or other Combuſtibles, laid one upon another, about as big as a little Bonfire, in a pyramidal Form, bring the Spits of Clay, and lay them round the ſame, two or three Spits thick, leaving only Room to put in the Fire; and then light the ſame. The Clay by the innate Heat of the Wood, *&c.* within, will ſoon take Fire, and as it advances outwards, ſtill lay on more Spits of Clay, placing them in ſuch an Order, ſo that the Fire may be pent up within the Heap, and never ſuffered to get out; for if you do that, your Labour will be loſt, and you muſt begin again. After you have burnt up your ſix or eight Loads of Clay, which is a little dry, the Heat which is within will be ſo great, as that it will fire any Thing; and then you may lay on the Clay green as it is dug out of the Pit, being always watchful to keep a new Addition of it, laying on one after another; but not too faſt neither, leſt you ſmother the Fire, and put it out that Way: This you may enlarge, and ſpread out at the Feet as the Heap ſwells; and if Occaſion be, there may be Stages of Boards laid, on which the Men may ſtand who place the Spits of Clay. This being done, and the Fire kept continually in, and watch'd Night and Day, you will ſoon have as large a Heap as you pleaſe for the Improvement of Land; for the larger the Heap grows, the eaſier it is

to burn the Clay. This is a moſt cheap Dreſſing, and not only agrees with all Sort of Lands and Situations; but alſo laid about the Roots of young or old Fruit-Trees pretty thick, enlarges, multiplies, and accelerates their Fruit; and is proper to ſow over all Kitchen-garden Ware.

Hog-Dung is reckoned the beſt to put on Barley-Ground juſt before ſowing, and ploughed in; it is moſt efficacious taken directly out of the Sty or Yard, and carry'd to the Field. This, as well as Cow-dung, is reckoned a cool Manure; and therefore beſt ſuits Gravels or Sands.

Pits are often made uſe of, to throw in Horſe-litter and other Stuff, in order to rot; but this is a Miſtake, for theſe Pits rather prevent it. Laying on level Ground, and often turning, furthers it beſt.

Sand laid on, and mixed with Clay-ground, ſhortens it, and makes it more fertile, as does Clay with Sand.

Cover over Dungs and Aſhes keeps in their Salts, which otherwiſe would be waſh'd out by the Rains, and exhauſted by the Sun and Air. And under this Cover, crude Earth may be brought and trampled on by Sheep or other Cattle, in the Winter, and ſo enriched as to become good Manure.

All Sorts of Salt Dreſſings from the Sea, which in ſome Places abounds with Plenty of them, as I have ſeen on the Coaſts of *Devon*

and

and *Cornwall*, as their Sea-weed or Ore-weed, which grows at the Bottom of the Sea, and is tore up by rough Weather and caſt on the next Shore, wherewith they make a Compoſt for Barley-land; alſo their Snail-cod from deep Rivers, and Oyſter-ſhells; which laſt Sort being only Salt congealed into ſuch a Form, will, after two or three Years, when the Weather has diſſolv'd them, mix with the moiſt Land, and do a great deal of Good for ſeveral Years after.

Fowl-Dung challenges the Priority of all other, whether Pigeons or Hens, a Load of which is reckon'd worth ten of others, and is generally laid on Wheat and Barley, after they are ſown, which we call Top-Dreſſing. But with Barley, I think it is better harrowed in. Others mix it with Sand-mould, Chaff, or Duſt, to take off its fiery Nature. This Dung laid on the Roots of Fruit-Trees, does Wonders; and of no leſs Value is it on Aſparagus-Beds. Gooſe-Dung or any other Fowl-Dung is excellent; but more, if mix'd with cooling Earths, and let lie to rot and putrify under Cover. This Cover is moſt ſerviceable to feed Sheep or other Cattle under in Winter, whereby they make their Dungs go abundantly further, eſpecially if mixed with Straw or Earths. In *Holland* they ſay they ſave their Cow-Urine as their Dung; for Urine of Beaſts as well as Man's is a great Fatner of the

Earth. Human Ordure is a rich Soil, if mix'd with Straw expoſed to the Weather, and let lie to rot. *Aſhes* of Coal are eſteem'd much beyond Wood-Aſhes, and are ſold for 4 *d. per* Buſhel thirty Miles from *London.* Wood-Aſhes are next, and both produce Honey-ſuckle Graſs in Meadows in abundance, if laid on about *Chriſtmas*, forty Buſhels on an Acre. I have chiefly by their Help cur'd ſeveral Fields of Moſs, to which they are an utter Enemy; and the ſure Way to make them efficacious, is to put eighty Buſhels on an Acre, as I have done. But Ground ſhould not be dreſſed twice together with them, but once with Dung, and the next with Aſhes. Aſhes made from Straw, is the worſt Sort of all. *Soap-Aſhes* are of great Worth on plough'd Ground or Meadow, laid on the Beginning of Winter, that the Rains may waſh them in. Of *Common Salt*, a Buſhel was ſowed on a Patch of barren Ground, which remain'd a freſh and green Swarth a long Time after. And now the Duty is taken off, I don't know but it may anſwer on Land, either ſown by the Hand alone, or mix'd with Sand-mould, Aſhes or Fowl-Dungs. *Rags*, for their warm Nature, chopt ſmall, and ſowed and ploughed in warm light Ground, will do great Service. Alſo Hair of Hogs, and from the Hides of other Beaſts, does good, thinly laid on the Ground; as do Coney-clippings and Hoofs

chopt

chopt ſmall, benefit Gravels vaſtly, by their long Duration in this hungry Soil. Grounds of Barrels, and Blood, dug in at the Roots of Trees, are great Enrichers, as is any Sort of Carrion. All theſe Dungs are made more improveable by mixing and digeſting together under Cover, than if laid on directly new: For certainly one Load of rotten Dung is worth treble the Quantity of new hollow and unrotted Dung. And our common Way is to draw out the Yard Horſe-litter and Dungs in the Spring after the Lent-Grain is ſown and put into a Clamp, which covered on the Top and Sides with Parings of Earth, will prevent the Sun and Wind attracting and driving from it much of its Virtue: For the better cur'd your Dung is, the better will be the Crop; and an Increaſe in your Crop will make an Increaſe of your Dung, and ſo *ad infinitum.* On the contrary, a Decay in the Dung creates a Decay in the Crop, from whence ariſes the Ruin of Farmers and Landlords.

White Sand is only fit for Fir, or Pine-Trees. Yellow Sand ſomething better will bear Buck-Wheat; the Haulm whereof being ploughed in, will be a great Dreſſing for other Wheat, as before directed. It is alſo a great Preparation for Turnips, Peas, or Carrots; as alſo for Potatoes, if it is not too wet. Lucern does excellently well in this Soil. The wet Sands will do for Cow-Graſs,

or

or white Clover or Rey-Graſs mix'd together, will be a laſting Crop: Six Pounds of Clover and one Buſhel of Rey-graſs Seed ſow an Acre. If too wet, Alders, Arbeles, or Sallows will ſoon pay well. Theſe, as well as black Sands, are excellent Manure for clay Grounds.

Gravels, if freſh and in Heart, will bear good Peas; alſo ſweet Turnips, but ſmall. This Ground is alſo good for Flax; then let Buck-wheat follow; and after, Oats; and where Dungs are ſcarce, an Author ſays, this Method will ſupply. In *September*, mow Fern; or, if that can't be had, young Furze: Lay it a Foot thick on the Ridge you intend to plant Potatoes upon; cover them at the Bottom of the Furrow, where the Plough doth not come, with Virgin-Earth half a Foot thick all over, and ſo let it lie till the firſt or Middle of *March*, then dibble in the Potatoes about nine Inches aſunder, all in Rows over the Bed; and when in the ſecond Leaf, cover them with Mould an Inch thick, which will deſtroy the Weeds, and make them very productive. All theſe Ridges being made fat and mellow with the Stalks, the next Year will bring excellent Grain, and for two or three Years together.

The *Sandy Loam* is one of the beſt Soils for Corn in *England*, and indeed for any Thing elſe, where it happens to be deep enough, as ſix or ſeven Inches; 'tis admir'd

for

for Carrots, Parſnips, or Turnips. If this Soil lies ſhallow, ſow it with Lucern-graſs or Trefoil. Loam is not of ſuch a hard Texture of Parts as to reſiſt the Roots of any Plant like Clay, or receive them too ſoon like Sand; both which are Faults in Soil: For conſidering the divers Sorts of Plants we muſt cultivate, as well the tender-rooted, as the hard-rooted, we muſt have light Soil for the firſt, and a ſtrong is more proper for the laſt. But this being ſomewhat leſs free than the Sand, and leſs tenacious than the Clay, all Plants will agree well enough with it, and every Sort live an eaſy Life therein, or make their Way like the middling People in a Nation by ſlow and ſure Means; while the hot-headed, like Sand, are too ſpeedily overthrown in their Attempts; and the too grave, like Clay, are never of any Uſe till they are ſtirred up. Where the Loam is too wet, and can't be drain'd, it will bear Hemp. In this Soil the everlaſting Pea will grow: It affords excellent Fodder for Cattle, and may be cut three Times a Summer. This Soil, with the Help of the Cleanings of Ponds or Ditches, will bear good Hops: And it requires the leaſt Manure of any other.

Marl is accounted one of the beſt Improvers of Land, but not of itſelf to be good for any Thing; yet if People knew better what Marl was, they would find it upon the Surface, as well as in Pits, as it

may

may be ſeen in many Places of ſeveral Colours. When 'tis yellow, ſome call it Loam; when 'tis white, 'tis called Chalk; and when 'tis blue, 'tis a blue Marly Ground: But when we dig for it, 'tis all Marl; for there are Marl-Pits common of all theſe Sorts. But if they are dug deep in the Ground, they muſt have Time to lie above it, and imbibe the Air before they are made uſe of. After this, 'tis either broken again by flinging into the Cart, or by ſpreading or ploughing, ſo that the Parts are more capable to receive the Air. For if we take Marl freſh out of the Pit, and ſow the Seeds moſt familiar to it, they will not grow upon it; but let it remain ſome Time in the Air to mellow, it will bring any Seed to Perfection. With this Notice, any one may know what I mean, *i. e.* Marl is a proper Soil for any Plant, when it has had Air enough to mellow it, and is deep enough to receive the Roots. According to this Notion is the Mud of Ditches or Ponds more or leſs better'd, which certainly is much improved when diveſted of its crude raw Quality; therefore 'tis ſurely good Huſbandry to mix it with Chalk, Lime, Sand, Litter, Horſe-dung or Aſhes, and being more than once turned and well mixed, will ſooner incorporate with the Earth it is to dreſs, and thereby become much more fertile. Marl, as well as any other free or open Earth which is taken

under

under the Turf, and below the Surface, as it is ſuppoſed not to have borne any Crop that has not in the leaſt been diveſted of any natural Power, is judged to be that which the Reverend Mr. *Lawrence* calls Virgin-Earth; which, if of the beſt Sort, is full of Riches, and of the greateſt Production of any Earth whatſoever. This is that which moſt plentifully abounds with *Sal Terræ* or the *Spiritus Mundi*, by reaſon of its being covered by the Turf, and ſo defended againſt the Exhalations of the Sun and Air; as are Bottoms of Cellars, Stables, Barns, *&c.* and in ſome Meaſure are Woods: Which makes that Sort of Earth ſo extraordinary prolifick when it is ſowed with Grain, after the Wood is ſtocked up. And all Cover upon the Ground conduces to the Conſervation and Increaſe of this Spirit; for which Reaſon, Sheep-folding all the Winter under Cover, in my Opinion, would be of great Importance to the Ground, and little behind that of Summer. I will ſuppoſe it to be performed in this Manner, to anſwer the Purpoſe:

For forty Sheep place three Hurdles on every Side, ſo that twenty-ſeven Feet ſquare ſhould be ſo taken in; let there be a Rufer or Pole of that Length, each End reſting on another, (by a Swivel) of about eight Feet high; which ſhould likewiſe have a Brace at each End, to help the better ſupporting the

the long Pole, and a Foot to ſupport that, and to make them thereby eaſier to remove each Night. Acroſs this long Pole a Tarpaulin or other thin Cloth may be laid on two or three Ropes to bear it, which ſhould be tack'd to the Hurdles on the Sides, and which ſhould be drawn with Straw-bands to keep out the Weather. Under this, or ſome ſuch Contrivance, the Sheep would feed their Meat dry out of the Rack, and which by one Man may be ſhifted each Night they are folded; and by this Method the Sheeps Dung and Stale will become more fertile by the Cover of the Straw or Hay that they pull under their Feet. So does Snow enrich the Earth, as is apparent to vulgar Obſervation, not only by covering the Earth to preſerve its Spirits in itſelf, but by the nitrous Spirit it leaves in the Earth after its Solution. And for this very Reaſon does ſtony Ground produce ſuch good Crops of Corn, which has been prov'd by taking the Stones away, and the Corn has not proved ſo well. That this Spirit of the Earth hath in it a ſenſible Heat as well as Fertility, we may perceive by Springs in great Froſts, when the Pores of the Earth are ſhut, the Body from whence theſe Springs flow is warm. On the contrary, when the Pores are open, and this Spirit waſted and transformed into Vegetables, Animals, *&c.* and exhauſted by the Heat of the Sun; then is the Body in-

ternally cold, as we ſenſibly perceive by the Waters in Wells in the Summer-Time.

By the true Knowledge of this, a Gate is opened to propagate, maturate, or advance the Growth or Worth of any Tree, Plant, Grain, Fruit, or Herb, to the higheſt Pitch Nature admits of. And, as a learned Author obſerves, this Globe of the Earth that affords unto us the Subſtance not only of our ſelves, but of all other Creatures ſublunary, is impregnated with a Spirit moſt ſubtile and etherial; which the Original or Father of Nature has placed in this World, as the Inſtrument of Life and Motion of every Thing. The Spirit is that which inceſſantly adminiſters to every Animal its Generation, Life, Growth and Motion; to every Vegetable, its Original and Vegetation: It is a Vehicle that carries with it the ſulphureous and ſaline Parts, whereof the Matter, Subſtance, or Body of all Vegetables and Animals are formed and compoſed. It is the Operator or Workman, that tranſmutes by its active Heat the ſulphureous and ſaline Parts of the Earth or Water into that Variety of Objects we daily behold or enjoy. It continually perſpires through the Pores of the Earth, carrying with it the ſulphureous and ſaline Part, the only Treaſure the Farmer ſeeks for; as hath been by ſome ingenious Artiſts mechanically proved, by receiving the ſame between the Spring and Autumn in an Alembick or Still-Head,

where it hath condenſed and copiouſly diſtill'd into a Receiver at that Seaſon of the Year; the Earth then more liberally affording it, than in the Winter-Seaſon. Which ſpirituous Liquor ſo received, is not a Treaſure to be ſlighted or neglected, carrying with it the only Matter of Vegetation; as the ſame Artiſt affirmed, that having placed the ſame under a Melon-Glaſs near ſome Vegetable, it was thereby wholly attracted externally, and converted into that Vegetable. It is eaſily obtained, and that in great Quantities, by ſuch who think not a little Time and Labour loſt, to ſearch into the Myſteries of Nature. But whether we obtain it ſingly or ſimply, or not, this we know, it is to be received by placing the more natural Receptacles, the Seeds, Plants, and Trees, in the Earth, which gives it us tranſmuted into ſuch Forms and Subſtances, as are moſt deſired and neceſſary. Water contains in it the more ſpirituous or aqueous Part; Plants, Flowers, and Soils, more of the ſulphureous; and Barks of Trees, Blood of Animals and ſeveral Minerals, more of the ſaline, which three Qualities are more or leſs in all Things. How ſoon will Horſe-Hairs receive Life, lying in Rain-Water but a few Days in the Heat of the Sun, in the Spring-Time? Whereof many may be ſeen in the Highways after Rain in the Month of

May, very nimble and quick, that had not yet loſt their Shape of a Horſe-Hair.

Neither is the more ſulphureous Part capable of yielding Vegetables, being of too hot and pungent a Nature, as the Dung of Animals that eject no Urine, *viz.* the Volatiles, unleſs commixed or allayed with ſome other Matter abounding with the other Principles, or that it loſes its too fiery, deſtructive Nature, by being expoſed to the Sun and Air until it be evaporated; then will it emit ſeveral Vegetables, the Growth of which will be accelerated and brought forward by the Aſſiſtance of Rain or other Water, which has in it a Portion of this Spirit of the World; and by the Help of Water the Earth is qualified better for its Perſpiration. That this Subject is the very Eſſence of Vegetables, and that from it they receive their Subſtance, and not from Water only, is evident in ſuch Places where Vegetables are not permitted to grow, and where it cannot vapour away, nor is exhaled by the Sun or Air, as under Buildings, Barns, Stables, Pigeon-houſes, as I ſaid before, where it condenſes into Nitre, or Salt-petre, the only fruitful Salt, (tho' improperly call'd ſo,) not generated, as ſome fondly conceive, from any caſual Moiſture, as Urine in Stables, *&c.* though it is augmented and increaſed thereby; but merely from the Spirit of the World. Lands therefore reſting from the Plough or Spade are much

much enriched only by the Increaſe of this Subject, and this is become an ordinary Way of Improvement; witneſs our ſeveral Lays of natural and ſowed Graſſes, which return ſuch profitable Crops of Corn on the firſt Sowing after they are broke up. This Eſſence is in all Aſhes, which otherwiſe may be called the fixed Salt, cauſed by Calcination, as the Lye or Lee of Aſhes may be boiled till a Salt is found at the Bottom of the Kettle or Copper; which indeed is the true vegetable Salt, and is in all Lime, burnt Earth, or Clays, *&c.*

Common, crude or ſingle Salt, if ſtrew'd on the Ground, is thought by ſome not to improve, but corrode and burn it; but they ſay, Lime is better: Yet they agree in this, that the Coupling of theſe male and female Salts makes a high Improvement. Indeed, they do not produce a long Graſs for the Scythe, but for Paſture; and it will be ſo thick, ſhort, and ſweet, as to grow all Winter; nor are their higheſt Grounds parched in the hotteſt Summer, by reaſon of the Honeyſuckle-head which ſhades its Roots. And if the Sea or Common Salt is too luſty and active in itſelf, the Lime has a more balſamick and gentle Salt; which being directly joined and mix'd with the other, is thereby invigorated, and becomes more powerful.

CLAYS.

THE *White Clay*, as an Author obſerves, is call'd in many Places ſoft Chalk; it will bring very good Corn, by being well ploughed and manured with Fold and Dung-Cart, or with black Sand or heathy Ground, or Turf from low Grounds, or Fern mixed and rotted with drift Sand. It will bear, after the Crop is off, the *Flanders* Spurry, which is frequently ſown to fatten Cattle, and cauſe good Store of Milk; it is alſo a great Fatner of Fowl, and will make them lay great Store of Eggs early in the Year. This Soil, ſays he, will afterwards bring a good Crop of Lentils, and alſo good *Dutch* Clover.

But notwithſtanding what he affirms, I know where they could never rightly obtain a full Crop of Clover in the chalky Ground, which obliges them to ſow Trefoil; this indeed ſucceeds to their great Profit for Sheep and Cows, when no other Graſs (as they know of) will grow to any Purpoſe there. It frequently happens that the chalky Grounds near *Ivinghoe*, about two Miles from me, bear ſometimes eight Loads of Wheat on an Acre, by their double Dreſſings; which of late has encouraged them to plough up the Sides of great Hills to come at the dry chalky Ground. Barley, Oats, and

and Peas, by this Means will be vaſt Crops, eſpecially in a wet Summer, not inferior to their rich, black Vale-Soils. But this Soil is not without ſome Inconveniencies attending it; as that in the Winter by the Froſts it is apt to ſhoal, and by the Air blown, and by the Rain waſh'd away from the Roots of the Corn, ſo as to leave it naked, and thereby kills a great Part of it. To prevent this, they roll it both forward and acroſs the Stitches, or broad Land, and likewiſe fold on it ſometimes after Sowing.

The reddiſh Clays, and indeed all others, are beſt for Wheat; but the red Clay in particular will not anſwer in Lent-Grain, without the Help of Chalk or Sand.

A Perſon ordered his Servant to plough up the Wheat-ſtitch of this Sort of Ground, in order to get it into a Tilth for Barley the next Spring, and ſaid he would dreſs it very well with Cart-Dung. The Ploughman's Anſwer was, that if he did ſo, or double-dreſs it, the Ground would not recover it in ten Years: For this Clay-Ground will not admit of croſs Cropping without the Help of Chalk, which ſweetens it, and keeps it light, when otherwiſe it will become ſour and clotty, and bear nothing to the Purpoſe. But Gravels, Sands, and dry Chalks, if they are dreſs'd well, and got into a fine Tilth, will bear croſs Cropping, even every Year, without Chalking, but better with.

Red or *Yellow Clay.* This Soil is commonly called the beſt Wheat-Land, and for Clover; but Lent-Grain and moſt other Graſs-Seeds do not proſper to any great Account, except the *Poland* Oat, which I have been forced to reap off ſuch Soil. Woad, they ſay, will bring valuable Crops on this Sort of Earth. Turnips will here grow to a great Bigneſs. This Sort of Ground is as much mended by gritty Sand, as Sand is by Clay. And where two Neighbours exchange Soils with each other, their barren Grounds were made quickly fertile, even from 1 *l.* an Acre to 40 *s.* The firſt Year after thus mixing the Ground, they ſet Beans on two Ploughings, and had a very good Crop; directly on that they ſowed Turnips, and fed Sheep. In the next Spring following, they ploughed and ſowed Bullamon, which is Peas and Oats, and brought a great Crop; ſince that, it has borne very good Wheat. Upon this Sort of Clay, Aſh, Oak, Beech, Pear-Tree, Apple-Tree, Cherry-Tree and Fir will grow proſperouſly, as will Walnuts and Beech on the Chalks.

This Sort of Ground is very apt to be ſour, and run with Twitch-Graſs; therefore good Ploughings are beſt, eſpecially by turning it up in ſharp Bouts for the Froſt to ſhoal, and the Sun to mellow. On the clayey Loams, the former Practice of ſowing naked Clover is much laid aſide, becauſe ſingle

Clover

Clover is apt to give Room to the Twitch-Graſs to grow among it; nor is it of itſelf ſo great a Sweetner to the Earth, as when mix'd and ſowed with Trefoil; then it is of more Potency to kill Weeds, by Means of their great ſpreading Cover. When the Dung is laid on in *March* or *April*, and the Weather will permit, plough it in not above three Inches deep; and when it begins to dry, give it another Ploughing an Inch or two deeper, which will mix the Dung or Manure laid upon it before the firſt Ploughing, and ſo make an extraordinary Reduction of the Stiffneſs of the Clay: After this, it may produce a great Crop of Turnips. Some commend this Soil for the planting it with Pear-Stocks, and ſo let them grow in the Manner of Coppice-Wood; for that it will proſper ſo well, that at five or ſix Years End it may be cut for Fences, Stakes, Implements, and Fire-Wood.

BEASTS.

COWS are reckoned to pay about 4 *l.* a Year clear Profit by the Vale Graziers, either by ſuckling Calves for the Butchers, or by making Butter and Cheeſe, or by fatting the Beaſt for the Butcher. 'Tis true, there have been ſome Cows that paid 5 *l.* or more; but one with another, this is the common Computation: But certain it is,

that

that no one knows what a Cow will pay, unleſs ſhe has her conſtant Bellyful of requiſite Meat. The Gentleman, in Mr. *Bradley*'s Monthly Book for *May*, ſays, that a Cow will give three Gallons of Milk a Day throughout the Year, provided you keep her changed for a new-milch'd one, when ſhe begins to fail, and then will return about 10 *d.* a Day, in all 15 *l.* 14 *s.* 2 *d.* a Year. I agree with him, it may anſwer in ſome Parts of *England*; but what muſt be the Diſcount in changing? I have often experienced, that if I give 5 *l.* 10 *s.* for a Cow and a Calf; when ſhe is dry, 55 *s.* or 3 *l.* is a good Price for her. So that if a Cow was to be changed every ninety Days, there will be, I believe, a Draw-back proportionable to my Calculation of 4 or 5 *l.* a Year. Therefore I rather agree with his Opponent's Account, which amounts to 5 *l.* a Year; *viz.* a Cow for the firſt ninety Days will yield three Gallons of Milk, for ninety more, one Gallon; for ninety more, ſcarce one Quarter of a Gallon; and for ninety more ſhe is dry: Thus in a Year a Cow may yield 384 Gallons of Milk, which will make two Hundred and a Half of Raw-Milk Cheeſe, and a Hundred of Whey-Butter, beſides Whey for Swine; or elſe two Hundred of Butter, and one Hundred of Skim-Milk Cheeſe, beſides Whey as aforeſaid for Drink to the People, and Food for Swine: By this Ac-

Account, the Profit of a Cow's Milk a Year may be about 5 *l.* Then for making and ſelling Veal, I have ſuckled ſix Cows at a Time, and been engaged in the Method ſeveral Years, and could never find a Cow pay above 4 or 5 *l.* a Year this Way; for I reckon ſhe will ſuckle three Calves beſides her own, and what Overplus happens in a Year will only ſupply what ſhe borrowed from other Cows to help her in fatning the four Calves. I have alſo try'd what I could get by ſuckling Calves at 2 *s.* 6 *d. per* Week in the Summer, and 3 *s per* Week in the Winter, for the Butcher, he finding the Calf; but found myſelf no better off than the former Way: For in this Caſe he would buy in larger Calves than ordinary, on purpoſe to have his Pennyworths of Milk. Nor will this pay and defray in the Dead of Winter in any of the foregoing Caſes; for then a Cow will nearly, if not quite, eat 200 of Upland-Meadow Hay in a Week, which, twenty-ſeven Miles diſtant from *London*, we ſell for 4 *s.* But the Caſe is altered in the Vales and Marſhes, where by the Coarſeneſs of their Hay, or the Remoteneſs of their Market, they can't make ſo much any other Way as by Suckling; or where they come at Plenty of Grains, which is a great Breeder of Milk, but cauſes a ſwift Rot in a Cow, without a Plenty of Hay with them. Malt-Duſt is a very good Thing to promote Milk, and

is beneficial where Grains can't be had; a double Buſhel is generally ſold for 12 *d.* and is uſed thus: To one Cow give a double Handful in a Tub, pouring boiling Water on it, and ſo three Times a Day; this will make the Water in a little Time like a ſtrong Wort, and will nouriſh much. Some Cows will take it directly, others muſt be faſted to it before they will touch it; but when once taſted, they will devour it greedily. Raw Turnips chopt or whole are given by ſome; others will boil them to Maſh, and give them with Bran mix'd.

Calves, the firſt Week, are allowed not their Fill, but afterwards as much as they will ſuck, becauſe in the Beginning they are apt to ſcour, if they have too much Plenty; and all the Time we give them powder'd Chalk in a Trough, beſides great Pieces hung up by them to lick at Pleaſure, in order to whiten their Fleſh, and make them ſuck, and keep them from being laxative; and if then they ſhould ſcour (which hinders their fatting) we give them ſome Syrup of Sloes mix'd with Flour, and put down their Throat by way of Cram, with a little Milk to waſh it down. Many cram them beſides ſuckling, to make Milk go the further, by mixing Wheat or Barley-Flour with Milk, and dipping the Crams in Milk when you put 'em down their Throat; others make uſe of ground Madder, others black

Pepper

Pepper in Urine, to cauſe a Drought, that they may ſuck the more; and keep them in the Dark, except when they ſuck, that they may be induced to ſleep more than ordinarily, which, with bleeding often, helps them to fat the ſooner. The Butchers, at the End of the firſt Fortnight, cut a Piece off the Tail; at the next Fortnight's End, they bleed them in the Neck; at ſix Weeks they do the ſame, and ſo on every Fortnight; it whitens their Fleſh, and makes them fatter with leſs Milk. We give them Wheat-Straw twice a Day on a Layer of Faggots to keep them dry; but in *Middleſex*, where it is not ſo plenty, they make Holes in Planks that lie with a Deſcent.

A Heifer will ſpring about three Months before ſhe calves, but a ſeven-year-old Cow only three Weeks; ſo that to know if a Heifer is in Calf in that Time, you may draw her Dugs, and if Milk or Corruption appears, ſhe is in Calf. The Country-Maids commonly obſerve to dry a Cow of a *Sunday* Morning, and then ſhe will always calve in the Day-time, as they ſay.

A Cow in middling Caſe, that is fed with Straw in the Winter, need not have Hay above a Month before ſhe calves, for that ſhe will give more Milk than if ſhe had it longer; becauſe the fatter the Cow, the leſs Milk; and yet if too poor, it is dangerous,

leſt,

leſt, as we call it, ſhe falls in Calving: And if the Seaſon will permit, it is beſt to let a Cow calve in the Field or Yard, that ſhe may have Room; nor is it ſo proper to houſe her one Night, if the Weather is good, becauſe the Calf will be apt to butt the Bag, and ſo cauſe it to be ſnarl'd and hard: And therefore we commonly hold the Calf in a Collar and String.

When a Cow is bulled, as ſoon as it can be done when ſhe comes home, throw a Pail of Water on her Udder behind, and keep her up that Night from any other, becauſe ſhe will be apt to ride them, and ſo miſs her Bulling.

If you would fat a Cow that calved in the Spring-Time, dry her about the 10th of *Auguſt*, and then ſhe will go near to fat with the After-Paſture. You may let her take Bull, or not, it is of no great Conſequence; but Suckling fatigues Cows more than Suckling and Milking, and is apt to hinder their Bulling; but both impede their Fatting. And if when a Cow is dried, her Udder gangrenes, as it often happens, the only quick Cure is to cut off her Dugs, and immediately drive her about; then, after ſhe has bled heartily, anoint them with Hog's Lard, and ſhe will do well: But this muſt only be done where the Cow is to be fatted directly on the ſame.

Some Cows will continue in a good milking State till ten Years old; but after that, decline.

As

As ſoon as ſhe has calved, throw a Handful of Salt on each Side of the Calf, which the Cow will ſwallow by licking it; this will cauſe her to glean very ſpeedily. I know a Farmer that gives a cleanſing Drink to the Cow preſently after Calving, as believing the Milk will not be right wholeſome without it. Others for Cheapneſs ſake, give a Horn of Stale to her, and a Day or two after, another; this, they ſay, will keep the Garget out of her Bag.

For a Cow that piſſes Blood.

Take Oak, ſhave off the outer Bark, and boil it in Spring-Water till it be red; alſo Comfrey, Shepherd's-purſe, Plantain, Sage, green Hemp or Nettles, of each a good Handful; and boil them with the Bark, ſtrain it, and put a good Handful of Salt in the Water; alſo ſome Allum, Bole-Armoniac, Chalk, or the Powder of Sea-Coal. If your Beaſt is weak, give only a Quart, or ſcarce ſo much; but if ſtrong, more: Once often ſerves, but twice will ſurely cure the Beaſt. Give it lukewarm.

Another. Toaſt a Piece of Bread, and cover it well with Tar, and give it. It's occaſion'd, ſome ſay, by their brouzing on Oak-leaves, *&c.* A Frog put down a Cow's Throat, and ſhe immediately drove into Water will directly piſs clear. It's a preſent Cure.

For

For the Blain in Cows.

When firſt taken, they will ſtare and foam, with their Tongues out of their Mouths; then immediately prick her in the Noſe, or blood her in the Neck, which will keep her alive twenty-four Hours: Then take a Handful of Salt in about a Pint of Water, and give it her, then directly ram a whole Egg down her Throat. Sometimes they have it behind under their Tail, when a Bliſter will appear; this is cured by running a Hand down her Fundament cloſe-finger'd, and brought wide out, which breaks the Blain within; if not diſcovered preſently, it kills them in half an Hour ſometimes.

For the black or red Water in Cows, a Diſtemper next to the piſſing of Blood.

Take a Piece of Iron, heat it hot in the Fire, and put it into two Quarts of Milk; after let the Milk cool, and give it the Beaſt blood-warm, and it will bind up the bloody Iſſue after two or three Times giving *.

For

* See the *Practical Farrier*, containing 200 Receipts for the Cure of the moſt common Diſtempers incident to Oxen, Cows, Calves, Sheep, Lambs, Horſes, Hogs and Dogs. Price 1 *s.*

For a Cow that ſtrains in Calving——when their Calf-haulm, Udder, or Bag will come down and ſwell, as much as a blown Bladder.

Take new Milk, and ſtrew thereon Linſeed bruiſed to Powder, or Chalk, or Pepper, but Linſeed is beſt; put it up with your Hand, and let her hinder Parts ſtand higher for two or three Days than her Fore-part.

For a Cow who by lying on the Earth, and too ſoon drinking cold Water after Calving, her Calf-haulm ſwells and lies over the Neck of the Bladder, ſtopping the Urine that ſhe cannot ſtale, or ſtand on her Feet.

Take two Sacks or a Window-cloth, put it under her Body, faſten a Rope to it, and put it over the Beam of the Barn, and draw her up that ſhe cannot touch the Ground with her Feet; then let a Woman anoint her Hand, and work the Calf's-haulm from the Bladder, that the Water may have a Paſſage; give her warm Bedding, warm Drinks, and warm Cloths.

For a Cow that cannot glean.

Take Germander and Pennyroyal, boil them in a Quart of Ale, then ſtrain it, and

put therein a little Saffron, and give it her to drink, and it will bring it away in two or three Days. Others will give two Ounces of Flower of Brimſtone in a Quart of new Milk warm'd.

To feed Calves whilſt they ſuck.

Put into a Trough Barley-meal, and it will whiten and fat. Some give them Oats in Troughs all the Time of their Suckling; and the Night before they have them to Market, cut off a Piece of the Tail, and tie it up with a Shoemaker's End, and when at Market will give them a Cram or two of Flour mix'd with Claret, to keep them from Scouring.

To cure Swellings, or Snarl'd Bags of Cows.

Take Rue and Adder's-Tongue, ſtamp them together, and ſqueeze out the Juice; this mix with a Pound of freſh Butter from the Churn without Salt, and make into an Ointment.——This is a moſt excellent Receipt, as I have often experienced.

Another Receipt to make a Cow glean.

Take a large Handful of Pennyroyal, and boil it in three Pints of Ale; then ſtrain it,

it, and put one Pound of Treacle into it, and let it juſt boil; take it off, and put an Halfpenny-worth of Flower of Brimſtone to it, and ſo give it in a Horn to the Cow. Some inſtead of Pennyroyal put in Southernwood.

Horſes. Our Farmers hereabouts commonly go to *Tame* Fair on *Michaelmas-Day*, and buy the yearling Colts for about two Guineas a-piece, which they turn into their Latter-Math for that Winter, and give them ſome Hay; two are beſt, for their Company's ſake: And the next Spring about the Beginning of *May*, put them into the Vale about *Ayleſbury*, for a Shilling or Eighteenpence a Week, and ſo raiſe fine Horſes at a cheap Rate. And as to their Management and Cure of Diſeaſes, I think *Gibſon*'s *Diſpenſatory*, and his other Books, are the beſt that ever came out on that Subject. I ſhall therefore only take notice, that for the Farcy, what I mention alſo for Sheep, is a moſt excellent Receipt.

Steep the Regulus of Antimony in Ale, with a little of the Spice called Grains of Paradiſe, and a little Sugar; of which give a Horſe about half a Pint at a Time, two or three Times, with a Day or two's Intermiſſion between each Time.

Swine are generally of two Sorts, the ſmall, wild, black *China*, or *Weſt-India* Breed, and the great *Leiceſterſhire*. Between theſe are alſo ſeveral Sorts and Mixtures. The firſt indeed makes delicate ſweet Pork or Bacon, alſo pickled is moſt dainty Food; they fatten for Pork in about three Weeks, and for Bacon in Proportion; and I have known them to weigh near twenty Stone when kill'd for Bacon. The great Sort will ſometimes weigh fifty Stone. I give mine Antimony in Powder, as much to each as will lie on a Shilling, two or three Times a Week, in their Waſh or among Peas, which gives them a Stomach and preſerves them from the Garget and Meaſling.

Sheep are the moſt neceſſary and beneficial of all other Beaſts upon a Farm, and where they are not kept, a Tenant's Deſtiny may eaſily be read. The Rot in Sheep is the greateſt Misfortune belonging to them. It is cauſed by too much Moiſture, by Water and Snows, which by their Weight and Diſſolution mix and waſh the Graſs in with the Earth, and ſo cauſe a Froth or Scum, which the Sheep through Hunger and Novelty greedily devour to their Deſtruction; it is alſo occaſioned in the Spring or Summer by a Putrefaction in the Air and Graſs, eſpecially in the Vales and Marſhes, and is known oftentimes by the Cobwebs on the Ground and Hedges, which hold a Wet or Moiſture,

and

and is of a poiſonous Nature, therefore the Farmers, particularly in the Vale, don't unfold them till Nine in the Morning, that the Sun may dry them and the Graſs. They are alſo kill'd by Means of a Red Water or Serum that is occaſioned by too much Moiſture, and ſometimes die by eating the Glow-Worm, or Canker-Worm, as ſome call them.

To prevent then the Rot or Red Water, ſome even at Midſummer will give them Straw or Hay, which has ſaved many a one, when others about them have died, that did not eat dry Meat. A Gentleman near me bought a Parcel of the large *Oxfordſhire* Pole-Sheep; ſeveral of them dying of the Red Water, the Shepherd gave the reſt Hay in the Fold, and ſaved them. Rotten Sheep will, in the Beginning of the Rot, fatten ſooner than ſound ones; and the Way to know them in the Market, (which they are generally brought to, ſo ſoon as diſcovered) is to feel the Cod of the Wether, and if there is on it a dry Wax or Scurf, he is rotten; but if moiſt and wet, he is ſound. And ſo the Ewe will be between her Legs. Alſo if the innermoſt Part of the White of the Eye has Streaks of Red, it is a Sign of Soundneſs; but this is often forced by putting before-hand Pepper into the Eye, which will fret it into a Redneſs. Alſo the Gums and Mouth of a rotten Sheep will be white.

To prevent and cure a rotten Sheep that is not too far gone.

Take Bay-Salt and ſtamp it well, and after the Sheep has fed a Day or two on clean, dry Oats, put ſome of it among them, and after that a greater Quantity, till ſuch Time as they begin to diſtaſte it; then give them clean Oats a Day or two, and after that ſerve them with Salt as before. This Courſe being followed until their Eyes have recover'd their natural Colour, they will be perfectly cured. This Meat ſhould be given them in wooden Troughs in Barns, and their Dung and Stale will anſwer the greateſt Part of your Expence; but if you have not that Convenience, it may be given them in the open Air.

For the Skit or Looſeneſs in Sheep.

Take Salt, Allum or Chalk, and give it in Small Drink or Water, and it will knit and help them preſently.

Another Receipt to cure and prevent the Rot in Sheep.

Take the Regulus of Antimony, ſold at the Chymiſts or Apothecaries, and ſteep it in Ale, with a little of the Spice called Grains

of

of Paradiſe, and a little Sugar; give it two or three Times with a Day or two's Intermiſſion between each Time. To a Sheep give about two or three Ounces at a Time. This muſt be done in Time, before the Liver is too much knotted, and that may be partly known by killing one or two, by which a Judgment may be made of the reſt.

But as the Proverb ſays, *The obſtinate Man ſeldom wants Woe*; ſo I have known ſeveral loſt their Flocks by their Indolence, and kept them on in hopes of their knitting and recovering by the Alteration of Weather, when they might have diſpoſed of them early, and loſt but little by them: Therefore I doubt not but theſe Receipts will be of ſingular Uſe when publickly known, in being a Means to prevent this Loſs and Trouble. For this Regulus of Antimony is a univerſal Remedy for moſt Diſeaſes in Men and Beaſts. It is a Chymical Preparation made with crude Antimony, Nitre and Tartar, and corrected by the Spice and Sugar. It alſo cures the Farcy in Horſes, as aforeſaid. Every Apothecary can give further Information of theſe moſt excellent Ingredients. The larger the Sheep, the leſs Power the Rot has; for the ſmaller ones are ſooner overcome by it. In our Chiltern hilly Country, the Weſtern white-faced Sheep prove the beſt of any, becauſe they come off a ſound Lay of Ground, from the great Commons or Downs

of *Wiltſhire*, &c. But I knew a Gentleman by me, that ſent down to the remoteſt Parts of *Wales* for a Flock of hardy ſound Sheep, as indeed generally the *Welch* are; and the Conſequence was this: They being kept on Mountains, and at their full Range in open Places, when they were brought into Encloſures (notwithſtanding they had a careful Shepherd) ran ſome one Way and ſome another, till a pretty many were loſt. The Gentleman on this told the Shepherd, he ſhould pay for them all, which ſo affrighted him, that he ran away too. The long looſe-wool'd Sheep are not ſo good as the Weſtern cloſe curl'd-wool ones are, becauſe the firſt after they are wetted, are ſometimes a Week before they dry, to their great Prejudice; nor are they of ſo hardy a Nature. It is a common Way for the Vale-Men, when they find the Rot has begun in their Flocks, to pay the Chiltern-Men for letting them feed on their Commons a few Months, in order to knit and recover them, which indeed often happens by the Change of the Air and Ground; but even where the Commons are not ſtinted or limited to a Certainty, the reſt have brought their Action (or at leaſt threatned it) againſt the Culpable, for their invading their Right of Common, by ſurcharging the Common with theſe Sort of Sheep; ſo that their Cure by theſe Means is now generally hinder'd all

over

over the Nation; which, I preſume, will make theſe Receipts the more acceptable. My good Friend and Neighbour, Mr. *Timothy Garret*, bought ſome Weſtern Lambs, about *Alhallontide*, and turned them into his Orchard, where they grazed till the Snow fell, when they lay ſcratching after the Graſs, and would not eat Hay; by this he loſt the biggeſt Part of them: And ſince he takes them into his Yard, and gives them Hay or Straw, ſo that they cannot come at any Graſs, they live and do very well.

A rotten Sheep, he ſays, he has ſeveral Times ſeen die with Plaiſes in their Liver and Head; This Plaiſe is a live Worm about the Breadth of one's Finger-Nail, and feeds and preys on theſe Parts. Another Remark is this; at *Hudnal*, a Farmer had a Wether Sheep took with a Giddineſs, which increaſed ſo that it could not ſtand; on this, the Farmer ſold it for Eighteen-pence to a poor Man, who immediately knock'd off that Horn that lay next the Ground, and there appeared a ſmall Bladder like that of a Fiſh, which he took out, and put a little Wool in the Place dipp'd in Tar, and ſew'd it up. This Sheep did well, and was ſold afterwards for nine Shillings.

This, as well as the firſt Caſe, undoubtedly was occaſion'd by the Corruption of the Blood in the Animal, which my Remedies

before

before mentioned directly ſtrike at, by warming, drying, and altering the whole Maſs of Blood; and therefore if given in Time, by Conſequence will prevent and cure theſe and the like Diſaſters.

Another Receipt to prevent the Rot in Sheep.

Take a Peck or better of Malt, and maſh it as though you would brew it into Beer or Ale, and make eleven or twelve Gallons of Liquor: Then boil in this Liquor a good Quantity of Herbs called Shepherd's-Purſe, and Comfrey, Sage, Plantain, Pennyroyal, Wormwood and Bloodwort, of each a good Quantity, and boil them in the ſaid Liquor very well; then ſtrain them forth, and put a little Yeaſt therein; after that, put a Peck of Salt, and tun and put it up in a Veſſel. Then give it your Sheep in wet Weather after *April* comes in, ſeven or eight Spoonfuls a-piece, once every Week, if the Weather be wet; if it be dry, you need not ſo often: And thus continue till *May* and after, as you ſee Cauſe, according to the Dryneſs or Wetneſs of the Weather. Give them now and then a Lick of Tar mixed with *Herb de Grace* chopped, and it will cleanſe the Bowels of much Corruption, and be healthful to the Blood.

Objection. It is ſaid, that ſuch Cover for Sheep in the Fold, as is before mentioned, will be too hot for them, as they are naturally a Beaſt the beſt arm'd againſt Cold, and that it has been fatal to ſeveral, on account of the ſevere Weather that they are expoſed to, out of the Fold, and when the Folding is over for the Winter in *February* and *March.*

To this I anſwer, That too much Cover may be as bad or worſe than too little; but as the Vale Farmers in ſome Places lay ſome long furzen Faggots juſt within the Fold, and againſt the windy Quarter, I think it may do well. A great Farmer by me is going to draw half his Fold-Hurdles with Straw-bands, to break off the Winds this Winter from the Sheep in Fold.

TAME RABBITS.

TAme Rabbits are great Improvers of a Farm by their Dung, which is ſold here for Sixpence a ſingle Buſhel trod in, and is chiefly uſed to harrow in with Barley and Graſs-Seeds. They are more Profit by far in Hutches than in Pits. Their Seaſon is from *Chriſtmas* to *Whitſuntide*, and when their Skins are clear without Spots, a ſingle one is worth 4 *d.* or 6 *d.* The main Art of keeping theſe Creatures, is to preſerve them from Tunning, or being Pot-belly'd; and therefore when fed with raw

Grains,

Grains, Hay muſt be always given with them in the little Apartment of the Hutch, to dry up the Moiſture of the Grains, ; and when fed with Bran, or other dry Meat, Greens muſt be given to anſwer their Drowth. Commonly we keep the young ones with the Doe two Months, and at five Weeks End let her take Buck, that the former Brood may go off before ſhe knits about a Week. Pollard mix'd with Grains, or made into Paſte with Water, and given three Times a Day, is very excellent Food for them. Ground Malt helps to recover the young ones when tunned; Barley alſo juſt broke, is very good. If a convenient Place can be had to let young ones run in Cover, or out at Pleaſure, they will thrive with leſs Meat. They mightily love to brouze on Pea-Straw or green Furze. If Bran is given alone, it ſhould be long Bran; but to mix with Grains, it ſhould be ſhort Bran or Pollard. I never try'd it yet, but am of Opinion, that *French* Wheat muſt be fatning Food for the young ones; and when they are ſo, they ſell beſt to the Higler at ſix or eight Weeks old. A Doe goes thirty-one Days; and generally one Time with another, brings ſix, which indeed is enough for any one Doe to bring up and fat. The beſt Time to ſave young ones for Breeders, is in *March*; and then with good Meat, clean Uſage, and cloſe Attendance, they will take Buck about *Alhallontide*,

and

and ſo enter the Seaſon with the Sale of their firſt Litter. A Doe is reckon'd to pay 10 *s.* a Year clear, and that her Dung will pay for Grains. Some there are that have gelt the Bucks in order to make them larger and ſweeter; but as I yet never experienc'd the Succeſs, I can write no further of it. The Sweetneſs and good Reliſh of their Fleſh, undoubtedly is a very deſirable Thing, and then they are certainly more wholeſome; and this, in my Opinion, is to be obtain'd, firſt, by ſuch Food as will occaſion it; as good Oats, Barley, Pollard, and freſh hearty Grains, Greens, and Hay: Secondly, by keeping their Hutches thorough clean, and carrying away their Dung to ſome Diſtance. And, thirdly, by keeping them in a wholeſome ſweet Air. For all living Creatures muſt ſubſiſt by Air, and be better or worſe affected by it, as it is good or bad; according to the Obſervation of a Gentleman, who ſaid he never eat ſo ſweet a one in *London*, as he did here; becauſe, as he ſaid, the Hutches there ſtanding in cloſe Places, and in a groſs Air, is apt to taint their Fleſh.

The common Way of killing them by ſtriking them behind the Ears only, is not ſo well, by Reaſon of the great Quantity of Blood that ſettles in the Neck, which by the new Practice is moſtly prevented. As ſoon as they are ſtruck with the Hand under the Ears, then immediately jobb a Penknife

into

into the Throat, and give it a Launce towards the Jaws; this will let out the Blood till they become white.

Another Way is to kill them as they do a Turkey, by ſlitting with a Penknife the Palate of the Mouth: This is reckon'd the moſt cleanly Way of all.

PIGEONS.

PIGEONS have ſeveral Natures and Names. The Tame or Houſe-Pigeons are called Barbels, Jacks, Crappers, Carriers, Runts, Horſemen, Tumblers, and Great Reds. The Barbel has a red Eye, a ſhort Tail, and a Bill like a Bullfinch. The ſmall Jack-Pigeon is a good Breeder, and hardy; has a turn'd Crown. The Crappers are valuable for their Swell. The Carriers for their ſwift Return Home, if carried to a Diſtance. The Horſeman-Pigeon is ſomething of the Carriers Nature. The Tumblers for their pleaſant Agility in the Air. The Runts for their good Breeding and bringing up their young ones. The Great Red for their Largeneſs. The Turn-Tails, for their turning them up almoſt to their Back. And the Black-Head is a white Pigeon with a black Head. Several of theſe are often preferred for their Beauty, but the moſt common are the Runts. Generally in about half a Year's Time the young ones may be paired, by putting a Cock

and

and a Hen into a ſmall Coop-Hutch, where ſometimes in an Hour or two, and ſometimes not under a Day, two or three, they will pair, which is known by their Billing and Cooing, the Cock's calling the Hen, and the Hen ſpreading herſelf before him. They breed almoſt all the Year, except Moulting-Time. It's common to croſs-match them, and they'll breed the better; and ſhould be fed all the Year, except Seed-Time and Harveſt. The former holds about a Month, and the latter three, even to *Alhallontide*. Some always give them Meat throughout the Year, becauſe, ſay they, before they'll be forced out to get their Living abroad, they'll ſtarve ſome of their young ones. Others, as Farmers, will give them no Meat all the Year. Theſe Calculations are for the Country, where Meat is plentiful at thoſe two Seaſons; and at others, at the Barn-Doors. Forty Pair is reckon'd to make about twenty ſingle Buſhels of Dung a Year, and is here ſold for 10 *d.* the ſingle Buſhel heaped. It is ſaid, this Number well looked after, will maintain a ſingle Man. A Garret or Room about twelve by twenty Feet will contain that Number; too much Room hinders their Increaſe, as well as too little. They commonly hatch within the three Weeks, lay generally two Eggs, and about three Weeks after Hatching, they are fit for Market. This Number will eat a Buſhel of Peas or

Tares

Tares in a Week, beſides half a Peck of Hempſeed, which fattens the young Ones very much, and is made uſe of by the Higlers to cram them on the Road by the Way to *London*; where, at the Seed-Shops, it is often ſold for Half a Crown the Buſhel. They ſhould have conſtantly ſeveral little Bins by them, to let out their Meat gradually into a lower Trough, as they conſume it, which is a Means to keep them from ſtraying; this, with freſh Water and Gravel, will keep them at Home, without the Salt-cat and other Contrivances. Indeed ſome Cummin-Seed is eſteem'd very good for its Scent to be kept conſtantly in the Pigeon-Houſe. An old Pair of Pigeons may be brought from another Place, and will ſeldom return, if they are kept in till they breed.

HEDGING.

IN wet Grounds, the Aquaticks are beſt to plant for Hedges, either by Roots or Truncheons, as the Alders, Arbeles, Willows, Sollars, Black Poplar, and others; but in dry Grounds, the White-Thorn and Sallow make the beſt of Hedges; the Sallow to be planted juſt within Side, and the White-Thorn without: By this Means when it is at its Maturity, you may cut the Sallow twice to the White-Thorn's once. And here we commonly make our Hedges once

in

in nine Years, when Wheat or Barley is ſown in the ſame Field. Sallow will grow from the very Stakes: But Setts planted with good Roots will come quickeſt. In caſe you make an intire new Hedge, throw up a Bank by making a Ditch; let this Bank be ſomewhat hollow in the Middle, then in the Spring-Time cover the Roots of the White-Thorn well with Mould, and make Holes with a Crow or other Thing, and ſtick in Truncheons or Pieces of Sollar about two Foot long ſlopewiſe, with a Sloping cut on the Top, that the Rain may the better deſcend to the Bottom; and put ſome Horſe-Litter in the Middle of the Bank, to keep the Sun and Air from drying the Setts. The Sheep and other Cattle are apt to damage the Sollar, be it old or young; the one by debarking, and the other by cropping the Tops. To prevent this, take Cow-Dung, mix it with Water in a Pail, and with a new Broom throw it on thick. Or take Lime, and ſerve it ſo; or take Dirt, and rub the Sollars well with it; and if waſh'd off by the Rains, renew it. Others will make an Hedge with all beechen Setts, eſpecially on the chalky Grounds, which they pull out of the Woods, about two Feet long; but then the Heads muſt not be cut off, as the White-Thorn or Sollar is: For then they won't grow. There is one Objection againſt this latter, *viz.* That it will,

quickly after making, riſe and become hollow; but this with Care may be ſupply'd; and indeed, there is Encouragement from this Plant ſo to do; becauſe it will return much Wood, as being of the Tree-kind. I planted one about fourteen Years ago, with Cherry-Trees in the ſame Hedge, at conſiderable Diſtance, ſeveral of which I have ſince budded; and both them and the Hedge, for forty Pole, thrive to Admiration. Nor will Cattle eat this Sort of Hedge ſo ſoon as they will Sollar or Aſh. I am this Winter, 1731, going to do the like on the ſame Length of Ground, by taking in a Piece of common Field-Land; in order to which, I run along the Plough, and throw'd up three or four Thoroughs, by which the Ditch and Bank is half made at a very ſmall Expence. The Horn-Beam, or Horn-Beech, is ſaid to make the fineſt Hedge; but about us, we chiefly make uſe of the White-Thorn, Sollar, and Beech, and reject the Aſh, Hazle, and ſome other Sorts.

PLANTING.

TO plant a Fruit-Tree, as a Standard, or againſt a Wall or Eſpalier, there are Diverſity of Ways preſcribed by ſeveral Authors: But as I am very ſenſible there are ſome groſs Errors inſerted in ſome of their Books, as well as ſome very uſeful

Rules

Rules in others, I therefore ſhall be very wary in writing on this Subject. And as my Talent lies chiefly in Field-Planting, I will be the more particular in writing of this moſt uſeful Science; becauſe a Miſtake in the Beginning proves often fatal, and is not ſo eaſily rectify'd afterwards, without great and too dangerous Violences. From hence proceeded that grand Diſcouragement that has ſo much prevailed over this Nation in general, and is chiefly the Cauſe of the great Scarcity we are at this Time under for want of more Plantations of Fruit-Trees, and eſpecially Apples and Pears. And as Examples are beyond Precepts, and the greateſt Encouragers or Diſcouragers of Arts and Sciences; ſo in this of Planting it has its peculiar Tendency for the better or worſe: But I think at preſent moſt of the latter. And here I have made many Obſervations in my Travels, with a concerned View of whole Plantations ſet too deep, which by Conſequence not only diſappointed its Owner of his Hopes and Profit, but alſo proved a forbidding Article to the Neighbourhood not to plant, leſt it ſhould be as fatal as it was to Mr. Such-a-one. And, indeed, to ſay the Truth, there is no Miſtake more common than this of Planting Fruit-Trees too deep; and yet nothing is more deſtructive to them, eſpecially in ſome Grounds too much ſubject to Wet and Moiſture, nor tends more to keep

Trees in a ſickly, unthriving Condition, and conſequently from bearing either much or good Fruit. A Gentleman near me, by Purchaſe came to a large Apple-Orchard that had been planted ſome Years. The Trees were great ones, but return'd little Fruit; this provoked him to enquire the Cauſe, and found it to be deep Planting at the firſt; for the Man dug ſometimes Breaſt-deep before he could diſcover a Root, and the Soil, after a Spit-deep, was red Clay on a high Ground. In the Room of theſe Trees, he has planted young ones, but after a different Mode. I muſt own, where the Soil is naturally exceeding dry, and lies on a Declivity, that will quickly carry off the Winter's Wet, the Fault may be leſs dangerous: But except there be a ſufficient Depth of natural good Earth above the Rock, Gravel, or Clay, the Earth complain'd of, will there quickly diſcover itſelf, after four or five Years; when the Roots of the Tree will be ſtarved by a hungry Gravel, Sand, Chalk, Rock, Clay, or whatſoever the Bottom be, that lies too near the Surface. On all Accounts therefore it is much the better and ſafer Way to plant high, provided Care be but taken the firſt and ſecond Year to keep the Roots tolerably cool and moiſt, yet not to ſubject them to too much Wet in Winter; for Summer Wet never hurts them.

Of

Of Planting Standard-Trees.

Various are the Ways uſed both by Gardeners, and my neighbouring Farmers, in planting Standard Fruit-Trees. And that the Reader may judge which is the beſt, I ſhall here ſet down ſome, I think, of the worſt Methods, as well as the beſt, I know of. There are ſome that directly dig up the Mould and make a Hole; in the Bottom of which they plant the Tree, and ſo cover it up by throwing juſt the ſame Mould in again, and leaving it. Others, thinking themſelves more careful, will drive in one Stake, and wythe it about the Tree. This is a ſad Way indeed, and muſt end in the Tree's Deſtruction; for altho' it may live, and grow in Wood and Fruit ſome Years, yet it can never anſwer to Advantage, either in the one or the other. And a Caſe ſomething of this Nature was acted by a Lord of a Mannor, in which lay a fine high Common; he being deſirous to improve it, tranſplanted a conſiderable Number of young Timber-Trees out of the Woods: The Soil was a Hurlock chalky Rock, about four or ſix Inches below the Surface, between which and the Top, he planted his Trees; nor could I perceive any Mould about them above the common Level: And, notwithſtanding he was at a great Expence, for a Cart,

Horſe and Man to water them during the firſt Summer, yet afterwards they dwindled, and did not anſwer. Now, by this Miſtake he loſt his Trees, the great Charges of watering them for a long Time, and ſo much precious Time, which would (if rightly made uſe of) have gone a conſiderable Way in their Growth. Therefore, happy is he who by others Harms learns to beware. The true Caſe then of this Matter, as I take it, ſtands thus: Inſtead of planting tall, large-body'd Trees on ſo high and naked a Situation and ſhallow Soil, I would have put a more young, ſlender and ſhorter Tree, in the following Manner; *viz.* Pare as thin a Turf off as poſſible, then take up all the Mould, even to the Chalk or Hurlock; this done, put the Turf upon the ſame, the Graſs downwards, ſpread a little Mould on the ſame, on which plant the Tree, and cover it with the reſt of the Mould. Upon this again ſpread a good Parcel of Fern-Litter, or other ſuch Stuff; then put two, three, or more Wheel-Barrows of Virgin or other Mould, about ſix or eight Inches thick, in the Form of a Baſin, about three or four Feet over, as your Root is more or leſs large. The next Thing is to ſecure the Tree againſt the furious Winds, the Bite of Sheep, and the Rub of them or larger Cattle; and that is done by driving two large Stakes oppoſite to each other, ſo that each may be about three or four Foot above

above the Ground, and about four or ſix Inches from the Body of the Tree on each Side. Then nail four Croſs-Bars to the Stakes againſt one another, two at Top, and two towards the Bottom, ſtuffing Graſs, Hay, Straw or Fern between the Body of the Tree and the Croſs-Bars, to keep it from Galling; then take black or white Thorn-Buſhes, and draw them thick between the Croſs-Bars, from the Top of them and higher, down to the Bottom; always remembring to make uſe of thoſe Stakes that are thicker than the Body of the Tree, that there may be a ſufficient Hollow between the Tree and the Croſs-Bars; and to keep the Tree more firm, wythe it to them. When this is done, there remains but one Thing more to compleat the Planting of a Tree, and this is ſo perfectly neceſſary, as not to be omitted: With a Spade firſt give a circular Cut about the Baſin-Heap of Mould; then ſix or eight Inches back from that give another circular Cut, and turn up all the Turf, letting it lie with the Graſs-part downwards, ſlopewiſe, and joining the ſaid Baſin-Heap: By this, there will be a round Gutter, which at all Times is ready to receive and make a Lodgement of all Rains that ſhall fall, and will ſufficiently ſupply the fibrous Roots with Moiſture, as they gradually proceed from the Maſter-Roots. And here ends the Plantation of a Tree for the firſt Time; but then it is not

wholly done with: For either in the third, fourth or fifth Year afterwards, as the young Shoots puſh more or leſs forward through the ſaid Gutter, which is beſt known by the Growth of the Head of the Tree, you are to make ſuch another Gutter as is before mention'd, to meet and water the ſucceeding fibrous Roots; and ſo renew the ſame, as Time and Judgment will beſt inform you. Now, let us conſider here the Benefits which accrue by this Method of Common or Field-Planting: Firſt, then, by the Turf and Mould which is placed under the Tree, the Roots are hinder'd, for a conſiderable Time, having to do with the Hurlock or Chalk Soil. Secondly, they are hereby encouraged to grow ſpreading and quick, by means of the Toughneſs of the Turf, and the fertile Salts which are in the ſame. Thirdly, the Fern or Straw, by being placed between the two Moulds, becomes a Watering-Pot to the Root, and by the Help of the upper Mould, laid in a Baſin-form, ſhelters and ſhades the ſame both from the Sun's and Air's too violent Influences. Laſtly, the great Charge of Man, Horſe, and Cart is prevented, and the Tree ſecured with a trifling Coſt from all Sorts of Cattle.

Another

Another Way,

As practiſed by a Nobleman's Gardener, on a pretty deep Loam, under which was a red Clay, is this: Firſt, he cuts a Circle with the Spade, of about three Feet Diameter, more or leſs, according to the Largeneſs of the Root; then he cuts and takes off the Turf in ſeveral Pieces, and lays it by itſelf; then he takes up all the next Mould for about a Spit deep, and lays that by itſelf, and ſo the next Mould which is worſer, he ſerves the ſame, in the Place of which laſt, he puts the Turf-Graſs downwards, then about half of the beſt Mould he ſpreads over it, on which he plants his Tree, and covers its Roots with the reſt. This again he lays all over with Wheat-ſtraw, and with the reſt of the Mould, and two or three Barrows of ſome other in a Baſin-like Manner, makes a Trench round the ſame, ſtaking and buſhing it up, as before mentioned.

Another Way,

Is what I have done amongſt others; and that is, planting a Tree upon the common Graſs Surface or Level, without any Manner of breaking the Ground, eſpecially where it is of a wet Nature; and upon the Roots put two, three or four Barrows of Virgin-Mould,

and

and Fern and Straw between the ſame, in a hollow Faſhion, with a Trench round it, and ſo ſtake and buſh up. This Way I have found to anſwer extreme well, as to tranſplanted large Cherry, Pear, and Walnut-Trees. But here, I muſt confeſs, that the Hardneſs of the Turf does not give the Roots leave to run ſo faſt at firſt as others do that are planted in looſe Mould, ſo that they will be longer before they get hold of the Ground; but when they have, they generally run faſter than others, and, indeed, make the largeſt Trees of all others: For to ſay the Truth, upon a due Obſervation, the biggeſt and beſt Trees are found to be thoſe that lie higheſt with their Roots in the Ground, as is their Fruit; as I ſhall hereafter explain. The Reaſons of this, I preſume, may be owing to the Graſs-Ground, that naturally attracts and draws the Roots into it; which top Earth being full of the beſt nitrous and ſaline Qualities, and more expoſed to the Sun, Air, and Rain, give an extraordinary Advantage to the quick Growth of Trees, in Time, even beyond thoſe which are more hid and cover'd in their Roots from thoſe Benefits. But I don't find that an Apple-Tree, and ſome other Sort will quite ſo well anſwer, becauſe their Roots being of a more tender, ſoft Nature, are not of that Strength, to enter and penetrate the hard Cruſt of the Earth; altho' I have now growing

ing ſeveral fine Apple-Trees on this Sort of Plantation. However, I am ſenſible there are Objections made againſt this Method: For it is ſaid, That a Tree in this Caſe is more liable to be blown down by the Winds, becauſe the Roots are not envelop'd enough in the Earth, to have ſufficient Hold: And, again, that they can't be ſo well water'd for want of a Trench. But to obviate this, I think the due ſtaking up a Tree for a few Years, and keeping a ſufficient Quantity of Horſe-Litter on the Top of the Border about the Tree, both Summer and Winter, is ſufficient to indemnify it againſt Wind, Sun and Air. I am ſure I have found it to be ſo, in ſeveral Inſtances of this Nature. But I have heard, that a Gentleman paſſing by a Plantation, ſhould ſay, The beſt Way was to put a thin Layer of Virgin-Mould on the Graſs-Ground, and plant your Tree upon that, directly after the before mentioned Manner. Now here is a requiſite Obſervation to be regarded in the Performance of any of theſe Ways, and that is, That the upper Bed or Layer of Mould that is thus put upon the common Surface or Level of the Ground, muſt not be too thick; for this, as I have found to my Coſt, will rather hinder, than forward the Tree's Growth; becauſe, as I ſuppoſe, too much Mould keeps the Sun, Air and Water at too great a Diſtance from the Roots, whereby they become dry, mouldy,

dy, and rotten; or, if they ſhould chance to ſurmount theſe Diſaſters, they grow but at a poor Rate: So that a thin Coat of Earth, about ſix or eight Inches thick, is often ſufficient. But this Piece of Management muſt be according to the Proportion of the Root: Which leads me to another Remark of this Nature, *viz.*

Planting of Fruit-Trees in Fields and Cloſes.

Field-Planting in this, as well as in ſeveral other Counties of this Kingdom, will, I ſuppoſe, be thought ſomething ſtrange at firſt, by reaſon of the common Objections.

Who would expoſe fine Fruits in the open diſtant Fields to rapacious Hands, and the devouring Beaks of Birds? *&c.*

Therefore, as I now engage myſelf in an Introduction chiefly new to the major Part of this Nation, I ſhall endeavour to anſwer theſe common and diſcouraging Obſtacles, which have hitherto hinder'd, to a very great Degree, the Propagation of Fruit-Trees, by laying down ſuch Reaſons, as I hope will be as prevalent with others, as they have been ſucceſsful with me. Firſt then, ſuppoſe a ſquare Field or Cloſe of forty Poles long every Way, the middle Part of which is ploughed Ground; on the four Sides of that are Baulks of Graſs-Ground of forty Feet broad.

broad. Along the Middle of theſe Baulks, I plant my Fruit-Trees at thirty-three Feet or two Poles aſunder, which will contain at that Rate twenty Trees on a Side, or eighty in all, be they Apples, Pears or Cherries, *&c.* Indeed Walnuts, as they generally have the largeſt Sort of ſpreading Heads, ſhould be planted further off one another: But Trees at this Diſtance, I think, may anſwer very well, conſidering there are none on the two Sides of them, and therefore have Room allowed them for the Sun, Air and Rain to come at the Ground about them, and the Graſs not ſcour'd by their too cloſe Cover. But this is left to the Diſcretion of the Planter, who may perhaps think forty, fifty or ſixty Feet Diſtance much better; and, indeed, I muſt ſo far join in his Sentiments, as to think him moſt in the right, where he can eaſily ſpare his Ground: For certainly the Fruit has thereby a greater Opportunity of ripening on all Sides more gradually, and at nearer a Time, and the Graſs rather better under their Drip. But my Dimenſions here are calculated for the medium Way, and where a Man is to make the moſt of a little Ground; for I have often known the Graſs to be a greater Burden in ſcorching Summers under the Shade of Trees, than otherways. And by ſowing Soot, Aſhes or Lime, *&c.* in the Winter-Time on the Ground in the Diſtance of their Shade, prevents the common Com-

plaint,

plaint, of the Drips ſouring the Graſs. The Rows of Trees being thus planted in the Middle of the Graſs-Baulks, according to the Plan here laid down, is for theſe Reaſons: Firſt, the Cart has Room on either Side of them to paſs and repaſs. Secondly, they are at ſuch a Diſtance from the Hedge, and ploughed Ground, that neither the Heads nor Roots of the one or the other are capable of receiving Prejudice by too cloſe Planting, but has a ſufficient Plat of Ground allotted each Tree for its due Nouriſhment. Thirdly, the Plough-Team has Room to turn on the Outer-part of the Baulk, without damaging the Tree or themſelves. Fourthly, the Hay may be made much better than in an Orchard, where the promiſcuous Shades of their great Numbers proves often very fatal to their Owners. Fifthly, a Fruit-Tree ſo planted in a Field, has much more the Benefit of the beſt of Dreſſing; which is the Dung and Stale of Cattle, who are fed in the ſame Field by Turnips or ſow'd Graſſes, *&c.* An Inſtance of this has been obvious to many, in the Largeneſs, haſty Growth, and good Bearing of a Cherry-Tree in my Home-Cloſe, which is a plough'd Field; under this Tree the Cattle uſed to lie and ſhade themſelves, when it was fallow, ſow'd with Turnips or Graſs-Seeds, and was one of the largeſt Trees in theſe Parts; and tho' a wild Cherry,

I have ſold the Fruit for a Guinea on the Tree, clear of all Charges. How much then muſt a Field-Tree have the Advantage of a pent-up Orchard-Tree? So likewiſe are thoſe Trees planted next a Road-Way, whoſe Roots are dreſſed by the Sullage of the paſſant Cattle; and which, if obſerved, may eaſily be perceived to excel thoſe by far that are planted more in the In-ground. But here I would be underſtood not to be a Votary for planting Fruit-Trees in Hedges, except for the Road ſake, becauſe the Roots of the Hedge are ſo many Thieves about its Root, and impede its Growth: And if by length of Time it grows large, then another Evil enſues, which is, that its Head by the Drip often kills or damages what grows under it, beſides the Misfortune that accrues to the Hedge by People's getting the Fruit. This Standard Field-Planting is vaſtly preferable to Half-Standard, Dwarf and Wall-Planting, becauſe of late Years ſeveral Sorts of rich Fruits which have been ſhelter'd by Mats, and other Contrivances, have been diſcovered to proſper as well or better in the Field on whole Standards, and bore much greater Quantities of Fruit at leſs Expence, and better taſted, than thoſe on Walls or Eſpaliers; becauſe Part of their Fruit by the Shade, is hid and kept from the Sun's Influence, which makes them generally ripe on one Side, and unripe on the

other: Witneſs the incomparable *May* Duke-Cherry, ſeveral Sorts of Pears, *Orleans*-Plumbs, *&c.* And even in the Vale of *Ayleſbury*, where they reckon no Cherry-Tree will rightly proſper in that naked Country; there, I ſay, this *May* Duke will grow and bear conſtantly, as in other Places. Here alſo is the great Expence ſaved of Pruning, Nailing and Tying, which in Half-Standards, Wall-Trees, and Eſpaliers, amounts to conſiderable Charges, and which not only takes up much precious Time, but ſhortens the Life of the Tree; whereas a Standard is rather hinder'd than furthered by the elaborate Practice of the Knife. What a charming Sight is a large Tree in Bloſſom, and after that, when loaden with Fruit enough perhaps to make a Hogſhead of Cyder or Perry! A Scene of Beauty, Hopes, and Profit, and all! It may be on leſs than two Feet Diameter of Ground. And above all, what Matter of Contemplation does this afford, when we let our Thoughts deſcend to a ſingle Kernel of an Apple or Pear? And again, how heighten'd, on the beholding ſo great a Bulk raiſed and preſerved by omnipotent Power, from ſo ſmall a Body?

There is alſo another lamentable Objection belongs to this Field-Planting, by the Vulgar and Ignorant; whoſe Argument againſt it is, That the Diſtance of the Fields from the Houſe expoſes them to Loſs. But when

when I write of Planting abroad, I mean ſuch to anſwer Delight and Profit, as are ſomething numerous, which I think a hundred or two of Trees will; and then I am of Opinion, by the Care of a Looker-after during their ripening Seaſon, the Fruit is ſafer than in a contiguous Orchard: For in a Town or Village, the Boys are moſt plenty, and their Eſcape is at hand, when by the Remoteneſs of the Fields, they can't ſo eaſily clear themſelves. Beſides, this perhaps may not be an Extra-charge, if the Overſeer can occupy himſelf in other Buſineſs near the Place. This is annually done in and about the *Kentiſh* Cherry-Orchards and Plantations. In the Year 1728, his Grace the Duke of *Bridgewater* was ſo good as to give me leave to take up a Score of wild Cherry-Trees out of one of his adjacent Woods, about twelve Years old; theſe, with their large Roots, I tranſplanted on the Graſs-Baulks of a five-acre ſquare ploughed Field, in Rows with no other Earth than what I found in the Place: Thus, I made a circular Hole, and put the Turf firſt down, with a little looſe Mould on the ſame, on which I planted my Tree; then I put ſome Fern, and cover'd it with the reſt of the Mould; by this Method there became a hollow Place all about the Roots: And notwithſtanding the ſucceeding Summer was very dry, they grew and flouriſh'd very

well, and on the 13th Day of *July*, 1730, I budded them with a *May* Duke, on the new young Shoots that followed after cutting off the old natural Head when I planted them. Here the Roots were intirely envelop'd and cover'd in Virgin-Mould, the greateſt Promoter of Vegetation; and by putting no additional Mould, the Hollow about them received the Wets in a more ample Manner; the Sun and Air had free Acceſs, and even the very ſulphureous and nitrous Dews, I believe, were not a little ſerviceable: Which plainly diſcovers the Excellency of this Sort of Planting; for had there been put another Coat of Mould more than the Place naturally afforded, then I don't ſuppoſe theſe Benefits would have been ſo propitious; becauſe they, eſpecially the latter, would not have had an Opportunity of coming ſo free and quick at the Roots, which by only having a thin Covering of the natural Mould, are expoſed more immediately to the vivifying, nutritious Particles of Heat, Water and Air. But indeed, to be more ſecure, I generally put ſome looſe Horſe-Litter only, upon and about the whole Border, by way of Safeguard againſt extraordinary Droughts and Froſts, that may happen in the Summer and Winter next after planting any Trees. But I dare not uſe the Cherry-Tree as I do the Apple and Pear; for upon theſe I put abſolute

rotted

rotted Horſe-Dung, Fowl-Dung, or Rabbit-Dung, to waſh down on their Roots, and ſo let it lie all the Year on the Border. This makes their Head run at a great Rate, and as it is an outward Application, the Trees are free from the Danger of Cankers, which Dungs will certainly produce, if laid to the naked Roots of any Tree when planted; on the contrary, this Virgin-Earth is a direct Security againſt the Canker. Even an Apricot, which is moſt ſubject to it, will live ſound and free in this Mould. However, as a Cherry of all others hates both Dung and Knife, I only venture Horſe-Litter or Fern on or about it. And this Fern, as I have experienc'd, is beyond Straw, when laid on the Roots at the Time of Planting; for as it is of a cold, ſpungy, wet Nature, it does its Office better, by keeping the Roots moiſt, and will alſo prevent the Mice making their Lodgements in the hollow Mould of a new-planted Tree, which they often do, ſometimes to the Killing of a Tree; when Straw, that is of a dry, hollow Nature, invites and ſhelters them and the Piſmires, who likewiſe are often fatal Enemies. Theſe Shelters then are of exquiſite Service, when applied above and below the top Mould: And this laſt long, dry Summer, proved the Truth of this, and another Invention a Gentleman near me made uſe of to defend the Bodies of new-planted Trees, as well as their

Roots: He got furzen Faggots, and laid at the Bottom, and ſo piled them almoſt up to their Head, which anſwered extreme well.

Of the Circulation of the SAP in TREES.

To help barren Trees, and to make others more prolifick.

THE Knowledge of this is certainly neceſſary for all Planters; for by it a Man is render'd capable of making his Eſtimations in Budding, Grafting, Planting and Tranſplanting, Pruning and Lopping. This Circulation of Sap in Trees, as well as Blood in the Bodies of Animals, is now paſt Contradiction, from that famous Inſtance of transfuſing young vigorous Sap into an old dwarf Pear-Tree, which was done with Succeſs by the great Dr. *Bradley*; who planted ſome young Pear-Stocks in Reach of the Head of the old Tree, two Stocks within an eaſy Reach of the beſt Branches of the old Tree to which they were inarched or grafted, by being inlay'd in the Spring-Time of the Year, and were perfectly joined with the young Stocks in leſs than three Months.

By

By this the old Tree, whoſe Fruit through Age had dwindled to but little bigger than a Hazle-Nut, bore larger Fruit than ever, and afterwards became ſo firm, that he was obliged to check it by ſawing it half thro', and driving Wedges in; but this did not check it enough, for he ſaw'd the old Tree intirely from its Roots, and then it bore Fruit for ſeveral Years. A Pear-Tree, as I hinted before, will endure Planting on the very Cruſt or Turf of Graſs-Ground, and is of ſuch Force in its Roots, as to make its Way thro' the Creviſes of a ſoft Rock, and therefore will do in any Soil; and if I was to plant Fruit-Trees on a Gravel, I would there plant the Pear ſooner than an Apple or Cherry, becauſe the former will grow and flouriſh, when the other will languiſh and complain. And for want of a due Knowledge of this, many Perſons have ſuffered very much in their Plantations; and certainly, 'tis of great Conſequence to plant a right Tree on a right Soil, and to a right Aſpect. A Pear-Tree is one of the moſt luxuriant Trees that grows, and where the Soil is *à propos*, it will grow to a prodigious Magnitude, and return Fruit anſwerable; as the Relation is of one in *Herefordſhire*, whoſe Fruit in one Seaſon made ſeven Hogſheads of Perry; a fine vinous Liquor indeed, if made of Pears accordingly. I have made near a Barrel of thirty-ſix Gallons from one

I have now growing, which is an Orange-Pear; which mixed with a red Catherine, is ſaid to make excellent Perry. This large Pear-Tree of mine was ſomewhat hollow thirty Years ago; and about twenty Years ſince his old Head was intirely cut off, in order to make him more prolifick. It then began to throw out a great number of Shoots at Bottom; but by grazing of Cattle about it all the Summer, they check'd it by their Bite, and the new young Head proſpered, grew, and bears brave large Fruit to Admiration. And where a tall Standard Pear-Tree has got too much great Wood on it, and that canker'd, or full of Moſs, I am of Opinion that this Method is the beſt to renew and renovate it.

The Way to alter the Fruit of any old gummy Standard-Tree.

As Cherries, Plumbs, *&c.* are Trees that are attended with a Reſin or Gum, which, in many, iſſues and runs ſo faſt as to cripple and kill them, therefore theſe Sorts muſt be treated in a different Manner from Pears and Apples. If you have ſuch a Tree, which does not bear well, through Age, Want of Sap, or by too much Moſs or Canker, then cut off all the Head, except a few of the loweſt, ſpreading Branches; for theſe will employ, draw up and give the Sap Room

to circulate, that the Tree will preſently get a new upright Head; then the very next Summer, or the Summer after, you may bud the ſeveral new Shoots with what Sort of Cherry, Plumb, Peach, *&c.* you like beſt. A Year or two after that, the old Branches may be cut off, and the new Head have the whole Supply of the Root; but if theſe Branches were not left at the Time of Lopping, theſe gummy Trees often die, as I conceive, for Want of Room to employ their Sap, and the too ſudden total Decollation of them, whoſe Ducts and Veſſels have for many Years before enjoy'd a free Circulation. And from hence, often, is cauſed that Iſſuing forth of Gum at the Top and Sides of theſe intire lopped Trees, which ſo often proves fatal to them. Now, if it be a hollow or blighted one, the above Method is the beſt Way to recover it, and to renew its natural or improved Fruit; as one in our Neighbourhood did: And the hollow Trees bore afterwards as well as ever. And I have now ſix found Cherry-Trees growing, that were near fifty Years old when I cut off their old Heads, (as not liking the ſmall wild Fruit that they bore) and put above ten Buds on the new Shoots of each Tree when they were two Years old, and now they have got large Heads in about ſix Years, and bear the White Heart and Black Cherroons in my Upland Meadow, through which is a Path-

Way to *Dunſtable.* And the beſt Time to lop them, in my Opinion, is about *Chriſtmas* or *Candlemas*, the latter rather beſt; becauſe the longer the Froſt has Power of the Cut-Part, the more it endangers it: But it muſt be ſure to be done before the Sap ſtirs. So the Hedger that wants Work often ſays, It is beſt to make a Hedge early; but it's found by Experience, the latter Seaſon is beſt, eſpecially an old Hedge. And for want of knowing the Way of managing a gummy Tree, I have formerly ſuffer'd the Loſs of ſeveral fine Cherry-Trees.

To help other Sorts of decay'd or barren Trees.

Many are the Ways preſcribed and practiſed, as ſo many Catholicons, for helping and reſtoring theſe Sorts of Trees; ſo that if a Tree wants Sap, or has too much of it, one and the ſame Remedy is to be made uſe of in both the Caſes; and therefore, as the true Cauſe is firſt to be found out, the following Applications may be made uſe of. In caſe then a Tree is too deep planted, got moſſy, or cankered, after cutting the Cankers out, dig up as much Mould as can be got from about the Roots of the Tree, (and ſome let them lie thus uncovered moſt Part of the Winter, for the Sun and Froſts to benefit them by their healthful Influences,

and

and in the Spring,) then take up as much Graſs-Turf as will fill up the Hole or Foſs, cut it into Pieces, and put it, Graſs downwards, upon all the Roots. This being full of Riches, and lying hollow on them, will in Time, by the ſubſequent Rains, waſh down and impregnate the old Roots with new fertile Salts, and cauſe a Renovation of the whole Tree. But this is not all, the Head muſt be managed as well as the Roots, and that by making uſe of the Back of a Knife, and rubbing and ſcraping the Tree, when it is wet, therewith; or, when the Tree is dry, to rub it and the Arms of it with a Hair-Cloth: This Method is abſolutely neceſſary not only to moſſy Trees, but on the moſt healthful, in order to keep them ſo, and prevent Moſs, and is, in Proportion, as requiſite as Currying to a Horſe: For the Bark to the Tree is as the Hide to the Horſe, and both require Dilating and Cleanſing by frequent Rubbings and Scrapings with proper Inſtruments. This Uſage I have known to recover and bring into an advantageous State of plentiful Bearing, ſeveral old large Apple and Cherry Trees, even without digging or breaking any Ground: The Trees were over-run with Moſs, and turn'd to little Account, till a poor Day's-Man took the Orchard, who, for the ſake of obtaining Fruit to pay his Rent, was tempted to

uſe

uſe his Diligence in this Manner, of clearing the Trees of their Moſs.

Others again will dig up the Mould about the twentieth Day of *June*, when they make their new Shoots, and apply dead Dogs, Sheep, or other Carrion in its Room, to the great Amendment of the Tree; alſo the Blood of Hogs, and other Cattle, and likewiſe the Excrement of their Paunches is of great Importance. And this laſt Spring I apply'd to the Roots of a young Vine that grew againſt my Houſe, the Blood of a Hog; but at the firſt coming of the hot Weather, the Blood began to be offenſive: I therefore took a Pail of Wood-Aſhes, and covered the Border all over, which being waſh'd in by the Rains, the fix'd Salt of the Aſhes ſoon overcame the ill Stench of the Blood; and both theſe by emitting their ſeveral Salts to the Roots, made the Vine ſhoot more in one Summer than it had done, I think, in three before. From whence I conclude, that Aſhes in particular, moderately made uſe of, are of an excellent Nature in promoting the Growth of the Vine, or any other Sort of Fruit-Tree whatſoever; and ſo is the Salt of Urine, if prudently uſed. An Example of its great Efficacy I ſaw at *Dagnal*, about a Mile from me, where, againſt the Back-Door of an Ale-Houſe, there was one grew, and bore more Grapes, they ſaid, than any one Vine in ten Miles round, againſt a South-Eaſt Aſpect;

Aſpect; and this great Fertility, they own'd, was owing to the People's piſſing upon and about the Bank that cover'd the Roots of the Vine. Yet here I would remark, that altho' the two Ways above mentioned are very good, I ſhould think the laying all Turf about the Roots is rather too ſolid, and will become too hard, ſo as to hinder the Rain and Air coming eaſily at the Roots; and all Furze will be too hollow: Therefore I am of Opinion, that a Layer of Furze and a Layer of Turf will do beſt. Some will take Chalk and put next upon the Roots of a moſſy or too deep-planted Tree, and cover with Turf.

Of the Checking the Sap in Trees, to make them more prolifick.

The Extreme of too much Sap is a grievous Fault, and is always an Enemy to Fruit-bearing; and therefore ſometimes a Tree will by this Means run into Wood, and not into Fruit. Again, it will ſometimes be overpower'd with Fruit, but then it is ſmall, and will not bear again perhaps in three Years. In this Caſe, lay open its Roots in *February*, and cut off cloſe by the Stem, ſome of the largeſt Roots, with a ſharp Chizzel, then throw in the Earth preſently; this will hinder an Overflux of raw Sap, and help it to digeſt its Juices regularly.

Where the Sap is too firm in a Pear-Tree, either Wall, Dwarf, or not too big a Standard, then cut his outer and inner Bark quite round four Inches broad to the naked Body, and it will grow and bear Fruit the better; but no other Tree will bear this Uſage; becauſe the Pear-Tree having the largeſt Pith, the Sap has ſufficient Paſſage that Way: And this I have ſeen done to a Wall-Pear at *Penly*, which bore Fruit the better for it afterwards. Another Way: Suppoſe your Tree in an Eſpalier is too ſtrong in its Growth, that moſt or all its Wood is over-luxuriant to bear the next Year; then from the Middle of the Tree let a ſtrong Shoot grow up, to carry up the moſt watry Juices, and the young Wood in the lower Part will bear, while the other may be trained to make a Head above the Eſpalier, and will alſo bear plentifully, whilſt the bottom Part will alſo produce abundance of Fruit. Another Way is, to mark the Bark of a Tree round and round, in a Screw-like Manner, and cut the Bark in thoſe Marks to the Wood, about the tenth Part of an Inch wide. There is another nearer Way than this, of making Trees bear Fruit; and that is, by budding or graffing them with Buds or Scions of good bearing Trees, which having a good digeſted Sap in them, will communicate it to the ſeveral Parts of the Tree, and make it fruitful.

All

All tranſplanted Trees are certainly very much checked at their Removal; but the Art is to find out a Method beſt to preſerve them from Deficiency. For my Part, I think the very beſt natural Seaſon to remove a Tree in, is *October*, and in a moiſt Time, when the Ground is thorough wet, and to replant it as ſoon as poſſible with as much Mould on it as can be brought away. As to planting at Midſummer in Mud, and keep watering the Plant after, it is right, and only ſo, when Neceſſity obliges.

Of the Aſpect, and the Expoſition of Trees, and their Shelters.

There are old traditional Directions repeated in Books, That a Tree in Removing or Tranſplanting, ſhould be firſt marked in the Bark, that it may ſtand juſt in the ſame Manner to the South as formerly; and alſo that they ſhould be ſet in ſuch an Age of the Moon. But both theſe, and many more, are juſtly confuted by the more ſagacious modern Authors, and more ſubſtantial Truths and Methods inſtituted in their Room. Yet it is of great Conſequence to plant a Tree in a right Situation and Aſpect, both againſt a Wall or a Standard. In a Field, where a Row of Trees are planted on a Baulk, they generally are not far from a Hedge, which, if thick and tall, may ſhelter them whilſt young,

young, and after, if they run not very high, from the North and Eaſt Winds, *&c.* This ſo much defends the Fruit-Trees, as many Times to hinder their Blights, when others ſuffer. And likewiſe in planting an Orchard, the talleſt Sort of Trees ought to be ſet next the North, North-Eaſt, or North-Weſt, to defend the more ſhort from the Violences of thoſe Quarters in particular. And not only ſo, but the very particular Sort of Fruit ſhould be conſulted, that they may be ſuch as are moſt hardy. Indeed, Mr. *Bradley* carries this Intimation farther; and lays a great Streſs on chuſing and adapting Rows of one entire Sort of Fruit, or wholly a Plantation of one Sort of Pears, Apples, *&c.* becauſe when they are planted promiſcuouſly, the Farina or Seeds are carry'd in the Bloſſom-Time by the Winds from one Sort to another; which occaſions a Kind of Adulteration in the Fruit, and alters the genuine Taſte in thoſe Fruits, that otherwiſe would have them. According then to this Doctrine of his, how valuable muſt this Field-Planting be? For here, the Trees in their great Diſtance of Rows are cut off of that Sort of prejudicial Communication, and the Fruit enjoy'd in their original and true priſtine State. And this reminds me of the Complaint I have of late Years heard, that the true and great *Kentiſh* Pippin is ſo degenerated, that now there is none to be had as formerly for

Good-

Goodneſs and Bigneſs. It ſeems therefore, according to my Conjecture, that the Want of this Knowledge and Practice, may probably be the Occaſion of it.

Of the Choice of Fruit-Trees.

Trees are certainly like Animals, as to Youth and Age: And here I muſt own my Miſtake, which ſome Years ſince I was guilty of, in preferring old large Apple and Pear-Trees before young ſmaller ones. And being in a Nurſery at *Redburn*, I thought my ſelf in the right of chuſing theſe large Trees about twelve Years old, to tranſplant in my Fields; when the ſame Seaſon I had ſome from *Brentford* about four Years old, that grew at leaſt three Times faſter in one and the ſame Field. The former I had off a poor Ground, which, according to the ſhallow and utterly wrong Notion of ſome, is eſteem'd a valuable Opportunity, when from thence they are tranſplanted into a more rich Soil: But this I have found to be a very groſs Miſtake. To explain which, I refer, as I ſaid before, to the Animal Kingdom, where 'tis obvious, that if a Beaſt in his Youth is ſtunted for want of ſufficient Food, *&c.* he will never thrive, nor arrive to that Bulk of Body and Tallneſs, as his Fellow that was brought up under the moſt plenary Advantages; even ſo it is with a Fruit-Tree,

as they may ſurely prove that try the Difference. In a Nurſery, particular Care ought to be had in the Inſpection of Trees, that none may be made choice of that has a Canker or any Tendency thereto; for this is a malignant Diſeaſe, and is ſeldom cured but by cutting out: So no leſs Care is to be had in buying thoſe that are well rooted; for without that our Hopes are vain. And notwithſtanding the common Cant of the Nurſery-Gardeners, who often impoſe on the Ignorant, by telling them this or that Tree will grow, altho' but half or a quarter rooted, give them not Credit. It is true, they may grow and languiſh for a little Time; but the former Reaſons I have laid down, of the Loſs of our Hopes and Profit, the precious Time and Ground, is enough, I hope, to prevent this Impoſition. A great Fruiterer in *Thames-Street* told me, that great Part of our Apple-Plantations ought to be extirpated, or their Heads cut off, and better Fruit put on; for that in the Room of others, the Golden Rennets, Pippins, and Pearmains ſhould be planted; for their great Uſe, I ſuppoſe, in making Cyder of that Sort, as at this Time of Day is reckon'd moſt wholeſome to the Body, and agreeable to the Palate; and alſo for their great Uſe in the Kitchen, and at Table, above others. And here I add my Sentiments of another Sort, which is now very much in Vogue, namely,

the

the Non-pareils; I mean ſuch as are grafted on the free Stock, in order to become tall Standards, as ſome are by me on high Ground, and a cold, loamy, wet Soil. This Apple is a Bearer on ſuch a Tree, and has a great many good Properties belonging to it; it is an Apple that will make very good Cyder, and now generally preferred at Table. It keeps a great while, provided due Care is uſed in its Conſervation: Not as ſoon as gathered put in Heaps on Wheat-Straw, as the common Way is, for that generally terminates in their Rottenneſs, becauſe the Fruit will in a little Time ſweat, and naturally expel their phlegmatic and crude Juice, which will not fail of wetting the Straw they lie on; and this, after the Sweat is over, will conſequently rot the Fruit: For all keeping Fruit has ſeveral Arch-Enemies attending it; the one is Moiſture, the other Froſt, and the third the ill Savour of the Place, or Boards on which they lie. The firſt is prevented by letting them lie in Heaps in large, tall, looſe Baſkets, ſuch as the *Thames-Street* Fruiterers uſe; or on Oak, and not Deal-Boards (unleſs they are very old) elſe the Turpentine Scent will affect the Fruit; and laſtly, by keeping 'em in ſuch warm, dry Places, where neither Froſt, nor Moiſture can do them Damage. I have drank ſuch Pippin Cyder, as I never met with any where but at *Ivinghoe Arſon*, juſt under our *Chiltern*

Hills, where their Soil is partly a chalky Loam: It was made by its Owner, a Farmer, and on my Recommendation our Miniſter went with me to prove it, and gave it his Probation. This was made from the *Holland* Pippin: And of ſuch a wholeſome Nature is the Pippin of any Sort above all others, that I remember there is a Relation of its wonderful Influences, I think it was in *Germany:* A Mother and two or three of her Sons having a Trial at Law, were aſk'd what they eat and drank to obtain ſuch an Age, which was 4 or 500 Years that they all made up amongſt them; they anſwered, chiefly by eating the Apple, and drinking its Juice. And I knew an eminent rich Lawyer, almoſt eighty Years old, who was very much debilitated through a tedious Sickneſs, on the telling him this Story, got Pippins directly, ſliced them to the Number of a Dozen at a Time, and infuſed them in Spring-Water, and made it his common Drink, till Cyder-Time came on; alſo he fell on planting a Number of Pippin-Trees in order to his enjoying their ſalubrious Quality, and a fine Plantation there is at this Day in his Gardens a few Miles from me. This Practice of his drinking the Pippin Liquor and Cyder, anſwered extraordinary well, for he lived ſeveral Years after, in a pretty good State of Health.

To make a ſtronger Cyder than the common Way.

Not in the Screw-Preſs, ſo well as the Lever-Preſs, becauſe the firſt confines the Bag too much, and ſo the middle Part of the Bag eſcapes the regular Preſſure that the two Outſides enjoy. But the latter has the greater Opportunity of forcing moſt Part of all the Apples in the Bag. Now to have the beſt Part, is to ſqueeze the Apples in the Bag very ſoftly, and but little: This firſt Running of the Apples is as the firſt Wort of Malt.

Of Planting the Sides of Barns and Out-Houſes, &c.

And here I muſt take notice of a general Misfortune, that I frequenly ſee in my Travels, of many brave Sides of Barns and Out-Houſes, Pales, and ſometimes Partition-Walls, loſt (as I may ſay) by being not improved with Trees anſwerable to ſeveral Aſpects and Bearings; and the rather, for that the Thatched Eaves hanging more over, and being more thick than thoſe of Tiles, are ſo much the more valuable, for their great Security in preventing Blights. For moſt of our Blights in Spring and Autumn fall perpendicularly; that is to ſay, the condenſed

Vapours, falling from the upper Region, do form themſelves at Night, when the Sun has withdrawn his hot Influences, toward the Surface of the Earth in Dews and watry Drops, ſubject to be frozen by the Coldneſs of the Air. And therefore the more any Thing lies open and expoſed to the perpendicular Deſcent of Vapours, the more will it be ſubject to be frozen and blaſted; the Truth of which is confirmed to us both by Reaſon and Experience: For the Obſervation of this is plain, when the Leaves and tender Shoots of a tall Aſh-Tree, in one of thoſe blighting Nights, may be ſeen to be frozen and as it were ſindged at the Bottom and middle Parts of the Tree, whilſt the upper Part, that is exalted above the Influence of the Miſt, ſhall be left free and untouch'd. But as to the black Wind-Froſts, which come more horizontally, altho' theſe Eave-Shelters are of ſingular Advantage, yet I am forced every Spring to make uſe of our common five-ſloted Hurdles of eight or nine Foot long and about four wide; theſe I have drawn with Straw-Bands, and woven through the ſame, which I put againſt my Wall-Fruit ſlopewiſe; and theſe are in my Opinion far better than Mats, becauſe they are of leſs Coſt, and admit more Air to the Trees, when at the ſame Time they keep off the Wets and Froſts in a great Meaſure, are eaſily put up and down when the Weather encourages, and do not break the Bloſſom

nor

nor Fruit, which Mats often do. And ſuch Advantages have been found in defending the bloſſoming Trees from the Wets, that ſome have put large Frames of Glaſs over, or before ſome of the beſt Sorts, when they are in Flower, and hardly a Bloſſom miſſes ſetting for Fruit. I ſuppoſe the Rain in this Caſe prevents the flying about of the *Farina fœcundans*, or impregnating Duſt, without which, Generation in Plants becomes abortive; ſo that it cannot perform its Office of ſetting the Fruit, or in other Terms to light upon, or enter the *Uterus* of the Bloſſoms. This Duſt, Mr. *Bradley* ſays, is the Male-Seed, and muſt be received into the *Uterus* of the Female, in ſuch a Manner as to reach the *Ovum*, and even to lodge itſelf in that Egg, before the Female can become pregnant. And again, it is no leſs certain, that the Seed of all Animals in Health abounds with living *Animalcula*, ſome one of which, when received into the Egg, as its proper *Nidus*, becomes in due Time a perfect Animal according to its Kind. Theſe *Animalcula* are eaſily diſcovered by good Microſcopes; and that ſome of the *Semen*, which abounds with theſe *Animalcula*, does paſs into the Egg itſelf, is evident from the Obſervations one makes every Day of the Cock's Tread, in the Eggs of Fowls and Birds, without which it is known that the Egg will be unproductive. So it is plain, that if the Male-Seed

does not paſs into the *Ovum* of the Female, the Female cannot become pregnant, nor be productive of its own Species. The Proof of this is plain alſo in Vegetables; for if a Hazel-Tree ſtood in a Place diſtant from any other, and the Catkins were timely in the Spring cut off, there ſurely would be no Nuts that Year on the ſame, becauſe this is a Gelding or Caſtration; for the Catkins retain the Male Part, and the ſmall reddiſh Bloſſoms the Female; which at a due Maturity opens, and by the Wind receives the Male Duſt that is ſo blown from the Catkins, and becomes impregnated. Again, there is a terrible Misfortune that ſometimes happens by Vale or Dale Miſts, eſpecially when they are accompanied with a Froſt, and when at the ſame Time, the hilly Grounds about them entirely eſcape; and even on *May-Day* it has totally deſtroyed the young Mulberries, Cherries, Plumbs and Walnuts, *&c.* Which proves that Hoar-Froſts in Spring and Autumn are moſt dangerous Enemies; but dry Froſts are not ſo bad as wet ones. To prevent then in ſome Meaſure theſe Diſorders, ſome of late have planted moſt Kind of Fruits to a right Expoſition of the Sun againſt Eſpaliers, which they guard both before and behind as they ſee Occaſion, with portable Reed Hedges in Frames; ſo that the Trees cannot eaſily receive any Harm, either from the blighting Winds or Rain: For theſe

Frames may be ſet ſo cloſe to the Eſpaliers, that the Rain cannot get at the Bloſſoms to wet them; for Rain, when the Air is in Motion, cannot fall exactly downright.

Tranſplanting of Trees.

Tranſplanting of large Trees I think is done in the beſt Manner, when they dig a large Trench or Gutter about them, in *October* or *November*, that the Froſt may come more immediately round the Tree, Root and Mould, and will keep all three ſo firm together, that they may be taken up by the Help of Pulleys and Levers, or by Levers and Mattocks, and carried on a Sledge to any other Place.

But young Trees may be eaſier done, by drawing them leiſurely out of the Earth, or dug up with all the Roots that can be got, and with as much Mould as can be brought away with them, and ſet in Virgin Mould; always endeavouring to ſpread and lay the Roots ſeverally on their new Place, and plant as is before directed.

If Neceſſity obliges any Perſon to tranſplant in the Summer, then Mr. *Bradley*'s Way is beſt; that is, to plant the Roots in a Pap, or Mud, and keep watering throughout the Summer. This indeed will make them ſtrike, and make new Roots directly, altho' tranſplanted with the Head and Fruit on.

As I remember, it was about the Month of *April*, when that generous Gentleman, *Richard Screen*, Eſq; whoſe Seat is near *Bath*, gave me leave to preſent him with ſome Cuttings of White-Elder, of about two Foot long, which I did, and ſent them to him at *London*; where I deſired he would let his Servant ſoap the Ends of them very well, as I did here before I ſent them: He was pleaſed afterwards to return me his Thanks for the ſame.

Alſo, as an Author ſays, if a Tree be carried a great Way, even in the open Air, it may be ſafely done by waſhing the Roots, and anointing them with Soap all over.

Currants and Gooſberries may be made to grow as Standards, the former twenty Foot high, and the latter twelve. The Gooſberry at firſt, as well as the Currant, muſt be ſtaked up: The Currant will alſo cover an Arbour well. The great white and red *Dutch* Currant is a fine Fruit. But for the lateſt Experiments and Methods to improve them, I refer my Reader to Mr. *Cowell*'s curious and profitable Gardener.

EXPLA-

EXPLANATION of ſome WORDS in this BOOK.

ASPECT, is ſuch a Poſition or Bearing of the Side of a Wall, Barn, Houſe, or Garden, to the *South*, *Eaſt*, *North*, or *Weſt*.

Back-boughting, is done by drawing the Plough once forward and backward, thorough that which has been boughted.

Baulks of Graſs, or thoſe which ſome call Hedge-Greens; they lie next to the Hedges in ploughed Fields, and ſerve to turn the Plough-Horſes on.

Boughting, is made by two Thoroughs, that the Plough by going backward and forward, throws up againſt each other.

Broad-Land Ploughing, is juſt turning an even Piece of Ground topſey-turvey, and is the neateſt cleaneſt Ploughing of any other.

Combing, or *Hacking of Land*, is made by the Plough's being drawn forward and backward cloſer than Boughting in ſmaller Thoroughs,

Thoroughs; and tho' a little ſharp Ridge, or Sleeving be left, yet in a Manner, this is neat clean Ploughing.

Four-thoroughing of Land, is not clean Ploughing, but running up four Thoroughs cloſe together with the Plough; is beſt done off Wheat-Stubble Stitches in the Winter, to ſweeten for Peas or other Grain: Or Broad-Lands may be ploughed into four Thoroughs; a good Method.

Horſe-Houghing, is ſo called by reaſon it ſaves Man's Houghing; not that a Hough is uſed by Horſes, but their drawing a Plough in a particular Manner ſupplies the Uſe of a Hough.

Hove in Cheeſe, is a Hollowneſs with Eyes cauſed by being made from Clover.

The Hoving of a Cow, is otherways a Swelling cauſed by the Wind, in Clover or Lucern Graſs.

Kerning Ground, is that which, dreſt well, will produce a great Quantity of Corn, as Gravel does, when others will run more into Straw and leſs Corn.

Loamy Ground, is that between Sand and Clay, of a Hazel Colour, and is of all others the beſt Sort.

Nitrous Dews, are Salts in the Dews, which are beneficial to all Roots they come at.

Smutty Wheat, is that which is diſcovered by its black Ear, and may be ſeen in ſtanding

ſtanding Corn, from that which is ſound. Upon rubbing it on the Palm of the Hand, it will leave a black Powder like Soot.

Tilth, or *Tilt*, is Ground reduced by the Plough and Harrow to a Fineneſs or Powder.

Thoroughing down, is drawing the Plough once thorough the Bought, to lay it plain, for Wheat or Barley.

F I N I S.

Books printed for THO. ASTLEY *at the* Roſe, *and* STEPHEN AUSTEN *at the* Angel *and* Bible, *in St.* Paul's Church-Yard.

THE Practical Farmer: or, the *Hertfordſhire* Huſbandman. Part the ſecond, by the Author of the firſt Part. 8*vo*. The 2d Edition, price 1 *s*.

Mr. *Switzer*'s Compendious Method for the raiſing of the *Italian* Brocoli, *Spaniſh* Cardoon, Celeriac, Finochi, and other Kitchen Vegetables; alſo an Account of the Lucern, St. Foin, Clover, and other Graſs-Seeds; with the Method of burning Clay for the Improvement of Land. The ſixth Edition. To which is added, a Diſſertation on the Cythiſus of the Ancients, a Plant which may be ſucceſsfully made uſe of for the Improvement of the moſt dry barren Land: Alſo an Account of the great Profits which ariſe from the ſowing the Lucern and Burning of Clay, price 2 *s*. The Additions may be had alone, price 1 *s*.

The Practical Farrier: Or full Inſtructions for Country Gentlemen, Farmers, Graziers, Farriers, Sportſmen, *&c*. Containing a very curious Collection of well-experienced Obſervations, and upwards of 200 Receipts for the Cure of all common Diſtempers incident to Horſes, Oxen, Cows, Calves, Sheep, Lambs, Hogs and Dogs, digeſted under their proper Heads: Many of which have been practiſed ſeveral Years with great Succeſs, and the reſt taken from the lateſt and moſt approved Authors and other Practitioners, *viz*. Capt. *Burdon*, Mr. *Solleyſel*, Mr. *Gibſon*, Mr. *Markham*, Mr. *Snape*, Mr. *Maſchal*, Mr. *Fitzherbert*, and others. By a Society of Country Gentlemen, Farmers, Graziers, Sportſmen, and others. The fourth Edition, with the Addition of ſeveral curious Receipts: Alſo a ſhort Account of Moles, with different Methods of deſtroying them. Price 1 *s*.

The True Amazons; or, the Monarchy of Bees: Being a new Diſcovery and Improvement of the wonderful Creatures. Alſo the Art of making *Engliſh* Wine or Mead. By *Joſeph Warder* of *Croydon*, Phyſician. The Sixth Edition.

Sir *Iſaac Newton*'s Tables for renewing and purchaſing of the Leaſes of Cathedral Churches and Colleges, according to the ſeveral Rates of Intereſt, and their Conſtruction

ſtruction and Uſe explained. Alſo Tables for renewing and purchaſing the Leaſes of Land or Houſes. Very neceſſary and uſeful for all Purchaſers, but eſpecially thoſe who are any way concerned in Church or College Leaſes. To which is added, by a Right Rev. Prelate, The Value of Church and College Leaſes conſider'd, and the Advantages to the Leſſees made very apparent. The fifth Edition, price 1 *s.*

The Law of Tythes: Shewing their Nature, Kinds, Properties and Incidents; by whom, to whom, when, and in what Manner payable; how, and in what Courts to be ſued for and recovered; what Things, Lands, or Perſons are charged with or exempt therefrom. With the Nature, Incidents, and Effects of Cuſtoms, Preſcriptions, real Compoſitions, Modus Decimandi, Cuſtom of *London*, *&c.* Wherein all the Statutes and adjudged Caſes, relative to the Subject, are introduced and conſidered. The ſecond Edition, corrected. By *William Bohun* of the *Middle-Temple*, Eſq; 8*vo.* price 5 *s.*

A Tything Table, ſhewing (by way of Analyſis) of what Things Tythes are, or are not due, either by Common Law, Cuſtom, or Preſcription. By *William Bohun*, Eſq; price 1 *s.* Proper to be bound with the Law of Tythes.

The Landlord's Companion: Or, Ways and Means to raiſe the Value of Land. Containing, 1. Conſiderations on the Reaſonableneſs and Neceſſity of advancing the Farming Intereſt. 2. Conſiderations on the Cattle Trade, and the Methods of raiſing the Britiſh Rents. 3. Conſiderations on other Methods of Relieving our Landholders. With Political Diſcourſes on the Land Tax, War, and other Subjects, occaſionally intermixed. By *William Allen*, of *Fobſton* in *Pembrokeſhire*, Eſq; Price 1 *s.*

Ogilby and *Morgan*'s Pocket-Book of Roads, with their computed and meaſured Diſtances actually meaſured by the Wheel. To which are added, a Table for the ready finding any Road, City, or Market Town, and their Diſtance from *London:* A Sheet Map of *England* fitted to bind with the Book: And an exact Account of all the Fairs, both fixed and moveable, in alphabetical Order, ſhewing the Days on which they are held. By *William Morgan*, Coſmographer to their Majeſties. The 9th Edition, with above 1000 Corrections, price 1 *s.* 6 *d.*

A New Engliſh Diſpenſatory, in Four Parts; containing, 1. A more accurate Account of the ſimple Medicines than any hitherto extant. 2. The officinal Compoſitions, according to the laſt Alterations of the College at *London*. To which are added, the Emendations of the *Edinburgh* Diſpenſatory, and many other Compoſitions, taken from the Practice of our Hoſpitals, and the moſt celebrated Authors. 3. Extemporaneous Preſcriptions, taken from the beſt Authors, and the moſt eminent Phyſicians now in Practice. 4. A rational Account of the Operations of Medicines. To which are added, the Quantities of the middle Syllables of the *Latin* Names expreſſed by long and ſhort Marks: So that the Diſpenſatory anſwers at the ſame time the Purpoſe of a *Proſodia Pharmaceutica*. By *James Alleyne*, M. D. 8*vo*. price 6 *s*.

Critical Reflections on the Emmenology of Dr. *Freind*. By Dr. *Le Tellier*, a *French* Phyſician. Tranſlated into *Engliſh*, 8*vo*. 1732. Printed on the ſame Size with the Emmenology, and proper to be bound with it. Price 1 *s*. 6 *d*.

A Treatiſe of the acute Diſeaſes of Infants. To which are added, Medical Obſervations on ſeveral grievous Diſeaſes. Publiſh'd originally in Latin at the Requeſt of the accompliſh'd Dr. *Sydenham*. By the late learned *Walter Harris*, M. D. Fellow of the College of Phyſicians, and Profeſſor of Surgery in the ſame. Tranſlated into Engliſh by *John Martyn*, F. R. S. Profeſſor of Botany in the Univerſity of *Cambridge*.

A New *Roman* Hiſtory, by Queſtion and Anſwer. In a Method much more Comprehenſive than any thing of the kind extant. Extracted from ancient Authors, and the moſt celebrated among the Modern. And interſperſed with ſuch Cuſtoms as ſerve to illuſtrate the Hiſtory. With a Complete Index. Deſigned principally for Schools. By the Author of the Hiſtory of *England*, by Queſtion and Anſwer. The 2d Edition, price 3 *s*. Calf.

The Hiſtory of *England*, as well Eccleſiaſtical as Civil, by way of Queſtion and Anſwer. Extracted from Mr. *Rapin Thoyras*, and the moſt eminent Hiſtorians. Which gives a moſt particular and accurate Account of the Monarchy, the State, Government, and Geography of *Great-Britain* and *Ireland*: Alſo, the Wars and Revo-

lutions

lutions that have happened in theſe Kingdoms; with an Account of the Conqueſts and Governments of the *Romans*, *Saxons*, *Danes* and *Normans* in *England*: Likewiſe a particular Hiſtory of each King, from the firſt Eſtabliſhment of that Kingdom to his late Majeſty's Reign. To every King's Reign there is a moſt excellent Chronological Table prefixed, by which you may eaſily diſcern, what Popes, Emperors of the *Eaſt* and *Weſt*, Kings of *France*, *&c.* have reigned. It alſo gives an Account of the moſt eminent Men that flouriſhed in each Reign; by what means the Kingdom of *Ireland* came to be dependant on the Crown of *England*; what Wars have happened in *Ireland* and *Scotland*. It is a Book deſerving of a Place in the beſt Study; and yet is ſo eaſy and intelligible, that it will delight and improve the meaneſt Underſtanding to that Degree, that even Children may become excellent Hiſtorians, and give a good Account of theſe Kingdoms and the Government thereof. The 5th Edition, 12*mo.* price 2 *s.* 6 *d.* Calf.

The natural Method of Teaching, being the Accidence in Queſtions and Anſwers, explain'd, amended, and fitted to the Capacity of the loweſt Form. For the Uſe of St. *Paul*'s School. The ninth Edition. By *Samuel Hoadley*, M. A. price 1 *s.* 6 *d.*

Ovid's Metamorphoſes. In fifteen Books. Made *Engliſh* by Mr. *Pope*, Mr. *Gay*, Mr. *Philips*, and others. Adorn'd with Cuts. Publiſhed by Dr. *Sewell*, 2 Vols. 12*mo.* The 3d Edition, price 5 *s.*

The Choice: A Collection of the moſt celebrated *Engliſh* and *Scotch* Songs. In 3 Vols. 12*mo.* price 4 *s.* 6 *d.* bound in Red.

The Life and entertaining Adventures of Mr. *Cleveland*, Natural Son of *Oliver Cromwell*. Written by himſelf. Giving a particular Account of his Unhappineſs in Love, Marriage, Friendſhip, *&c.* and his great Sufferings in *Europe* and *America*. Intermix'd with Reflections, deſcribing the Heart of Man in all its Variety of Paſſions, and Diſguiſes; alſo ſome curious Particulars of *Oliver*'s Hiſtory and Amours, never before made publick. In 3 Vols. 12*mo.* price 7 *s.* 6 *d.*

The Works of *Virgil*. Tranſlated into *Engliſh* Blank Verſe. With large Explanatory Notes, and critical Obſervations. By *Joſeph Trapp*, D. D. In 3 Vols. 12*mo.* price 9 *s.*

The

The Uſefulneſs of Mathematics demonſtrated: Being Mathematical Lectures read in the public Schools at the Univerſity of *Cambridge*. By *Iſaac Barrow*, D. D. Profeſſor of the Mathematics, and Maſter of Trinity-College. To which is prefixed the Oratorical Preface of our learned Author, ſpoke before the Univerſity on his being elected *Lucaſian* Profeſſor of the Mathematics. Tranſlated by the Reverend Mr. *John Kirkby*, 8*vo*.

Geometrical Lectures, read before the Univerſity of *Cambridge*. By *Iſaac Barrow*, D. D. Tranſlated by *Edmond Stone*, F. R. S. 8*vo*.

The Compleat City and Country Cook: Or, Accompliſhed Houſewife. Containing ſeveral Hundred of the moſt approved Receipts in Cookery, Paſtry, Confectionary, Pickles, Cordials, Preſerving, Coſmetics, Syrops, Jellies, *Engliſh* Wines, *&c*. Illuſtrated with Forty-nine large Copper-Plates, directing the regular placing the various Diſhes on the Table, from one to four or five Courſes. Alſo Bills of Fare, according to the ſeveral Seaſons for every Month of the Year. Likewiſe the Horſe-ſhoe Table for the Ladies at the late Inſtalment at *Windſor*, the Lord Mayor's Table, and the other Hall Dinners in the City of *London*; with a Fiſh Table, *&c*. By *Charles Carter*, lately Cook to his Grace the Duke of *Argyle*, the Earl of *Pontefract*, the Lord *Cornwallis*, *&c*. To which is added by way of Appendix, near two hundred of the moſt approved Receipts in Phyſic and Surgery for the Cure of the moſt common Diſeaſes incident to Families: The Collection of a Noble Lady deceaſed. A Work deſigned for the Good, and abſolutely neceſſary for all Families.

A Compendious and Methodical Account of the Principles of Natural Philoſophy, as explained and illuſtrated in the Courſe of Experiments, performed at the Academy in *Little Tower-ſtreet*. By *Benjamin Worſter*, A. M. The Second Edition. Reviſed and Corrected, with large Additions, by the Author, 8*vo*.

Directions for the profitable reading of the Holy Scriptures, together with ſome Obſervations for the confirming their Divine Authority, and illuſtrating the Difficulties thereof. By *William Lowth*, B. D. and Prebendary of *Wincheſter*. The Fourth Edition: To which is added, Morning and Evening Prayers, and other Devotions collected from *Nelſon*, *Patrick*, &c.

THE

Practical Farmer;

OR, THE

Hertfordſhire Husbandman:

Containing many New

IMPROVEMENTS in HUSBANDRY.

I. Of MELIORATING the different SOILS, and all other Branches of Buſineſs relating to a FARM.
II. Of the NATURE of the ſeveral Sorts of WHEAT, and the SOIL proper for each.
III. Of the great Improvement of BARLEY, by BRINEING the SEED, after an entire new Method, and without Expence.
IV. Of increaſing Crops of PEAS and BEANS by HORSE-HOUGHING.
V. Of TREFOIL, CLOVER, LUCERN, and other Foreign Graſſes.
VI. A new Method to IMPROVE LAND at a ſmall Expence, with BURNT CLAY.
VII. Of the Management of COWS, SHEEP, SUCKLING of CALVES, LAMBS, *&c.* with Means to prevent, and Remedies to cure ROTTENNESS in Sheep.
VIII. How to keep PIGEONS and TAME RABBITS to Advantage.
IX. A new Method of PLANTING and IMPROVING FRUIT-TREES in *Ploughed Fields*.
X. Of the various MANURES and DUNGS proper for every SOIL.
XI. Of the Uſefulneſs, Culture, Method of Raiſing, Drying, and the Virtues of HOPS.
XII. Of Foreign WHEATS.
XIII. General OBSERVATIONS on the Year 1734.
XIV. A COMPARISON of different METHODS of FARMING in ſeveral Countries.

By *WILLIAM ELLIS*,
Of *Little Gaddeſden*, in *Hertfordſhire*.

PART II.

The Third Edition.

LONDON:
Printed for T. ASTLEY, at the *Roſe* in St. *Paul's Church-Yard*. 1742.
(Price One Shilling.)
Of whom may be had, The Firſt Part.

THE

Practical Farmer, &c.

PART II.

THE firſt Particular treated on in the former Part of this Work, is the Melioration of Soils by Mixtures of Dungs, Hand-manures, Artificial-Graſſes, &c. and certainly it ought to be the chief and ultimate End of our greateſt Cares and beſt Endeavours in Farming ſo to do, becauſe as the Earth is the Foundation or Production of all Crops, and Increaſe of Grain, Fruit, Wood, Cattle, &c. if this is neglected, all Things that are ſown, planted, or grow in the ſame, will complain, and Nature itſelf will be a Witneſs of the ill Huſbandry of its Occupier. This was more than ordinary evident to me, when I ſaw an Acre of Ground of my Neighbour's produce only four Buſhels of Wheat, and another that return'd forty Buſhels; and I am ſure the former was the better Land, becauſe it was a deep Hazle Loam, and the latter a Hurlucky-chalk. The firſt was inclos'd and rented at 14*s.* *per* Acre, the other open-field Land, at about half the Money, a great Difference in-

deed, and that by mere Dint of Husbandry, for the inclos'd Field was but half dress'd, and that only with light Cart-dung, that was ploughed in, and then sown with Wheat on a Fallow of four Tilth, after a Crop of Peas, when the other had regular Ploughings all the Summer, brought into a fine sweet Tilth, was well folded, and had about fifteen Loads of short Horse-dung ploughed into, and thoroughly mixed with the Earth; by all which it may plainly appear, how one Farmer may be ruined, while another gets an Estate; for there is the very same Rent, Taxes, Tythes (if paid for) Ploughing, Reaping, *&c.* of a bad-manag'd Acre of Ground, as there is for one ever so well husbanded: So that it is egregious Folly to undertake Farming without a Person has both Money and Skill, and there be a due Application of both. Another lively Instance of this appear'd in one of my Acquaintance's Conduct that rented about 100*l.* a Year, who having only but 100*l.* besides his Stock, laid most of it out in meliorating his Land with Chalk and other Dressings, and tho' it is near twenty Years ago, such a Beginning proved a Foundation of most of his After-success, and the Man can now call himself a Man of Substance; when the slothful, negligent Farmer (who had, in my Opinion, as good an Opportunity as the other) is at this Time reduced to great Indigence.

The Shifting or Changing of Crops yearly is an experienc'd Improvement towards meliorating of our Earths; for as several Species or

Roots

Roots have their Suction from the Ground in different Manners, they each Time cauſe an Alteration in the Nature of the Land, and thereby makes it a more proper Receptacle for the next Change of Grain or Graſs: But this Uſage can't be carried on in Clays or Loams, ſo long as in Gravels, Chalks, or Sands, becauſe a Clay or Loam by this Means will in Time become heavy Clung and Som, and then it's in vain to ſow any more till it is got ſweet again; and if they are ſowed conſtantly too long, ſuch Earth will be overtaken with the wild Oat. But Gravels, Chalks, and Sands will hold ſowing ten Years together, provided they be got to a Tilth, dreſs'd well, and the Seed chang'd every Year: Yet even theſe by Length of Time and conſtant Sowings, will be apt to breed the wild Oat or other Trumpery, as it happened to be my Lot to prove in *Feb.* 1733, when, at *Leighton-Buzzard* in *Bedfordſhire*, I bought ſome Barley that came off a ſandy Soil at *Solebury*, where they ſow their Ground every Year, but the Barley was ſtained with the wild Oat; however, I could get no better there, the Change being right from a Sand to a Loam; and indeed ſuch Alterations of Seed have now very much ſupplanted the Uſe of Chalk and Lime, that would very potently open the Pores of the Earth, and ſweeten it to ſuch a Degree, as, with the Help of the Plough, would meliorate it for twenty Years together: Inſtead of which, a Crop of well-houghed Turnips, a full Crop of Beans, or a houghed Crop of Peas, *&c.* will anſwer in a great Meaſure.

Of WHEAT.

THERE are many Sorts of it both in *England* and foreign Parts; but with us in the Weſtern Part of *Hertfordſhire*, there are but two Sorts in general Uſe, *viz.* the Lamas and the Pirks. The Firſt, as I have ſaid before, is the moſt noble Wheat of all others, for its large Body, fine Flour, and the great Quantity it yields; but then it is not fit to be ſowed on any Ground beſides rich Clays and Loams, becauſe in ſuch it will return its full Subſtance in Grain; but in Gravels, Sands, or poor Grounds the Pirks excel, and in either, there may be thirty-five or forty Buſhels obtain'd in an Acre ſome Years, if it is doubly dreſs'd with Cart-dung, Fold, Soot, Horn-ſhavings, Rags, *&c.* for Gravels, tho' they are naturally poor Soils, yet are they of ſuch a kerning Nature, that I have known them bear eight Quarters of Barley on an Acre, and ſo in Proportion of Wheat, and then a Farmer may depend on paying his Rent, and ſaving of Money; but he that ſpares Dreſſing, will be ſure to fail, if he expects ſuch Crops.

Beſides, when a full Crop of Wheat, or any other Grain has grown in the Ground, ſuch Land will be made hollow, and freed of Weeds, which renders it in a true Capacity to bring forward ſucceeding Crops to great Profit: This anſwers the old Maxim, *That Riches beget Riches.* For many have found this Truth to anſwer in

their next Crop of Peas or Beans, that love dearly to grow in hollow rich Earths.

The Nature of that fine Wheat, by ſome called White Lamas, by others White Pirks, makes the whiteſt of Flour, and is beſt ground with the Red Lamas, becauſe the latter is generally full tough, and the other as brittle. The white Pirk is a hardy Wheat, and makes a great Return by its full Ear, and is much eſteem'd in foreign Parts. It is near alike to the *Sicilian* Wheat, that one of the Royal Society was ſo good to make me a Preſent of near a Peck, that I have now growing: And if any Perſon think fit to be furniſhed with this true genuine Seed, that I had the Year before laſt from about *Ayleſbury*, they may have it ſent up to *London*, or elſewhere, at a reaſonable Rate, on ſending a Letter (Poſt paid) directed to me at *Little Gaddeſden* near *Hempſtead* in *Hertfordſhire*, twenty-ſeven Miles diſtant from *London*.

BARLEY.

This Grain, in all Probability, is likely to become more plenty and cheaper than ever, by Reaſon of the great Increaſe that the famous Receipt mentioned in the firſt Part, will be the Cauſe of, if uſed according to my Directions. It will certainly be found to be the beſt Augmenter of Barley-Crops, of any of this Kind ever invented, and a happy Diſcovery it will be found in Time, not only for the great Uſe it affords

of making brew'd and diſtill'd Liquors; but the extraordinary Opportunity it gives the Farmer of feeding his Horſes, and fattening his Hogs, *&c.* when firſt broken by the Mill; and therefore I would adviſe the Sowing of Barley as often as there is Room for it, and then the Ground, which (when ſow'd with this Grain) commonly lies in broad Lands, will be ready on one Ploughing to bear a good Crop of Beans, Peas, *&c.* and after the Peas or Beans (if they are a full Crop) a Crop of Wheat may ſucceed before the Ground is fallowed; and for this Reaſon many in the Chiltern Country give their Land a Fallow after three Crops, whereas formerly they us'd to do it after two.

It is poor Farming when a Farmer accounts three or four Quarters of Barley on an Acre, a good Crop, after his great Charge and Trouble of Ploughings and Dreſſings, as I have known it often happen in our Chiltern Grounds; but how inſipidly obſtinate are thoſe Men that thus go on, when they may as well have ſeven Quarters on an Acre, and that for not a Halfpenny Charge, as I know of, more than the old Way, becauſe the Buſhel of Barley ſaved in the Seed, balances the Charge of the Nitre, as I have already wrote of. However, I am in Hopes the Eyes of their Underſtanding will be open'd in Time, and if Reaſon won't convince them, the Examples of their more diſcerning Neighbours will, and provoke them to the frequent Uſe of this my invaluable Receipt.

OATS.

OATS.

Oats is a Grain very apt to ſhed if they are too ripe before they are mowed, even to the Loſs of half the Crop; or ſometimes the ſame Diſaſter is occaſion'd by great Rains that fall after they are mowed, and by Length of Time looſen them in the Hull, ſo that great Quantities are ſcatter'd out before they can be got in. It is therefore excellent Huſbandry to feed the Field firſt with Hogs, and then with a Number of Turkeys, Hens, or Chickens: It's true, Cocks and Hens are not Fowls that will bear driving, if the Field is at a Diſtance; but Geeſe or Turkeys will; and then there will be a great Improvement made, which otherwiſe would be loſt, as I ſee it often done by many remiſs Farmers. Again: If Oats are mowed too ſoon before they are ripe, and got in before they have had Rain, they will be very troubleſome to the Threſher, and coſt more Money and Time to get out; they will alſo be ſhrivelled up and ſmall-bodied, that will much hinder their Sale, therefore this Grain ſhould be firſt examin'd by good Judgments before it is mowed and got in. It's a common Notion with ſome, that Oats will take no Harm, if the Water runs out of the Cart as they are bringing Home, but this is wrong; for ſuch Oats generally will become mouldy and hoary in the Mow, and ſo ſtink as to ſpoil the Sale of them: If they ſaid, they would take leſs

Damage

Damage by Wets than other Grain, I am of their Sentiments; and if a Shower or two falls on them after Mowing, it often does them a great deal of Good, becauſe it plumps their Kernels, and makes them threſh much eaſier and better, and for this Reaſon many let them lie on purpoſe in the Field for the Enjoyment of this Benefit.

It is a Grain that is obtain'd with the leaſt Trouble and Charge, and where Ground is proper for them, they will pay as well as any. They are likewiſe neceſſary to ſow as a Change to the Ground, that always beſt proſpers under Variety of Seeds; and then ſeveral Crops may be had before a Fallow is allow'd it, eſpecially if the Land is a Gravel, Chalk, or Sand.

FRENCH WHEAT.

This great Improver of Ground is ſuch a Friend to the Farmer, that if its Value was more known, I am ſure it would be more made uſe of than it is: What a Benefit muſt it be to dreſs an Acre of Ground for half a Crown, as well as Soot or moſt other Manures would for twenty or five and twenty Shillings! Indeed it is not all Ground would admit of this Management, but in Sands, Gravels, *&c.* this Grain will grow and flouriſh, if ploughed in at *Auguſt*, and Wheat be ſowed on the ſame when it is rotted, there will undoubtedly be a good Crop; and of Rye, if ſerved in that Manner.

PEAS

PEAS *and* BEANS.

Theſe are alſo great Improvers of Land, as well as a great Friend to the Farmer in particular, and are now become ſuch a uſeful Grain, that the like was never known; hardly a Farmer, as well the Rich as the Poor, but what fat Hogs enough to keep them and their Families good Part of the Year from the Butcher's Shop: The Excellency of this nutritious Fleſh wants no Encomiums to illuſtrate its Value and Uſe; but yet I can't help obſerving the Humour of the *Kentiſh* Farmers, who were the firſt as I know of, that brought up the general Cuſtom of pickling Pork, which among them is ſo common, that I remember a Ploughman had a Warrant for his Maſter for feeding him with this Pork three Months together. It has now almoſt ſupplanted the Uſe of Bacon in that Country, and with a great deal of Reaſon, becauſe there is not that Waſte in this, as in the Rhind and Ruſt of the other.

Peas and Beans are the beſt of Food for fatning of Swine, and make the firmeſt Fleſh, of all other Grain. But a right Choice of Peas is of ſome Moment to the Farmer, who to act warily, ſhould have both the forward and latter Sorts, for then he ſtands the ſurer Chance of good Crops, and therefore he ought to begin with the Horn Grey-Pea that will bear ſowing in *January*, and is a moſt hardy Sort,

and

and of a good Size. The next he ſhould ſow is the large Maple-Pea, about the Middle of *March*, for ſooner will endanger their Growth: The next is the white *Eſſex Roading*, and the blue Sort, that ſhould be ſowed in *April* on Broad-lands, or in Drills; but the latter is the ſureſt Way, and by theſe laſt, he is liable to enjoy a Meſs of Green-Peas in the *Summer* Seaſon, and alſo a fine Pudding of them, or Meſs of Soup all the Winter.

Artificial GRASSES.

Thoſe Graſſes are evidently known to furniſh many Farms with good Hay all the Year, that before could not cut a ſingle Load, as having none but plough'd Ground belonging to the ſame; nor is this the only Benefit belonging to them: They likewiſe hollow the Earth, kill the Weeds, and enrich the Land with a great Quantity of Roots, that when the Land is ploughed up, are left in the ſame, eſpecially the Clover, St. Foyne, and Trefoil Sorts. Many of the Farmers differ in their Opinion, as to their Management: Some ſay, one Year's feeding or cutting of Clover or Trefoil is beſt, becauſe by that the Ground has received ſufficient Reſt and Alteration, and that Wheat or Barley ought to follow the ſame, as paying more than a ſecond Year's Graſs. Others ſay it is better to lay two Years, becauſe the Ground gets ſo much richer by having a longer

Reſt,

Reſt, and the Roots of the Graſs are the more bulky, and conſequently do the Ground more Good: But then ſuch Graſs ſhould be dreſs'd the ſecond Year with Coal-aſhes, or Soot, it being moſt natural for its Improvement, and by this Means the ſecond Year will be as good as the firſt, and make the Ground the richer for the ſucceeding Crop of Wheat.

Try your Clover-Seed firſt, by ſowing a little of it in a Garden, and if it comes up well there, it will do ſo in the Field; for there is a great deal of bad Seed mix'd with ſome good, and then it will diſappoint the Hopes of the Owner.

Rye-Graſs is a good Feed while green, for Cattle, and ſo is the Hay, if mowed in due Time, and got in well; but in the latter Part of the Summer, it grows dry, ſtubbed, and harſh, and good for little: It is poor Huſbandry to ſow rich Land with this Graſs, becauſe it only affords a Benefit the firſt Part of the Summer; whereas Clover holds it even to *All-hollontide*, and longer ſometimes; therefore poor gravelly Grounds, *&c.* are moſt fit for Rye-Graſs, and yet this Sort of Land may be put to a far better Uſe, as I ſhall hereafter make appear.

St. Foyne and Lucerne are truly worthy of Encouragement for their bulky Crops, when all other Graſſes are burnt up; but then they muſt be adapted to a right Soil, or elſe your Labour will be loſt: They both run much alike

with

with their carrotty Roots, and that ſo deep, that the Sun has the leaſt Power to dry them of all others, tho' they are ſowed in Chalks and Sands, which are the moſt proper Soils of all others for their Growth. They both will do well in dry Gravels and Loams, but not in Clays or wet Loams. However, any of the aforementioned Graſſes are admirably beyond that ill Piece of Huſbandry which too many of the negligent Sort, to my Knowledge, have and do uſe; and that is, the letting of the wild Honey-Suckle ſtand for a Crop the ſucceeding Summer after a Crop of Corn, in which it grew among; for it is only a Weed occaſioned by want of due and true Ploughings, that would certainly eradicate and deſtroy this Incumbrance, that often cripples whole Crops of Corn, eſpecially in wet Summers, when it grows moſt rampant; and this they ſuffer to grow to feed their Cattle inſtead of a Crop of Clover or other Graſs, to the great Prejudice of their Land, that muſt conſequently abound with this Weed the more, as Opportunity by this Means is given it to enlarge and increaſe its Roots *.

Of PLOUGHINGS, SOILS, *and* DRESSINGS.

Ploughing of Ground is of ſuch abſolute Neceſſity in all Lands, where Corn and artificial Graſſes are ſown, that whoever is wanting in this

* See Mr. *Switzer*'s Method of improving Land by Graſs-Seeds, Burnt-Clay, &c.

this Work to get the Earth into a fine, hollow, ſweet Condition when it is ſowed, may depend on it, that they ſtand a ſorry Chance of having a plentiful Crop of either; nor is it often ploughing the Ground that will do, if it is not plough'd deep where the Staple will allow it: Therefore the Two-horſe Farmers ſeldom cultivate the Ground as it ſhould be, becauſe their Strength renders them uncapable of doing this Work to the Purpoſe, beſides the many other Inconveniencies that attend the ſame. As in dry Seaſons, in Gravels eſpecially, they are obliged to loſe their Opportunities of ploughing, becauſe their Strength is not ſufficient to do this Work to the Purpoſe, nor can their Shair-Point penetrate deep enough to eradicate, nor their Coulter cut thro' the many potent Weeds that many Grounds are infeſted with, which is often the Occaſion of the Loſs of moſt Part of a Crop; for if only a Camock-root will ſet ſix Horſes ſometimes, what Chance has a Pair with ſuch a ſtrong Weed? 'Tis therefore a Farmer's Intereſt to keep a Horſe extraordinary, if his Conveniency will let him, to help him through theſe and many other Difficulties; that is, if he has but two, to keep a third, or three, to keep four, *&c.* as I know ſeveral do.

When Land is thus ploughed well, and the Weeds killed, then is there greater Room for Manures and Dreſſings, which in weedy Grounds helps to multiply and enlarge their Product, and often is the Cauſe that ſuch Weeds ſpoil

the

the Crop; and for this Reaſon ſome judicious Farmers won't put their Dung on the former Part of the Summer, but will ſtay till juſt before the laſt Ploughing is made, to ſow Wheat, that the Dung may not nouriſh the Weeds, which it will ſurely do, when ploughed in with them in foul Ground, as is too commonly ſeen, eſpecially in wet Loams and Clays; and therefore it is, that theſe Sorts can't be ploughed too often, when Sands, Chalks, and Gravels can't be too ſeldom. It was the Caſe of my next Neighbour this laſt Year 1733, in a Ten-acre Field, to plough about nine Acres of the upper or hilly Part of it ſeveral Times to get it into a fine Tilth for ſowing of Wheat, on a true loamy Soil; but the tenth Acre being a ſharp Gravel, lying on a Level at the Bottom of the reſt, he gave it but one Ploughing, and that only before he ſowed it with Wheat and folded on the ſame: This proved right Management, for if he had ploughed the gravelly Part oftner, the Rains would have waſhed the Mould from the Stones, and made it poorer: Beſides, one Ploughing would bring ſuch Ground into a Tilth as ſoon as two or three would a Clay or Loam.

BEASTS.

Cows, are Beaſts that very much vary, not only in their Make and Shape, but alſo in their Bags, which obliges the Buyer in particular,

cular, to have a Regard to them: Some have their Leathers thick and fleſhy; others thin and lainge. The thick-leather'd one will often ſeem big, and give but little Milk, and that very hard to be got, when a thinner one ſhall give much more, and be eaſily milk'd; and therefore, when a Perſon is Maſter of a right Cow, it concerns him to keep her on; for I may ſay, I have found this Sort hard to come by. I have had a little Cow with a good Bag give much more than a larger one that had a great deal of Leather, and little Milk: And indeed, in our Chiltern Country, a large Cow ſeldom pays like a leſſer one; becauſe, if they do milk well, yet muſt their Living be according to their Body, elſe they'll quickly loſe a daily Quantity of their Milk, which is ſoon loſt, but hardly (if ever) poſſible to get again that Seaſon.

SHEEP.

About *Chriſtmas* laſt, 1733, in the adjacent Parts of the Country near *Tame* in *Oxfordſhire*, there were many Sheep died rotten in their low Meadows, by Means of a white Froth on the Ground, occaſioned by the Fall of great Rains that at this Time happened, and alſo by Means of the Dirt or Sullidge that waſh'd from the higheſt Parts on the lower, that tainted the Graſs, and did the Damage. It's true, the Rot was not very much this Winter, in Com-

pariſon of ſome that has been, and therefore the eaſier cured: But had my invaluable Receipt of the Regulus of Antimony been duly applied, and my other Items been obſerved, undoubtedly there had not been ſo many periſhed, as was. Nor would there be ſuch a Number of Misfortunes happen to Horſes, Hogs, and other Cattle, as perpetually do, if the right Uſe of the ſeveral Preparations of Antimony were more known and practiſed.

RABBITS

Are Creatures that not only ſupply the Markets, but alſo ſerve a Family for Variety, and at a Time of Neceſſity, which makes them more and more be bred in Hutches. But, in my Opinion, not one in ten does this to the Purpoſe, and that for want of Management. The ignorant Man I have known give Wheat-Pollard (which is the beſt of Food for them) with freſh Grains, and ſometimes neglects the Mixture with ſtale ones, but there is not that Occaſion for the firſt as the laſt; for when Grains (which is their common Food) are ſtale, then the Pollard takes off the griping Part of them, which new ones are free from. The right Sort of Rabbits are alſo a principal Matter, for without them a great deal of Charge will be loſt; for it is the ſame with theſe as with Horſes,

or

or Cows; the beſt I can light of are thoſe that are all grey, and a brightiſh Circle about their Eyes. This Pollard will, beſt of any Thing, prevent the young ones being pot-bellied.

PIGEONS

Alſo are of the ſame Service, and pay as well for their Food and Care that is beſtow'd on them, and are indeed leſs troubleſome than the Rabbits, becauſe they can provide for themſelves better. There are ſeveral Perſons, to my Knowledge, that out of an avaricious Temper, neceſſitate the Pigeon to ſeek his Food abroad; but what ſuch Perſons get in the Hundred, they loſe in the County; for theſe Creatures, as they are great Breeders, ſo are they Feeders; and where they are debarred of their Fill, they are obliged to roam at a Diſtance, and ſo are expos'd to the Loſs of their Lives by Guns and Hawks, and often tempted to ſtray away with others of their Specie, or at leaſt to breed ſeldomer than if they were kept from that Fatigue and Trouble: It alſo is the Occaſion of ſome Loſs of their Dung, that thoſe moſt enjoy that moſtly feed. A Turner by me keeps forty Pair of Pigeons, twelve breeding Does in Hutches, a Number of Fowls in proportion, and only rents a Houſe and Orchard of five Pounds a Year, which gives him an Opportunity to go

to *Hempſtead* Market almoſt every Week, for the Sale of ſome of their Young; and with Hens-Eggs, during the Seaſon. But his Skill and Diligence in this Affair is (as in many others) half the Profit; and he has often proved, as well as myſelf, the great Benefit of feeding well, for that then the Cock and Hen will bring up a Pair at a Time, when they will but one, if ſtinted of their Meat.

HEDGING.

This moſt ſerviceable Invention is the Farmer's Happineſs in more than one Reſpect; it not only furniſhes Fuel, but contributes greatly to his Repoſe, by being an Aſſurance Night and Day againſt Cattle's damaging himſelf and Neighbours; and therefore ought to be propagated with all Expedition, Care, and Diligence, where it may be done. It alſo gives him an Opportunity to diſplay his deſpotick Power (where he is not obliged to the contrary) by ſowing what he thinks fit, and when, which open Fields generally debar him from; and it may be depended on, that Incloſing will be more beneficial than ever, for ſeveral Reaſons that I could here aſſign. The beſt Hedge, as I have already ſaid, is the White Thorn and Sallow, for Wood and Fence, where they will grow: Holly and Furze, indeed, do potently reſiſt both Men and Horſes, and are proper in ſandy or barren Grounds, where the

two firſt will not proſper. The Horn-beech makes a pleaſant good Fence, and is a profitable Wood for Firing, and many other Things, but then it's tedious in Growth. The Aſh is uſeful, but it has its Faults. The Hazel is a ſlow Grower. The common Beech is beneficial on Chalks, but is late before it is fit to cut in a Hedge. The Maple will thrive well on ſome Sort of dry Grounds, but is a ſoft Wood, and bad Fence. In a Word, there are nothing beyond the Sallow and White Thorn in Gravels, Loams, Clays, *&c.* but in marſhy Grounds the Alder exceeds.

PLANTING.

I ſhall be brief in this Article, becauſe I have already enlarged on it, and ſhall only ſay, that now about me, it is become a general Practice to plant the Fruit-Trees on the very Surface of all Grounds, be they Chalks, Gravels, Loams, or Clays, be they either ploughed or ſowed, becauſe the beſt Earth is always at Top; and by covering their Roots after they are planted in good Mould, with Dung or Horſe-litter, they will be ſecur'd againſt the Drought, and grow as faſt again, as if ſet deep in the Earth; eſpecially if Virgin Mould is firſt put in a Foſs, for their Roots to run into in *October* or *February*; for then let the ſucceeding Summer be dry, they will grow and flouriſh without watering (as I have already

obſerved) which would be an exceſſive Charge and Trouble, if Trees were planted at ſome Diſtance from the Houſe, or on Hills: By this Method large Plantations might be propagated to great Advantage; when, on the contrary, all the Charge of Fruit and other tranſplanted Trees would be loſt, which indeed in many thouſand Inſtances have proved a Diſcouragement, not only to thoſe already planted, but to the Propagation of others that would have been planted, had the firſt anſwered Expectation; and I dare ſay this is the main Impediment why the County of *Hertford*, and ſeveral others near *London*, is not at this Day better furniſhed; which, if they were, would prevent, in a great Meaſure, the Effect of the old Proverb,——*Far fetch'd and dear bought*,——as is true at this Day; however, I hope in Time the Scales will be taken off the Eyes of the Landlord's Mind, that lives in the adjacent Countries to *Middleſex*, who have a better Opportunity by far, than ſome of the North-Weſt Countries, whoſe Benefit is partly advanced by our Miſtakes; becauſe what hinders many Improvements, is a barbarous Notion that governs too many, who are adverſe to new Diſcoveries, or envying others that have rival'd their Wiſhes or Intentions to propagate the ſame; ſuch, I ſay, are too much guilty of that ſordid ſavage Quality that is charg'd on the Dog under the Manger, that would neither eat Hay himſelf, nor let the Horſe

Horſe eat it. Others that are ignorant of theſe moſt neceſſary Improvements in Farming, are ready to ſlight an Eſſay on the firſt Sight, becauſe it is not within the Compaſs of their narrow Underſtandings. This I have had a regretted Experience of by too many of my Countrymen; but however, I am reſolved that ſhall be no Barrier to me, becauſe I am perſuaded theſe, and the many other new Things that I am going to publiſh in Agriculture, *&c.* will be followed and practiſed in Time by thoſe very Caviliſts, for the Sake of their Intereſt only; for I don't expect Dint of Reaſon will ever get ſo much the Aſcendant with theſe Sort of People, as to reduce their Obſtinacy to practiſe upon any other Footing.

Again: In the Undertakings and Performances there are many Miſtakes committed, to the entire Diſcouragement of the Owner; as the Planting of an Apple where a Pear ſhould be; a Cherry inſtead of an Apple; a Wallnut in the Room of a Codling, Plumb, Pear, Cherry, *&c.* and then the Iſſue will be Charge and Expectation without Profit: Or elſe by an erroneous Method of ſetting a Tree in the Ground at firſt; and this is ſo great a Calamity, that I dare be preſumptuous to ſay, That not one Orchard in ſix, throughout the Nation, is planted right. How neceſſary then are theſe Books, that may convict Perſons of ſuch fatal Miſtakes, and ſhew them at the ſame Time a Way of Planting, that will be

truly ſucceſsful, and give them Fruit in a little Time, as well as many Years afterwards?

For this Purpoſe, happy are they that poſſeſs good Earth, for we find that this will give more than that which is mended with great Coſt and Charges: Therefore it is very neceſſary to enquire into the Quality of your Ground, whether it be heavy or light, dry or moiſt, ſoft or ſtrong, what is proper to mend the Ground with, and how to chuſe Trees fit to plant it withal: For he acts the beſt Artiſt that accommodates his Tree to its proper Soil.

Moiſt Ground produces the largeſt Trees, and Fruit and Trees will laſt many Years longer in ſtiff moiſt Grounds, than in the more dry and looſe Earths; but then the Fruit will not be ſo well-taſted in the former, as in the latter. He that will but obſerve a moiſt and dry Summer, and the Difference of Soils, may ſoon diſcern the ſame by the Taſte.

According to your Ground, you muſt chuſe ſeveral Ways of Dunging.

COW-DUNG

Is a fattiſh, but poor Excrement, yet is good in all hard, dry Grounds, to make them ſoft and light.

SHEEPS-

SHEEPS-DUNG

Is of a hard, unctuous, ſaline and hot Nature, and aſſiſts all Grounds more than any other: It is a univerſal Dreſſing to any Manner of Earth whatſoever, and of two Years Duration in the common Fields; and therefore, where any Surface of Ground can be conveniently come at with the Fold, it will do vaſt Service to the Roots of any Tree, both in Summer and Winter; it is this that makes Field-planting ſo beneficial, becauſe when Trees are planted in Rows on the Graſs-baulks or Hedge-greens of ploughed Fields, they conſequently receive great Aſſiſtance from theſe and other Cattle's dunging and ſtaling on their Roots, as I have before more largely wrote on: And where a Perſon has an Inclination to plant a Piece of Ground with Fruit-Trees, who has no Sheep of his own, this may be ſupplied very well, if he lives near Commons that are grazed by Sheep; for then he may gather all the *Summer* long Quantities of this excellent Dung, with which he may make an Infuſion, and water the Roots of his Trees with the ſame to an extraordinary Profit. The Stale of this Creature is alſo certainly of a very hot, ſaline Nature, by Reaſon it generally lives with leſs Water than any other Beaſt whatſoever of its Bigneſs, and therefore of great Efficacy to the Roots of Trees, and in-

deed moſt other Vegetables. Their Wool likewiſe adminiſters a Nutriment to the Earth whereon they frequently lie, by the Warmth and Greaſe thereof.

HORSE-DUNG

Indeed is better for a Flower-Garden than Trees, in ſome Reſpects: But there is a Way of making it very ſerviceable for Trees alſo, as I have often experienc'd; and that is, let it be well rotted, and then put it on the Surface of the Earth, at any Time of the Year, about four Foot round the Body of the Tree (but never put any cloſe to the Roots, for then it will breed a Canker in the Body of the Tree) and then the Rains will have an Opportunity to waſh its Salts in upon the Tree-Roots, and cauſe it to grow a prodigious Pace, and the more becauſe it keeps off the Sun's too great Power from the Roots, which in hot, dry Summers, is apt to deſtroy, rather than nouriſh; and therefore, it ſhould always be kept upon the Roots throughout the Year, becauſe in Winter it prevents the Froſt's Miſchiefs, as well as in Summer the Sun's.

HOG-DUNG

Is good for almoſt any Ground, as being of a more moiſt, fat Nature, than the dry, hot Horſe-Dung: It is a quick Promoter of Vegetation,

tation, and an excellent Dreſſing for almoſt all Sorts of Ground, but is more or leſs good, as the Food is that produces it; for Horſe-Beans that are generally given to fat this Beaſt with, being of a very hot Nature, and abounding with Plenty of the Nitre-Quality, is certainly very fertile, and very proper to be laid on the Surface of the Ground upon the Roots of Trees, but beſt of all when it is carried directly out of the Hog-ſtye or Yard, before its Salts are waſhed away by the Rains. This Dung, if mixed well with Mould, and let lie for ſome Time to rot and incorporate together, will be a very good Compoſition to plant a Tree in; or laid, after the Tree is thoroughly planted, on the Top of its Roots, about ſix Inches thick, and three Foot from the Tree's Body all around it. So likewiſe if it is laid alone, as it comes out of the Stye, or mixed with Earth, all about the Roots of an old planted Tree, and kept on the ſame all the Year, it will do Wonders in the Production of Wood and Fruit, as I have truly experienc'd it, by ſeveral Trials: But I don't adviſe the Laying of ſuch crude Dung next to the naked Roots of either old or young Trees; for if this is done, it is a Chance if it does not deſtroy the Tree, by its great Heat, and the cloſe Adheſion that this greaſy Dung joins the Tree-Roots. However, if diſcreetly us'd, it is certainly one of the beſt Dungs, and therefore, the Multiplication of it ought to be endea-

endeavour'd by all who keep Hogs, which may be done, if Straw, Roots, Garbidge, Weeds, *&c.* are timely ſupply'd to them. In ſhort this Dung, by moſt Farmers, is eſteem'd the moſt fertilizing Manure of all the Quadrupeds, either for the Aſſiſtance of Trees or Grain; and for this Reaſon I would recommend the Uſe of this excellent Dung in the following Manner, *viz.*

When a new Hedge is planted with Quickſets of Thorn, Sallow, Holly, *&c.* they are with us laid in the Bank ſomewhat horizontally, with a ſmall Aſcent with their Head-part, that the Water may the better deſcend to their Roots, by which Means the Top or Surface of the Bank is bare, and left roundiſh; now here is Room for a Quantity of ſuch Hog-Dung to be laid on the Ridge of the Bank all the Way it extends itſelf, which by the ſucceeding Rains will gradually waſh down upon the Roots of the new-planted Sets, or the Roots of any Fruit-Trees that may be planted therein, as I have done this Winter 1733, and there adminiſter ſuch a Fertility as to cauſe ſuch Sets and Trees to grow as faſt again as they would otherwiſe do, if they had no ſuch Application: By this Means alſo the Sun's Heat is kept off from drying and ſcorching the young Roots both of the Sets and Trees, which often is deſtructive to ſuch Undertakings: So alſo are the Froſts hindered from killing

killing them, that ſometimes are fatal to them. Now, it may be objected by ſome, That this is a great Charge and Trouble to beſtow their Dung this Way, when they have a hundred other Calls for it in their Fields. To this I anſwer, That there is not an abſolute Neceſſity for this Trouble and Charge above one Year, or once well-doing of it; becauſe when the Roots have taken the Ground, they will be ſtrong enough of themſelves to reſiſt the Extremities of Weather; nor will the Charge be much, by Reaſon one Cart-Load of ſhort Hogs-Dung will be ſufficient to cover five or ſix Poles of ſuch a Bank.

The Roots of old Hedges generally extend themſelves ſeveral Yards from their principal Stakes, as will the Roots of Fruit-Trees, if planted at ſome Diſtance in ſuch a Hedge, according to the common Rule, which is forty Foot aſunder, and theſe are all govern'd in their Growth, according to the Goodneſs or Badneſs of the Soil; therefore I would adviſe all Perſons that are Maſters of ſuch Hedges and Tree-Roots, to give them a Dreſſing of this, or other Dung, on the Surface of their Extention, and then they may depend on it, they will have a profitable and quick Return of Wood and Fruit. This is ſuch a Piece of Huſbandry, that, in my Opinion, there is hardly any Thing exceeds it in Farming, becauſe your Fence will be the ſooner in Service,

and

and out of the Cattle's Reach. But to be more particular, I will tell you the Practice of one of the beſt Farmers in our Country, and that is, preſently after he has ſown his Wheat or Barley, he takes a Number of

COW-HOOFS.

Theſe he ſticks in the Ground about a Foot aſunder, with their broad Ends upright, by firſt making a Hole with a Piece of Iron or Wood, and that commonly from the very Hedge, if the ploughed Ground reaches to it, and thus it may be planted an Acre or two, or more together. Now by planting theſe Hoofs upright in the Ground, they are capable of receiving and holding the Rain-Water that falls into them, which in Time will corrupt, putrify, run over, and water all the Ground between the Hoofs, ſo that the Roots of the Trees and Hedges, as well as the Corn, will have the Benefit of it, and ſuch a one as will cauſe all of them to grow exceſſive faſt, according to the Account I have given of this Dreſſing in my late Book, entitled, *The Chiltern and Vale Farmer*, Page 338, and is what all Farmers ought to obſerve, that can come by ſuch a durable and moſt valuable Manure.

MUD.

MUD.

Mud taken out of Ditches or Bogs, will mend all Sorts of light Grounds, and bring it into a proper Conſiſtence to plant Trees in; but ſuch a Mixture ought to have a ſufficient Time allowed it to be digeſted in a Heap by the Sun and Air, which will the ſooner be done, if turned now and then. In low, moiſt, or wet Grounds, apply a Compoſition of one Load of human Ordure grown ſtale, whereof the Strength is gone, ſeven Buſhels of Lime, one Load of Clay, and two of Cow-Dung: Mix theſe together very well, and let them lie on a Heap for a Quarter of a Year to rot, then turn it, and ſo let it lie till you have Occaſion to uſe it; and when that is, dig a Hole according to the Bigneſs of the Tree you will plant, and fill it up with the ſame Ground, ſo that the Roots are all envelop'd in this Mixture; then cover all with common, or rather with Virgin Mould, and you need not doubt but your Tree will be fruitful, and never be overgrown with Moſs, which is generally the Misfortune of all low, wettiſh Grounds, and provided the Rules already laid down in this Book be duly obſerved.

URINES

Are all in general of a fiery Quality, and afford a great deal of that Principle which all Farmers and Planters ought to endeavour after, as the moſt fertile Aſſiſter for all Trees, Shrubs, and Grain; and here it is in a great Meaſure to be met with and enjoy'd, provided a due Care is uſed with it, for elſe it will do more Harm than Good, it being ſo efficacious on all Corn, Graſs, and Tree-Roots, that one ſingle Dreſſing or Sprinkling of old Piſs in the Spring-time, is ſufficient to bring forward their Growth for that Summer, as I have ſeveral Times experienc'd; and though it may burn or ſcorch the Graſs, or Corn-Blades, for a little Time after it is uſed, yet will they recover and come to their former Verdure in a Week or two's Time.

Of the HOP.

This moſt uſeful Vegetable has perhaps been the moſt abus'd of any other, both in its Uſe and Character, by the ignorant Perſon, who not knowing its fine Virtues and true Management, has miſt enjoying a moſt pure Ingredient; for it is certain the Hop (like many other Vegetables) has its good and bad Properties: Good, I ſay, when its ſpirituous, flowery, healthy Part is obtain'd free of the earthy,

earthy, unwholſome, phlegmatick Part, which may eaſily be done in all Manner of Brewings, if Skill and Care be employed in the ſame: But as that Matter is ſomewhat foreign to my preſent Purpoſe, I ſhall now wave that Particular, and obſerve, That it's my real Opinion, and that for very good Reaſons that I could aſſign, the Hop will be in greater Reputation than ever, when its extraordinary Virtues are more known, and conſequently a third Part or more conſumed than at preſent they are: And therefore, I would adviſe all Perſons that are in a Capacity, to make Plantations as faſt as they can, and the ſooner they do it, the ſooner will they come by the Profit that will ariſe by a new Method of conſuming them in Malt Liquors, that will be ſpeedily publiſhed.

It is a moſt hardy Plant, agreeing with Clays, Loams, Gravels, *&c.* but in Sands and Chalks, *&c.* they will not anſwer ſo well. They will proſper almoſt in all Climes where the Soil is fit for them; and when they have got Footing in the Ground, there is hardly any deſtroying them, as I have ſeen experienc'd by a Perſon that would have clear'd a few Yards of them, where they grew in a wrong Part of the Garden; but he could not, without digging farther into the Ground than he was willing. However, the Hop, like moſt other Vegetables, requires a Soil that muſt actually be well-dreſs'd with rotten Dung, rotten Turf,

Bottom of Ponds, Wood-Earth, Virgin-Mould, Lime-Aſhes, Sea-Sand, Marle, *&c.* for without this Huſbandry they will degenerate; therefore if the Undertaking is great, the Purſe ſhould be ſo likewiſe. They will not enjoy a full Crop of them till the ſecond or third Year, and then there may be a thouſand Pounds Weight on an Acre, which is reckoned but a middling Crop: An Acre will coſt about twenty Pounds planting, poling, and looking-after; and then if a Blight does not happen, it may return thirty or forty Pounds in one Year clear Profit. Sallow, Poplar, Alder, Willow, Cheſnut and Aſh, are proper Poles, that are worth about twelve Shillings *per* Hundred with us, if they are three or four Inches Diameter and twelve Foot long, and may be raiſed in ten Years Time for Uſe, the firſt Time; but afterwards they may be cut in leſs Time, according to the Directions in my *Chiltern or Vale Farmer.*

A dry Soil and open Situation to the South-Eaſt and South-Weſt Points agree beſt with Hops, if they are defended with Trees planted on the Eaſt, North, and Weſt Sides, and likewiſe planted in a good Tilth and rich Mould, by Lines throughout the Ground you plant, with Knots or Rags tied at eight Foot Diſtance, to direct where a Stick muſt be put in for the Making of the Hills either in ſquare or quincunx Forms. Then in *February*, *March*, or *April*, the Hop-Sets of ſeven or eight Inches

long may be planted, and their Roots carefully bedded, leaving three or four Joints out: Or Cuttings or Shoots from the Roots will grow at this Time of Year, and ſo they will, if cut when the Hop is gathered, and directly put into good Earth to be re-planted in *March* following, and become a good Set. To plant the Set, raiſe a Hill of about fourteen Inches over, and with a Dibber plant five or ſix Sets in each Hill, and cover them two or three Inches with good Mould, that may encourage them to make Sap-Roots ſpeedily. In the Summer keep all Weeds between clear with the Hoe, and about *June* twiſt them together, and let them lie, that they mayn't bear the firſt Year; to make good which Time, Garden-Beans may be ſet between the Hills, and about *November* plough and dig the Interſpaces, and dung an Acre with forty Loads, cutting the Hop-Vines down to the Earth, and cover with fat Mould, that the Froſts hurt them not. About the Firſt of *March*, the ſecond Year, open the Hills, and cut away all new Suckers; then pole them with twelve-foot Poles. The third Year they are in full Perfection, and will laſt about twenty Years; and now they muſt have Poles of twenty Foot long, three to a Hill, but don't pole till the Shoots are ten Inches high, which generally is about the Middle of *April*, making firſt a Hole with an Iron Crow to put the Poles in, that muſt be cut three-ſquare at their Ends. When

the Vines are three Foot, and all are not taken to the Poles, guide the reſt to them. Dry Times are often Impediments to the Hop, which to ſupply, ſome are at a great Expence and Trouble to water each Hill; but I will tell you how to avoid it. When you make your Hill, put in, about the Middle of it, either Fern or Horſe-Litter, and cover it with Mould in the Shape of a Baſon, and never water the whole Summer; this will do by retaining the Wets, and ſo ſave watering ſix hundred and eighty *Hills that an Acre contains at eight Foot Diſtance.* If planted ſquare, at ſix Foot Diſtance, then twelve Hundred on an Acre is the uſual Quantity. The Quincunx Order, at ſix Foot Diſtance, is fourteen hundred Hills. If the green Lice or Fly annoys the Hop, uſe the *Dutch* Squirt, and it may chance to give you Hops when your Neighbours have none. About the Beginning of *September* your Hops will be ripe, known by their brown Colour; then cut the Vines three Foot from the Ground, and pull up the Poles, which carry to the Bin and pick them; twiſt the remaining Vines together; three Acres will employ five Bins or Frames. Pull the Hops a little before they are ripe, that they mayn't loſe their Seed, and put them on the Kilns as ſoon as poſſible, and dry on the Hair-Cloth; when the Hops are brittle, they are dried enough, which commonly is in two or three Hours; Charcoal or Coak is generally uſed to dry with;

with; they muſt not be turned on the Kilns while they ſweat, but check the Fire firſt and then turn, and when dried enough, let them lie to ſweat in Heaps two or three Days; and then they will be fit for Bagging, for Hops will break to Powder, if bagg'd directly from the Kilns. They are to be bagg'd by a Man's treading them in. The Poles may be ſtack'd all Winter in an upright, or leaning Heap, about three Hundred together. Aſh-Poles will laſt ſeven Years, Cheſnut longer; but if Yew-Poles could be had, they would out-laſt all others. If Sets of Hops are to be brought from ſome Diſtance, ſoap their Roots, and it will preſerve them, and ſave the Trouble and Charge of packing them in Sand and Mould. There is an Inſtrument call'd a Dog, that if applied right, will take up the Poles eaſily.

At this Time, I have ſome Hops growing in a red Clay, where they have been theſe twenty Years, and yet bear very well; which proves that this Vegetable affects a ſtiff Soil better than a light one, for in this they will flouriſh, and continue longer than in light and looſe Earths, becauſe theſe emit their Salts free and quick to the Vegetables that grow in it, and therefore ſuch Earths ſooner loſe their Fertility; when the ſtiff Sorts emit them more ſlowly, and ſupply a greater Moiſture to the Roots than the dry and looſe Sorts can. Beſides, in all ſtiff Soils, Dungs and Manures will remain longer than in the more

dry and looſe ones, becauſe the latter are more voracious and hungry, and are ſooner exhauſted than ſtiff Earths; and therefore it is, that all Dreſſings ſhould be proportion'd both in Quantity and Quality to their particular Soils; as for Example, Horn-Shavings, Coney-Clippings, and long Dungs, are proper for Sands, Chalks, and Gravels: But for ſtiff Clays, or Loams, Soot-Aſhes, Sea-Sand and ſhort Horſe-Dung are moſt proper. The Tops of Hops are excellent Eating, if gathered about *Lady-Day*, or the Beginning of *April*, and boiled in Bunches tied up like Aſparagus; and, I am of Opinion, are much wholſomer. The Criterion to know how much is good of their Tops, is diſcovered by their breaking ſhort off when they are bent at their loweſt brittle Part, that is commonly about a Foot from the Top-Bud, and ſo far they are uſeful, and no farther; and theſe may be gathered where their Shoots are too numerous, without prejudicing the Hop, and will rather ſtrengthen, than weaken, the remaining Shoots.

The general expeditious Way of drying Hops, is by the Kiln, which extract their Humidity in a little Time; but then ſuch Violence is not ſo natural as the Heat of the Sun, that is the beſt of all other Ways, where Conveniency will allow its being enjoy'd in drying of Hops; for the ſpirituous Parts of this

this Plant are ſo nice, that it cannot endure any violent Heat without Prejudice to its fine Virtues, that are of a friendly, opening Quality, when its aromatick, ſubtle Spirits are thus moſtly kept in, and then they naturally powerfully purge by Urine, and are a ſpecial Remedy againſt the Stone, although by many of the Ignorant, they are unjuſtly charged with breeding it. Indeed, when this noble Vegetable, the Hop, is abuſed, and after their good Virtues are drawn off, or evaporated by the Force of Fire, as Boiling, or the like, which is done in a Trice; for no Herbs that have been dried as they ought, will endure the Fire or Boiling, without manifeſt Prejudice to their beſt Virtues, which is the Reaſon that the *Plymouth* People eat their Herbs chopt ſmall, and put into their Broth after it is in the Porringer: Then, I ſay, the contrary ill Qualities may be expected to bring on and produce Gravel, Stone, and other evil Effects. But to have the true Benefit of the Hop, it is a gentle Infuſion that will naturally, and without Violence to Nature, extract or draw forth all that is deſired in Hops, or any dried or prepared Herbs. The further Particulars of this Management in Brewing, ſee in the *London* and *Country Brewer*, publiſhed by an experienced Hand; a Book far exceeding all others for its ample Accounts of the ſeveral Methods of brewing Malt Liquors, *&c.* and is truly neceſſary

for all Perſons whatſoever, concerned both in publick and private Brewings, and alſo all Drinkers of Malt Liquor.

About *October* laſt, 1733, I ſowed ſome foreign Wheat, that was given me by a Member of the Royal Society, on an hungry, gravelly Soil, in a Land by itſelf, excluſive of any Mixture of the *Engliſh* Wheat that grows in the ſame Field, and find it to carry a different-colour'd Green, compared to the *Engliſh* Sort, grew up with ſtrong Stalks that produced naked Ears about the 9th of *May*, which were then three Foot high and better; but theſe Ears, to my Surprize, come out bearded, like Barley or Dugdale Wheat, which is a good Property, becauſe they defend the Ear from Blights, which entitles many to Crops of the Dugdale Sort, when others miſs, and is ſuch a Reſiſter of Cold, that it is now much ſown in *Lancaſhire*, and other Northern Parts, and would be more propagated in the Southern Parts, were it not for its Coarſeneſs. Again, I obſerve, that in the ſame Field I ſowed *Engliſh* Wheat a Month almoſt before I ſowed this foreign Sort, and yet the latter ſhot out ſooner than the former by a Month.—All which Difference gives me great Hopes I ſhall be Maſter of what has been ſo long wanted, *viz.* a Wheat that will endure late Sowing, and yet be ſooner ripe than any of our *Engliſh* Wheats,

Wheats, and then we ſhall be as happy in this Grain, as we are in the rath-ripe or forward Barley, and obtain the great Conveniency of having a Wheat-Crop after our Turnips, inſtead of a Barley Crop, which though now practiſed by ſome, yet is it with great Uncertainty and Hazards; and particularly the Wheats, being liable to Blights, occaſioned by Honey-Dews, *&c.* that happen in *June* and *July*, and are often fatal to the late-ripe Wheats, by Reaſon their Ears being then greeniſh, theſe Dews, by their glutinous Natures, have the more Power to lock up and cloſe their Parts, ſo that they can't enlarge their Bodies, and then the Produce will be only a lean, thin Corn, oftentimes of about Half the Subſtance of the old Lamas Sort.——Alſo by the ſame Perſon in *May*, 1734, I was preſented with another Sort of foreign Wheat, which being too late to ſow this Summer, I intend to try it the next Seaſon.——I had alſo a Preſent made me by the ſame Perſon of a foreign Barley, that is partly like Wheat, and partly Barley, of a larger Body ſomething than our *Engliſh* Sort, and is ſaid to produce almoſt double the Quantity of Drink, when malted, than any Barley that grows in *England.* This foreign Barley I put into my Ground in a Garden, and covered it with Nets; but as there was but Half a Handful ſown, the Birds were ſo voracious after it, that they got under

der the Nets, and deſtroyed moſt of it, ſo that I had hardly thirty Corns left, which I have ſince put into the Ground for another Trial. My Friend alſo had the Misfortune to loſe his entirely, by the Miſtake of one of his Weeders, who, while he went into the Country for ſome Time, cut up the Barley among the Weeds of the Garden. It was firſt brought out of *Greece* over Land to *Hamburgh*, from whence it was brought to *England*. I have alſo a new Sort of foreign Graſs ſowed this Summer for a Trial, which if it anſwers my Expectation, ſhall venture to ſow it in common, and publiſh its Effects: And indeed, it is a great Pity, that Trials are not more made to naturalize Exoticks in our Fields by thoſe whoſe Abilities are capable of doing it, that our Ground may be more employed in Variety of Corn, Graſſes, Fruits, Trees, *&c.* However, as to theſe already mentioned, I hope to give a good Account of them when I have ſeen their Product, as alſo of many more curious and ſerviceable Matters, as I, and others, have truly experienced, when I can print my Monthly Books that I have for theſe ſix or ſeven Years paſt been endeavouring after, by trying Experiments, and making Collections and Obſervations for the Good of my Country, and which I am certain will be of vaſt Service to it, for particular and many Reaſons that I could aſſign, had I Room enough.

The

The *Indian* Wheat that is in general Uſe in *Africa*, and many other Parts of the World, and is called Cankee by the Blacks at *Cape-Coaſt*, might, in my humble Opinion, be ſtill further attempted, than it has been; for if there could be found out ſomething extraordinary to forward its Growth, ſo as to bring it to Maturity before the ſhort Days are too far advanced, I am in Hopes it may be effected, and as a Well-wiſher of ſuch Succeſs, I intend to make a Trial the next Opportunity of a Seaſon, and if I miſs, it ſhall only be in a ſmall Attempt at firſt, and not in a random, extraordinary Charge, which then would juſtly impeach my Diſcretion; for though I have as great a Paſſion for the Vegetable as moſt, yet, I think, it does not become me, nor any other Perſon, to venture too much at firſt, leſt the Difference of Soils, Management, Miſtakes, or other Incidents, cauſe an unforeſeen Miſcarriage.

General Obſervations on the Summer, 1734.

This Summer was chiefly a wettiſh one, that cauſed the Vale-Crops in general to be ſo big, as to be laid flat, and that before the Wheat and Barley were full kerned, which made theſe Grains to be lean and half-bodied, by hindering a free Aſcent of the Sap to the Ear.

The

The Horſe-Beans alſo grew ſo high, as cauſed a greater Drip of Rain than uſual to fall on their Under-Bloſſoms, that could not dry ſoon enough to prevent the Damage the Wets occaſioned by Reaſon of their great Cover, and ſo became a very indifferent Crop; their Oats, Peaſe and Tills had the ſame Fate: Nor did we in the Chiltern altogether eſcape a Share in this Misfortune, for there were many of our Hill-Country Farmers had their Wheat, Barley, and Peaſe laid in ſome Parts of their Fields, but not like the Vales: I had Barley fell down in *May*, by the Violence of Rains, and the Strength of Winds, in two of my Fields, but not ſo much as to hinder its being a vaſt Crop, and allowed by our Farmers to be the beſt in the Pariſh. Our Graſs was very great, and we had a very good Time to inn it about the Firſt of *July*, which is commoly the Time our Hay is got off our cold, clayey, hilly Ground at *Gaddeſden*; but our Black-Cherries received what we call a Blight, by the Colds and Wets, that cauſed a great Fall of them about a Fortnight before *Midſummer*. Our Woods and Hedges grew extreamly faſt this Summer. The Fruits of Apples and Pears were plenty. But the greateſt Quantity of Beech-Maſt hung on the Trees that ever was known in the Memory of the oldeſt Men. About this Time, Wheat roſe two Shillings in five Buſhels, by the Apprehenſions of a ſhort Crop, and the great Call there

was

was abroad for it. The Kernels ſeemed to ſuffer by an indifferent Blooming-Time, that its two Enemies were the Cauſe of, the Wets and Flies: In ſhort, the bad Huſbandman had the beſt of it this Summer in many Places, for the poor Grounds were loaded with plentiful Crops by the great Feed the Rains gave them: However, as theſe unforeſeen Incidents of Weather ſeldom happen, it was no Fault on the induſtrious Farmer's Side; and if the Chiltern Farmer had the beſt of it this Year, the Vale Men have the Advantage of greater Crops four to one, at leaſt, other Times. And what was very particular, their Sheep eſcaped a general Rot, which, in wet Springs or Summers, they commonly are overtaken with; but this Time there were but few that died, and that was by the red Water, and Cholick or Gripes, that the flaſhy Nature of the wet Graſſes occaſioned; though both them and we were upon the Edge of ſuffering, had not the Rains in a great Meaſure ceas'd, which it did for ſome Days at Times; and 'twas theſe Intervals of fine Weather, in my Opinion, that ſav'd us from the Rot. However, on the Loſs of two of my Sheep the Beginning of *June*, I gave the reſt two Spoonfuls a-piece of my Sheep-drink, two or three Times, and they did not complain all the Summer after. Any Perſon that pleaſes ſhall be welcome to view my Proceedings in Farming, after the ſeveral Methods that are publiſh'd in

my

my Books, and be ſatisfy'd of the ſame by ocular Demonſtration, and the Declaration of the Neighbourhood, particularly of the great Efficacy of the *French* Wheat that this Summer I ploughed in, in three ſeveral Fields, and other Ways of cheap Manuring; for where theſe and other Dreſſings may be had cheap, it would be very abſurd Management of any to let the Ground want Aſſiſtance, according to thoſe plain Directions that I have publiſhed in This and my *Chiltern* and *Vale Farmer*, which, if duly regarded, by the Bleſſing of God, no Perſon need fear a good Crop on the Ground, and that oftner than by the common Way of making a Fallow every third Summer: But then there muſt be a careful Obſervation of the Times and Seaſons of the Year, which I have found of ſo great Importance, that for theſe ſeven Years paſt I have been making Collections and Experiments, and wrote the Succeſs and Loſs of ſeveral Farmers Proceedings in our Country, as well as my own, which I intend ſhortly to publiſh by way of Monthly Books, that conſequently muſt be of great Service to the World; for let a Perſon be ever ſo good a Huſbandman in the operative Part, yet if he does not know how to time his Matters, he may likewiſe loſe his Money and Labour too; for Example, Chalk or ſandy Ground requires different Times of Sowing than what Clay or Loams do; ſo likewiſe wet Grounds want not only different Dreſſings

than

than the dry Soils, but alſo Times accordingly to lay them on; in Ploughings the ſame, Planting the ſame, and in Seeds the ſame: For if a tender Maple-Pea was ſown in *January*, it's Odds, if the Crop is not loſt, when the hardy Horn Grey-Peas may be ſpoiled by ſowing in *April*; and ſo in many other Things uſed by the Farmer.

A COMPARISON OF Different Methods of FARMING IN SEVERAL COUNTRIES.

THE County of *Hertford* is allowed by the exacteſt Obſervators to be a moſt healthful Situation, abounding with red Clays, Loams, Chalks, Gravels, and Sands, that lie in many Hills, and a few Valleys, which are moſt of them naturally poor Soils of themſelves, but of late greatly improved by the Induſtry of its Farmers, who living within a Day's Journey of *London*, many of them have been encouraged to employ their Teams at vacant Times to carry Meal, Bran, Chaff, Corn, Wood, and other Vendables thither, in order to load back again with Soot, Aſhes, Hoofs, Horn-

Horn-Shavings, Rags, *&c.* for dreſſing their Land, that by the Help of theſe and good Ploughings, many have the Benefit of Grain, Graſs, Turnips, *&c.* yearly, without the Loſs of one Summer for the fallow Seaſon; which of late has become ſo profitable, that our Chiltern Farms let for more than the Vale Grounds, that are in themſelves richer than the hilly Lands, being a black Mould mixed with a bluiſh Clay, that will, with Half the Dreſſing of ours, return the moſt plentiful Crops of Wheat, Barley, and Beans: But then there is this Difference, we in the Hill-Country have ſometimes three Crops in leſs than a Year and a Half; as Clover, Turnips, Wheat, or Barley; or elſe Peas, Turnips, Wheat, or Barley, *&c.* by Means of our convenient Incloſures; whilſt they in their valey, open Fields are confin'd to loſe a Year and a Half before they muſt ſet on a Barley-Crop after their Beans. For which Reaſon it is, that we commonly reckon a Wheat or Barley-Crop ought to pay two Years Rent. However, with theſe Inconveniences, they have ſeveral balancing Advantages, as having their Land cheaper than in the Chiltern; for though the Vale of *Ayleſbury* begins but four Miles diſtant from *Gaddeſden*, yet have they their very beſt Marley-Ground for nine Shillings *per* Acre, while we pay twenty for a much poorer Sort. There alſo the very Smith's Bill will amount only to ſix Pounds a Year, when three Times as much with us will hard-

ly defray the Charge of the ſame Number of Horſes, Waggons, Carts, Ploughs, and Harrows. Their Servants are alſo hired cheaper, and generally fare harder; but then they are at a Loſs for Clover and other artificial Graſſes, Turnips, *&c.* which few of them can enjoy, becauſe of the Richneſs of their Soil, that will not bear the Cattle's Stolching and Treading in them to feed in Winter, nor in wet Summers, beſides the diſagreeable Nature of their low Earth to that of the Turnip, that inſtead of Appling or Bottling, it runs into rank Leaf. This obliges them to feed their Sheep on their Commons and Stubbles altogether, with which they very plentifully abound; inſomuch, that few or none of them ever buy any *London* Dreſſings, though ſome of them are but one and thirty Miles off it. One indeed I did know of them purchaſe a Waggon Load of Soot, for his Farm that he rented at one hundred and ſixty-five Pounds a Year; and it anſwered very well, as he himſelf owned, but I never could hear he went a ſecond Time to the ſame Market: On the contrary, he has been ſeveral Times to fetch Pigeons Dung at ten Pence *per* ſingle Buſhel, for to ſow on his Barley-Ground, out of *Bedfordſhire*, tho' he lived ſixteen Miles diſtant in *Buckinghamſhire*. Another great Benefit they have in the Vales are the Number of Cows which they keep in abundance, by Reaſon of their great Quantities of Cow-Paſtures, as they call them; that is,

where

where a Cow-Common is, each Farm has a Right to feed a certain Number of them, and are ſo valuable as to be worth——a Year each Head, about *Chedington* and *Edgborough* in *Bucks*, in caſe they lett them out, as many do, for which they ſeldom want Chaps, by Reaſon of the great Sweetneſs of their Graſs-Turfs, and the extraordinary Heart there is in their Herbage; for it's certain, the very Hay off their Marly-Soil will fat a Horſe or Ox alone, when ours in the Chiltern will but do the ſame with Hay and Oats too. Another Convenience they have in the Vale is, That they are not under the Neceſſity of much Brain-work to ſtudy the Improvement of their Land in their open Fields, becauſe every Farmer acts commonly as his next Neighbour does, and that Year after Year in one and the ſame Sort of Management. For if they would do otherwiſe, they are hindered by the Want of Incloſure: So that in the open Vale-Ground, the Science of Farming is as eaſy and plain, as it is hard and difficult in the Chiltern, where an acute Farmer is obliged to form a Plan of his future Proceedings three Years at leaſt before-hand, that each Crop may ſucceed one another in ſuch Order as to impoveriſh the Ground as little as poſſible; not but both Vales and Chilterns vary much in many Places, in the ſeveral Ways of Huſbandry.

In the Vale of *Ayleſbury*, one Part of it fallows their Ground every third Year; another

every fourth Year: Some drill their Horſe-Beans in; others ſow them broad-caſt, and plough them in. Some plough up their Sward or Graſs-Ground, and ſow Wheat, which they ſell at an extraordinary Price, as coming off freſh Earth, or Virgin-Mould; and after fifteen or twenty Years Tillage, they lay it down again for Graſs-Ground; and ſo continue this Practice in ſeveral Parts of their Farms alternately, eſpecially in *Buckinghamſhire* and about *Buckingham*; and which is of ſo great Service to us Chiltern Farmers, that it tempts ſome of us often to go down with our Waggons to *Ayleſbury*, to buy this fine Seed, as well for the Sake of the Change of Ground, as for its being clean of Seeds, Weeds, and other Trumpery. And of this Sort I ſow myſelf, and had very good Succeſs this laſt Harveſt, 1734. Yet in ſome other Parts of the Vale they have no Notion of this Improvement, though they have the ſame Opportunity.

In *Berkſhire*, in ſome Places, they cut up their Turf or Peat, and burn it to Aſhes, to dreſs their Ground with. Here they drill and hough their Hog-Peas. Some again follow the ingenious Mr. *Tull*'s Way of drilling in Wheat, and other Grain and Graſs-Seeds, in order to ſow the Interſpaces the next Year, that lay vacant the preceding; which I think to be a good Way, if the Charge of Houghing could be avoided; but that is ſuch an

an expenſive Article, as will not ſuit with the Farmer's Mind nor Pocket. The Method alſo of drilling in Horſe-Beans at ſix Foot Diſtance has been practiſed, and the Hough-ing-Part ſupply'd by the Plough; but the At-tempt proved unſucceſsful, becauſe as they manag'd it, the Weeds came up and choak'd the Beans; not but that I believe it might an-ſwer, if a proper Method was made uſe of, which in this Place is too long to diſcuſs. See more on this Subject in my *Chiltern* and *Vale Farmer*.

In *Cornwall*, *Devonſhire*, and ſeveral other Maritime Countries, they dreſs with Sea-Sand, Oar-Weed, Sea-Mud or Vaes, Shells, and ſome-times Fiſh, as I knew it once done in *Corn-wall*, where there were ſuch Numbers of Pilchards affrighted to the Shore near *Mount Edgcomb* by the Porpoiſes, that ſeveral laid them on their Lands, and afforded a great Im-provement by the oily, ſulphurous Parts of the Fiſh. So in *Cambridgeſhire*, *Bedfordſhire*, &c. ſeveral make uſe of Rape-Canes, ground at the Oil-Mills near *Cambridge* into Powder, which does great Service to Land.——Likewiſe in *Berkſhire*, and the Chiltern Part of *Bucking-hamſhire*, ſeveral ſow them for their Cattle.— In *Eſſex*, and ſeveral other Countries, they ſend ten or twelve Miles, or more, for Lime to manure their Ground with; as they do in *Hert-fordſhire* with Chalk, Rags, Horn-Shavings,

Sheeps-Trotters, Hoofs, Hair, Aſhes, and Soot. In *Surrey*, *Suffolk*, and many more Places, the Marle-Pits excel as well as others that dreſs their Clays with Sand, and Sand with Clays. The Marles in *Warwickſhire* and *Northamptonſhire* are of two Colours, red and blue; the red is as hard as an Earth-Floor, which obliges them to dig it out of Pits with Mattocks and Crows of Iron; from thence they lay it in Heaps in their Fields, and in three or four Nights Time, its ſmall Pieces and Bits will ſhoal by the Help of the Dews and Rains in *Auguſt* and *September*. The blue Sort being ſofter, is much eaſier manag'd.——In *Surrey* and *Berkſhire* their *French* Wheat is a great Improvement, by being ploughed in to dreſs their Ground. About *Harrow* in *Middleſex*, ſeveral do the ſame by their Clover, which is reckoned but half Dreſſing in Compariſon of *French* Wheat.

In the Vales, their Way of cleaning Wheat, and other Grains, is very different from ours in the Chiltern: The former follow their ancient Way of wind-fanning it; the latter, by throwing it with as much Expedition as they, and fewer Hands.——Their Hedging in the Low Countries varies much from that of the High Lands. In *Bucks*, *Bedford*, and many more Places, they cut Half the Side of the Hedge for Fewel, and leave the other Half for a Fence: But in *Hertfordſhire*, *Kent*, and ſome others,

they plaiſh all that is to be left, and make a Sort of a Wall-Hedge about four Foot high from the Ground, far exceeding all other Ways. —In the Vales their Wheat and Beans are larger body'd than ours in the Chiltern, by Reaſon of their excellent, ſtrong, black Soils; but their Oats and Barley are not ſo good, becauſe their Ground is ſo rank as runs them moſtly into Straw, and leſs into Corn, that often lays them flat to the Ground by the Greatneſs of their Bulk, and then it's generally lean Corn, as it happened this laſt Summer, 1734.—In *Kent*, their Ploughs that have two broad Boards, are excellently well adapted to the Culture of their hilly Grounds, becauſe they turn a Thorough or Furrow all one Way, and thereby leave no Bendings, as the Wheel *Hertfordſhire* Plough does; which renders them very uſeful in turning the Ground from the lower Part towards the upper Part; and for this Reaſon it is, that they call ours a Baſtard Plough. But our new-invented double Plough anſwers extraordinary well, eſpecially in Barley and Turnip-Ground, and in ſterile Seaſons; for then there may almoſt double Work be done with four Horſes in Half the Time that a ſingle Plough is employed; and thus to ſave Time and Labour in thoſe Seaſons where the Farmer's great Benefit lies in Expedition, muſt certainly be of great Value; as I have more largely ſet forth in my *Chiltern* and *Vale Farmer*.—In the Vales, this preſent Fall of the Leaf, 1734, they are in

many Places under the direful Misfortune of having rotten Sheep, by their watery Situation, and looſe, ſticky Earth, that eaſily waſhes about the Graſs, and communicates a poiſonous Quality into the Blood, which ſweeps away many Thouſands in a Year; and notwithſtanding what I have ſaid in this, and my aforeſaid Book, I have Reaſon to ſuſpect, that the common, obſtinate Farmer will not adhere to my excellent Receipts that have by ſome been tried, and found to do Wonders in this Reſpect, by ſaving many that have but been juſt touch'd with the Rot. And they may believe me, if they pleaſe, that a Member of Parliament who lives in the *Weſt* aſſured me, he tried one of my Receipts, and found it anſwer, by preventing his Sheep that were in great Danger of being deſtroyed by the Rot; and not only in the Rot, but alſo to prevent and cure the Red-Water, that kills many in the Year in the hilly Countries, as well as the Vale.

INDEX

INDEX

TO THE

TWO PARTS.

B.

BARLEY-SEED, to ſteep, an excellent Receipt 26
Barley, its Nature 28
Barley, ſowed after ſeveral Methods 29
Barley, rolled after a wrong Method 31
Barley prepar'd, good to feed Horſes with *Ib.*
Barley, dreſſed with long Dung on the Top 32
Barley, new Obſervations on 179
Beans, when ſown 44
Beans, how ſown in the Vale of *Ayleſbury* *Ib.*
Beans, deſtroyed by the Dolphin Fly *Ib.*
Beans, ſown on Wheat Stitches 46
Beans, ſpoiled by the Hell-weed, *&c.* 47
Beans, when expected a good Crop 49
Beans, new Remarks on them 183
Beaſt, of 188
Benefits ariſing from ſteeping Barley-Seeds 27
Brining and Liming of Wheat ſeveral Ways 21
Bullimon 35

C.

Calves to ſuckle 108
Calves that ſcour, to ſtop *Ib.*
Chalks, their Culture 79
Chamberlye 83
Cherries, their Planting and Improvement 146
Citch and Vetch 45
Clay, burnt 87
Clays, of ſeveral Sorts 103
Clays, their Culture 76
Clover mowed, better than fed 16
Clover, fed with Cattle 17
Clover, how long to remain in the Ground 50
Clover mowed 52
Clover, how obtain'd amongſt Peas 53
Clover, ſown among Barley, Oats, Peas, and Beans *Ib.*
Clover, ſown amongſt Wheat 54
Clover, ſowed for Seed 55
Clover, fed in Racks 60
Clover-Graſs, its Nature 50
Clover-Hay, how to make it 55
Compariſon of different Ways of Farming in ſeveral Countries 220
Cow-Dung, of 196
Cow-Hoofs, of 202
Cows, to preſerve againſt hoving in Clover 57
Cows hoved, to cure *Ib.*
Cows, their Improvement 105
Cows, what they will pay a Year 106
Cows, to feed 108

Cows, to dry 110
Cows, their ſeveral Diſeaſes, and Cure 113
Cows, how to chuſe thoſe that give the moſt Milk 189
Cyder, to make ſtronger than the common Way 163

D.

Dreſſing, of, what is proper for Lands 186
Dungs 84

E.

Explanation of Words 169

F.

Foyne, St. its Nature 71
Foyne, St. ſown amongſt Barley 72
Foyne, St. when to feed *Ib.*
French or Buck-Wheat, its Nature 36
French-Wheat makes a good Lay for common Wheat 37
French-Wheat makes a good Lay for Lucern *Ib.*
French-Wheat, how to ſow, and on what Soil *Ib.*
French-Wheat good for Cattle 38
French-Wheat, farther Remarks on 182
Fruit-Trees, their Choice 159

G.

G.

Graſſes, artificial 184
Gravels, their Nature and Improvement 93

H.

Hedging 129
Hedging, farther Remarks on 192
Heifers 109
Hog-Dung 198
Hop, of the Uſefulneſs, Nature, and Method of planting, drying, &c. 204
Horn-Shavings, Coney-Clippings, Rags, Hoofs, &c. 8
Horſe-Dung 198
Horſe-Houghing 80

L.

Lime, ſowed on Wheat in the Spring 18
Lime, its ſeveral Uſes 82
Lucern, its Soil 73
Lucern, when to ſow, and when to make Hay of it 74
Lucern, objected againſt 75
Lucern-Graſs, its Nature 73

M.

Melioration of Earths 6

Melioration of the ſame 175
Mud, of 203

O.

Oats, their Nature and Improvement 33
Oats, white 34
Oats, a new Sort *Ib.*
Oats, their Quantity to ſow, and with what Management 36
Oats, new Remarks on them 181
Obſervations on the Year 1734 215

P.

Peas, ſowed in Drills 17
Peas, wrote of by a late Author 40
Peas, their ſeveral Sorts and Culture 41
Peas, improv'd by Chalking *Ib.*
Peas, ſowed after the *Berkſhire* Method 43
Peas, make an *Aqua Vitæ* 46
Peas, farther Remarks on them 183
Philoſophical Account of ſteeping Barley, *&c.* 25
Pigeons, tame, their Sorts 126
Pigeons, their Feed 127
Pigeons, the Profit of 191
Planting 130
Planting too deep, explain'd 132
Planting Standard-Trees 133
Planting, after the beſt Method 135
——— another Way 137
Planting Trees on Fields 140

Planting Sides of Barns, and Out-houſes 163
Planting, new Obſervations on 193
Ploughing, with a Fin 79
Ploughing, new Obſervations on 186
Ploughings, Soils, and Dreſſings 75

R.

Rabbits, tame, their Management 124
Rabbits, the beſt Food for them 190
Rye, its Nature 36
Rye and Wheat ſowed together *Ib.*
Rye-Graſs, its Nature 62
Rye-Graſs, when to ſow, and on what Ground 63
Rye-Graſs, objected againſt 64

S.

Sand, Salt, Fowl-Dung, their Uſes 92
Sands and Marls, their Improvements 95
Sheep, hoved in Clover 61
Sheep, their Nature 117
Sheep, to cure, that are not too far rotted 118
Sheep, to prevent rotting 122
Sheep, what occaſions their being rotten 189
Sheeps-Dung 197
Soils, Obſervations on 186
Spiritus Mundi, its Nature and Uſes 99
Stitches or Ridges, beſt for ſome Uſes 77

T.

Tares 45

Trees, the Circulation of their Sap 148
Trees, to alter their Fruit 150
Trees, decay'd, to help 152
Trees, to make prolifick 155
Trees, their Aſpect 157
Trees, to tranſplant 167
Trefoil, its Nature 65
Trefoil, an Antidote againſt hoving with Clover 66
Trefoil, when to mow 67
Trefoil, its Quantity to ſow 68
Trefoil, objected againſt 69
Trefoil, killed a Crop of Wheat 70

U.

Urine, of 204

W.

Wheat——Red Lamas, Yellow Lamas, Pirky, and Dugdale 10
Wheat ſooted in *November* 13
Wheat harrowed in, on one Ploughing, after Barley 19
Wheat ſowed after Barley, a better Way *Ib.*
Wheat, farther Remarks on 178
Wheat, a new Sort brought lately from *Greece*, and planted by the Author 212
Worms, ſpoiled Wheat 72

FINIS.

BOOKS printed for T. ASTLEY, *at the* Roſe *in* St. Paul's Church-Yard.

1. THE BRITISH CARPENTER: Or, A Treatiſe on Carpentry. Containing the moſt conciſe and authentick RULES of that ART, in a more uſeful and extenſive Method than has been made publick. To which is added, a SUPPLEMENT: Containing *Palladio*'s ORDERS of ARCHITECTURE, with the Ornaments of Doors and Windows, proportioned and adjuſted by Diviſions on Scales; together with the accurate Curves of their Mouldings, and their Application to Uſe. By FRANCIS PRICE, Carpenter. The Second Edition enlarged, with an Addition of Sixteen Copper-Plates. Price 10*s.*

Having peruſed this Treatiſe of CARPENTRY, compiled by Mr. FRANCIS PRICE, *we think it a very uſeful and inſtructive Piece, and as ſuch, recommend it to every one concerned in Works of that Kind.*

N. HAWKSMOOR,
JOHN JAMES,
JAMES GIBBS.

N. B. Thoſe who bought the firſt Edition, may have the Additions alone, Price 4*s.*

2. The LONDON and COUNTRY BREWER. Containing the whole Art of Brewing all Sorts of Malt Liquors, as practiſed both in Town and Country; according to Obſervations made by the Author in four Years Travels through the ſeveral Counties in *England.* Alſo the Method of preſerving Liquors in the Caſk, and Directions to be obſerved in Bottling. In three Parts. To which is added a Supplement. By a Perſon formerly concerned in a publick Brewhouſe in *London.* Price 5*s.* bound compleat.

3. The Hiſtory of the Life of Peter I. Emperor of *Ruſſia.* By JOHN MOTTLEY, Eſq; Embelliſhed with curious Frontiſpieces, an accurate Map of the *Ruſſian* Empire, and ſeveral other Copper-Plates, repreſenting a Proſpect of the City of *Moſcow*, a Plan of the City of *Petersburgh*, the Fortreſs of *Cronſlot*, and the different Habits and Cuſtoms of the ſeveral Nations ſubject to that great Empire, *&c.* In three neat Pocket Volumes. The Second Edition.

4. A Collection of Novels and Tales of the FAIRIES. Written by that celebrated Wit of *France* the Counteſs D'ANOIS. In three Volumes. Price 7*s.* 6*d.*