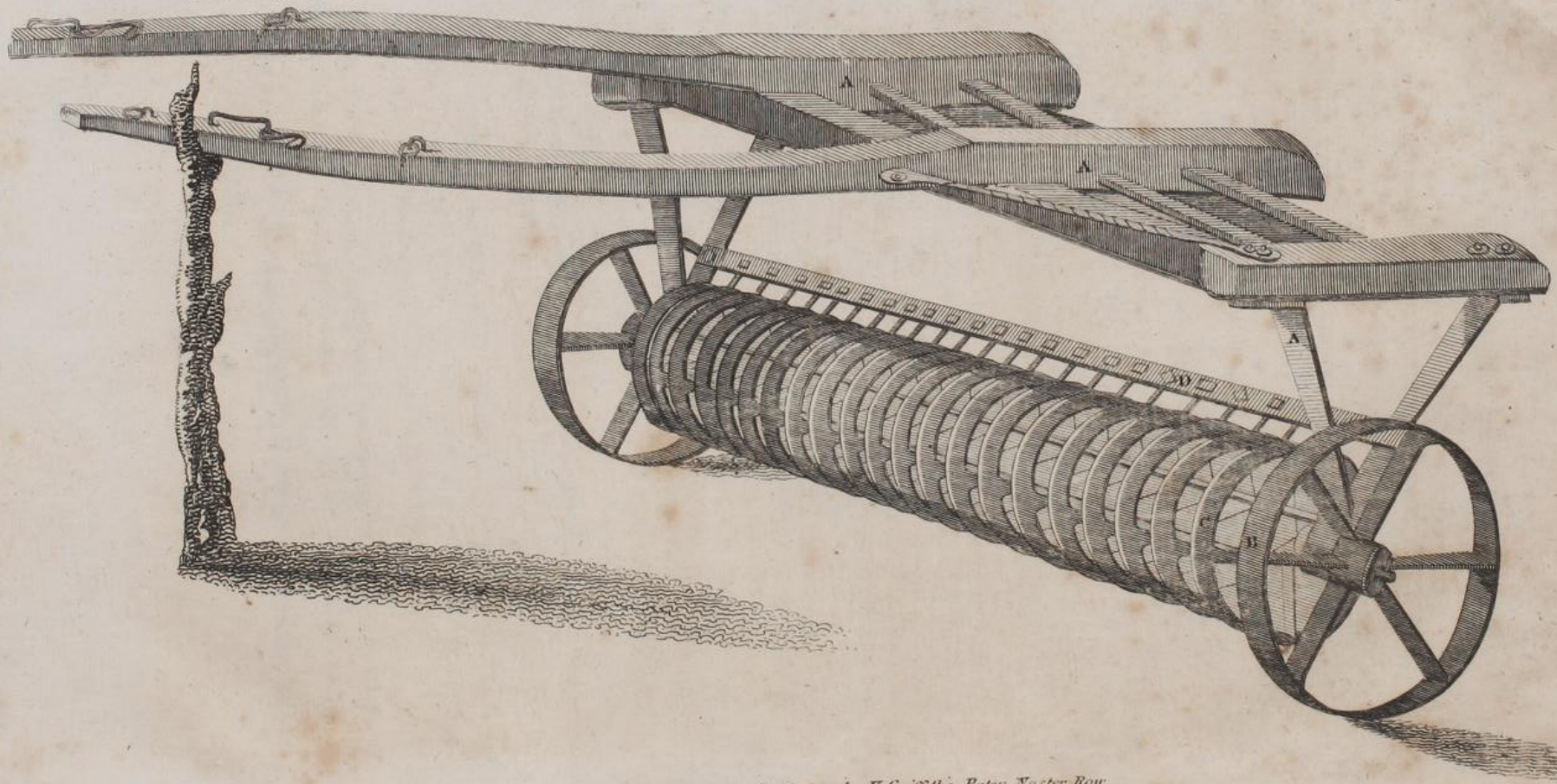
Mr. F. B. Harries's Clod Roller



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THE

AGRICULTURAL MAGAZINE.

No. IX.] *SECOND SERIES.* [Vol. II.

FOR MARCH, 1807.

MR. FRANCIS BLITHE HARRIES'S, CLOD ROLLER.

[*With a Plate annexed.*]

To the Editor of the Agricultural Magazine.

Sir,

AGREEABLE to your request, I have inclosed a Drawing of my Clod Roller, the particulars of which you did me the favour to specify in your Magazine of the 1st of Jan. In addition thereto, I beg leave to mention, that the value of either of the patterns is eighteen pounds, exclusive of the row of spikes to clear dirt or stones, (which may not be judged necessary) and the shafts.

A, shafts.
B, two cast-iron wheels, to take it to the field.
C, cast-iron wheels, to cut the clods.
D, spikes to clear the wheels of dirt or stones.

FRANCIS BLITHE HARRIES.

Benthall House, Feb. 20, 1807.

CURSORY REMARKS ON DIFFERENT SUBJECTS.

To the Editor of the Agricultural Magazine.

Sir,

NOT having for several months sent you any thing, I take up my pen to give you a few observations on what I have remarked from some others of your correspondents, as I apprehend, some part of the plan of your useful Magazine is intended to correct errors, and promote improvements.

I shall begin my remarks, with one of your Numbers for last year, wherein you say you should be thankful to your several correspondents, for their future discussions of the important subject of the poor laws. I believe your readers think

themselves much obliged to your correspondent R. W. for many judicious remarks on this subject, but I do not find he has kept his intended promise, in writing to you further on this very interesting national object; and his neglect has been to me a disappointment, and I do not doubt it has also to many others of your readers. But how much soever Mr. Malthus is justly applauded, R. W. in my humble opinion, has quoted an article from him, which if put in practice, would be productive of the worst of consequences, and which is as follows: "He infers, that in every country there must exist some check, which proportions the population to the means of subsistence." I argue just the reverse—*that subsistence should meet the wants of increased population*, supposing the kingdom in general would copy such an improved system of culture, as there is to be met with in some few particular districts. In that case, I do not hesitate in saying, the nation would be enabled to provide good and sufficient food for at least double the number of its present inhabitants.

In respect to R. W.'s account of horrible famines attending a numerous population in China and Indostan, whenever there is a failure of the rice crop, the circumstance inserted in your Magazine for May, by the president of the Board of Agriculture, should be made as public as possible, and is a proper comment on the above. "The extensive cultivation of potatoes in the East Indies, by which thousands, and in process of time, millions of human creatures will be preserved from perishing by famine, is to be attributed to the recommendation and exertion of this Institution.

I am, Mr. Editor, one of those old fashioned Englishmen, who are rather fond of some of the old English proverbs, because I often find them consistent with experience and truth, for instance: "Providence never sends mouths but he sends meat, if we use the best means in our power to obtain it.

I have for many years, at intervals, written what I apprehended, would be attended with public benefit respecting the poor laws, and was always of opinion, the promoting a good system of education, should be considered as the corner stone. When I received the Star paper, of the 20th of February, with Mr. Whitbread's justly celebrated speech, principally for establishing a national system of education on the most approved plan; I could not but consider his superstructure as founded on a rock, extensive and noble, which when put in force, and properly attended to, may tend more to the comforts of the poor and advantage of the public, than all other means that can be devised by the wisdom of man, and that would of itself, in time, do all that could be wished in the business; not that it would be improper to add some rules

in aid of such system, but these are not many. Mr. Whitbread has alluded to some, and I intend to submit a trifle more to his better judgment, and to reserve what I have farther to remark on this subject until your next number.

After your engraving two of my plans of underdraining, in your last spring Number, done in Elkington's best method, I must confess my surprise was great, in observing a plan in your Magazine for December, performed with a great many shallow drains, by an acquaintance of your respectable correspondent *Agricola Norfolciensis*, who may depend upon its not answering his future expectations; these shallow drains will sooner or later choak up, as I have found by experience, whereas if the drain A, which he properly calls the main drain, had been performed in the manner I described, it would have effectually drawn off the water, and stood firm for ages, *and not been attended with half the expense*. I intend sending you a drawing of Elkington's borer for one of your future Numbers, which I thought of conveying to you before this, but having lent it out, I could not get it home again for more than twelve months.

I have thought the above remarks the more necessary, as A. N. says, in his postscript, Mr. Rix is so thoroughly convinced of the utility and advantage of the method he has pursued, that he is now preparing a second meadow, lying near the foot of the one just improved, for a similar process.

A. N. with many others, complain that some parts of their farms are peculiarly subject to mildew, and consequently the wheat crops receiving material injury; but this misfortune is easily obviated, by sowing the bearded or spring-wheat, which is growing yearly more and more in repute, and now often sown and seeded down the same as barley.

I am, Sir,

Your obedient servant,

Chadwick Manor, Worcestershire, J. CARPENTER.
March 13, 1807.

CURSORY OBSERVATIONS ON THE GREAT AND RAPID INCREASE OF THE POOR RATES.

To the Editor of the Agricultural Magazine.

Sir,

MANY and loud have been the complaints of the "*great increase of Poor's Rates*," and many have been the remedies prescribed; but it bids defiance to all prescriptions, and the real remedy is perhaps at as great a distance as ever.

It is admitted I believe as a maxim, "that the cure of a disease must be preceded by a knowledge of the cause," and therefore it may not be useless to enqure wherefore it is that so much money as 5,000,000*l.* annually, should be found necessary for the relief of the poor.

That war may be operative in some measure to produce an increase of paupers I must admit, but it appears to me to be so in no very considerable degree, because whether we are at peace or warfare, the aggregate amount of rates would scarcely decide which state we were in.—I allude to *rural parishes.*

We have no information that a century or even four-score years ago, any rural parish book, contained a rate of five shillings in the pound, rarely did it amount to half the money; but it was always paid chearfully, because little was wanted, and many contributed to produce it. Parishes were full of little farms; the occupier tilled his land and reaped his harvest by the sweat of his own brow, his wife was his partner, his children were his servants. Plenty was consequent. His cow, his pigs, his poultry constantly supplied the neighbouring market, and moderate prices were consequent.

Since the period I have mentioned, (from what cause I will not take upon me to say) the little Farmer has been gradually disappearing, and that most valuable race of men is nearly extirpated from the soil to make room for the overgrown monopolizer, commonly called a Gentleman Farmer.

I have been credibly informed, Sir, and I have reason to believe the fact, that within ten miles of the spot I write from, no less than *nineteen* small farmers with their families, were expelled to make room for an *individual!!* and pray observe, those nineteen farmers kept 42 cows upon the same lands that have since supported only *four!!!* In the same neighbourhood, there is another consolidation of *seventy-one* farms, precisely under the same circumstances.

Do not this monopoly and decrease of produce naturally enhance the price of provisions? And does it not readily occur, that the dispossessed farmers with their families, must descend into the class of labourers, and so become suitors to that fund to which they were wont to contribute.

Gentlemen farmers in a great many neighbourhoods will rarely permit a single feather to be sold from their poultry yard, nor an ounce of butter from their dairy, and (if at all) then at such extravagant prices as our ancestors could have had no conception of.

From hence I think it appears that the grievance complained of is produced by the complainants themselves; and

that had it not been for a monopoly of land, provisions would have been more reasonable—Paupers fewer, and poor rates moderate.

Nearly all necessaries have doubled in price within forty years past, which is a proportion not equalled in two centuries preceding, and may fairly be charged to the annihilation of the labouring farmer, and substituting the gentleman.

I shall just notice "Clericus et Colonus" on Tythes, and shew him by an actual occurrence that his plan for securing to the clergy "the full value of their *present general* stipends" would be ineffectual as a permanent measure—thirty years ago the stipends were less than now, and would not be sufficient at this day to support that respect which is due to the cloth; how then shall we say that the stipends of the present day will suffice half a century hence? they must *necessarily* be proportinate to the value of land produce—but to the occurrence.

A reverend Gentleman presiding over a parish in the county of Sussex, and having no other means than what he received from his parishioners for their commuted Tythes, thought himself liberally provided for, and so he was till the year of scarcity came, and he was then obliged to pay (out of his stipend if you will) twenty-two shillings and sixpence in the pound, poor rate!—This needs no comment.

I wish I could point out a method for preventing the frequent litigation between the pastor and his flock, but I have only to lament my inability, and profess my high respect for your Magazine, and the abilities of a great number of your valuable correspondents.

Remaining Sir,

Your very obedient Servant,

Hudlow, Kent, 1806. AN ATTENTIVE READER.

ON TYTHES.

To the Editor of the Agricultural Magazine.

Sir,

Tythes have at all times operated so unfavourably for the improvement of land and the introduction of good husbandry, as well as to the increase of the cultivation of crops of the grain kind, that I have been induced to send you the following plan for the equitable removal of them, which appears to me judicious, and is suggested by the writer of the very able Survey of the County of Stafford. With the expectation of your giving it a place in your very useful publication.

I am yours, A Farmer.

"IT is properly and justly remarked, that tithes having been formerly appropriated for a particular purpose, must be admitted as a property equally sacred with any other, especially as that appropriation is admitted by those laws which regulate the country where the tithes are produced; and although a considerable part of the property so appropriated, has since been alienated from its original purpose, yet such alienation having been admitted and confirmed by those laws which protect all other property, no friend to justice and the stability of property can expect an exoneration from, or an abolition of tithes, without proposing or providing an equivalent.

"But notwithstanding, the writer must, he says, at the same time confess, that tithes being a heavy tax upon the efforts and exertions of human industry, are in a considerable degree a prohibition of such exertion, and in that respect, act as a dead-weight and a check upon that spirit of improvement, which it is good policy to encourage by every means that can be devised. If an equivalent can be found, and a commutation be effected without injury to any one concerned, such regulation would, doubtless, be an improvement to our political system.

It is therefore proposed, that the subsequent plan should be adopted as the outline of an exchange of tithes for land, as land will always bear a value proportioned to that of its produce, and even the price or value of labour is measured by the same standard.

It is that an act of parliament, appoint in every diocese, an equal number of the most respectable clergy and country gentlemen, commissioners and trustees, with a power of nominating surveyors, to value all the tythes belonging either to the clergy or laity within the diocese; and let the act give an option to the land-owners of purchasing their respective tithes, as the valuation fixed on them by such surveyors; the money arising from such redemption might be invested in the funds, or other securities, until a proper opportunity should offer of laying it out in land, and where the land-owners should refuse to purchase such tithes, the commissioners might have the power of mortgaging them, or taking up money on their security, to be invested in the same way; with that arising from tithes, actually sold, or after a given time, the trustees might be empowered to set apart an allotment of the land of those owners who refuse to purchase, and which if conveniently situated for the former tithe owner, might be so applied, otherwise sold, and the money arising from such sale invested as before, until it could be laid out in the purchase of land. The execution of some such plan would be attended with infinitely less trouble and

expense, than that now incurred by the annual valuation of tithes, as should the proposed regulation be once effected, the business would be settled for ever, but under the present system, the surveyor or valuer's business is continued from year to year; and if that system should continue, will be from generation to generation. An equivalent in land, must certainly be a more solid property than tithes. Land may be improved in any degree, by good management and industry; tithes fluctuate or sink in value at the will of the cultivator. I think some such commutation as this may be easily effected, and that all parties would be pleased with the alteration."

ON THE CULTURE OF FLAX FOR DIFFERENT USES AND MANUFACTURES.

To the Editor of the Agricultural Magazine.

SIR,

THE methods detailed below are those which have been found to answer in the best manner in the County of Argyle, as given by the intelligent author of the Agricultural State of that district.

I am, yours, &c.

A. B.

IT is suggested that as the culture of flax is not yet well understood by the greatest number of those who raise it in this county, it may be proper to give a few directions on the subject. Care must be taken to have good seed, plump, fresh, and of a shining colour. The brighter in colour and the heavier the better. That which, when bruised, appears of a light or yellowish green, and fresh in the heart, oily, and not dry, and smells and tastes well, and not fusty, may be depended upon. That from *Riga* is reckoned the best. Dutch seed is also reckoned good. But if the seed come from America, it should be from the provinces to the north of Philadelphia. Choice must then be made of suitable ground for it. A deep sandy loam, in good heart, clean and well pulverised, is the best. It answers well on rich ley ground, as it will be free from weeds; or after a good crop of turnips, potatoes, or other cleaning crop.

The seed should be sown when the ground is neither too wet or too dry, and harrowed in like *clover*, with a short teethed harrow, after the ground has been first broke and smoothed by another harrow. This will prevent any of the seed from going too deep, and make it come up equally. It is better to sow rather thick than thin; for if too thin, it will branch; and the goodness of the crop will depend on its running into long fine stalks without branches.

The ground, after sowing, should be well clodded, and then rolled, to prevent its being hurt by drought. When three or four inches long, the crop must be carefully weeded, and as little injury as possible done to it by the feet or otherwise. The crop should not be allowed to ripen so much as is commonly done at present ‡. It should be pulled when the stalk begins to turn yellow, as soon as it has lost the blossoms, and before any of the *bolls* are hardened and approaching to ripeness. To allow the seed to ripen, would hurt both the crop and the ground. It is owing to the common error in this case, that flax has got the name of scourging crop. It is so, when allowed to ripen its seed, but the reverse when pulled as soon as it has lost the bloom; as it ought to be when the seed is not to be saved. If the flax is fallen, it ought to be pulled the sooner, that it may not rot. The *beets* should be no longer than a man can grasp in both hands, and tied very slack with a few dried rushes.

No circumstance respecting the management of flax requires more attention than to water it properly. We generally keep it too long in the pond, or rather in the stream, which is injudiciously allowed to run over it. Instead of this a canal seven or eight feet wide, and two and one half deep and of a length proportioned to the quantity, should be made and filled with soft water, three weeks before it is needed, in order to warm it by the sun; supplying, if necessary, any waste occasioned by evaporation.

The beets should be laid in the canal slope ways, with the root end uppermost, as the crop-end is apt to breed vermin hurtful to flax. It may be covered with *divots* the green side undermost, and if not heavy enough to keep the lint under water, some stones may be laid above them, but the flax should not be pressed to the bottom. If the flax was pulled in proper time, and the water is warm and soft, the rind will probably be sufficiently loosened in seven or eight days; and if on trial, it was found to be so, it ought immediately to be taken out. It is always safer to give it too little, than too much watering, as the defect may be easily remedied by giving it the longer time upon the ground; whereas a mistake on the other hand cannot be repaired.—When sufficiently watered, it feels soft to the gripe, and the *harle* parts easily with the *boon or show*, which last is then become brittle, and looks whitish. The coarser the flax, the sooner it is watered. Each beet, when taken up,

‡ The finer quality of Irish and foreign lint, is aſcribed to its being pulled before it is ripe. This will add to the quantity. A writer in the STAT. ACC. (XVI. 527) after telling that 71 ſtones were got from three lippies of ſeed, obſerves that it was pulled before it was fully ripe.

AN ACCOUNT OF MR. CURWEN'S METHOD OF CULTIVATING CARROTS, AND APPLYING THEM AS FOOD FOR CATTLE.

[From the Transactions of the Society of Arts &c.]

HE remarks, that "in Mr. A. Young's valuable and interesting Report on the Agriculture of Suffolk, he was much struck with his account of the culture of carrots, and the advantages resulting from the application of them as food for horses.

From the very general opinion which prevails, that none but particular soils are applicable to the growth of carrots, the culture of them to any extent has been confined to small districts.

Mr. Young's observations are, he says, confined to sowing by broad-cast, which can be successful solely in sandy soils. The method he has pursued has been to trench-plough, and stitch up the ground intended for carrots, as soon as it was clear, leaving it in that state during winter, which greatly facilitates its working in the spring. In April he breaks it up, by giving it three or four ploughings, harrowings, and rakings, which brings it into garden tilth. Previous to the last ploughing he gives from ten to fifteen cart-loads of ashes per acre. The second week in May he has it stitched up, and made ready for sowing; allowing three feet between each stitch; and he throws the ridges as high as they can be put. The tops of the stitches are smoothed with a very light roller, so as to admit of a furrow being drawn with a hand-hoe.

The seed, ten days or a fortnight before it is used, is mixed with wet sand, and placed in some warm situation, so as to be in a full state of vegetation before it is sown. A fortnight is gained by this method, and the carrots are less liable to be injured by the weeds. The plough and harrow are kept at work during the whole summer. The plants are twice hand-weeded, and afterwards thinned. The expense attending this is considerable, but the value of the crop amply compensates it.

In 1804 he had an acre and a rood, which had been previously occupied by cabbages, and afterwards by tares. The soil was very heavy and strong. The tops of this crop were so abundant, that they would have fed twenty head of cattle for a month. He began cutting them too late, by which means he lost a great part. It is essentially necessary to get the carrots dry, to enable them to keep. He endeavours, if

the weather be favourable, to have them up by the first or second week in October. He employs women to take them up with forks, which costs 10l. The crop yielded 829 Winchester bushels, equal to 4143 stone (of 14 pounds). Estimating the carrots at 6d. per stone (the price of oats at that time) they were worth to him 103l.

Each working horse in his employ is allowed 8lb. of oats per day. One half was taken away, and supplied by an equal weight of carrots, and this was continued while they lasted. The general opinion was, that the horses improved in their condition upon this food.

In 1805 he had three acres and three roods of a similar soil sown with carrots, which had previously borne a crop of oats. The first part of the season was uncommonly cold, and afterwards unusally wet, which checked the growth of the tops, so that they never got to any size, and were eaten off by sheep. In order to facilitate the work, and at the same time to save expense, he made a trial of the plough to take off the earth from the carrots, and then setting in and turning them up.

The injury was trifling, and the expense not a tenth part what it had been. There were 108 carts of 80 stone each, or 2246 stone per acre, which, at 6d. per stone, would amount to 60l. and upwards per acre. He has made use of them as in the preceding year, with the most complete success, and saved 60 bushels of oats per week, and shall be able to continue to do so for a fortnight or three weeks longer.

In the first trial an acre of carrots was equal in food to 23 of oats, allowing 60 Winchester bushels of oats per acre, and at three stone the bushel. On taking up the carrots, a small piece was cut from the top of each, to prevent it from vegetating, and these were immediately used. The remainder were piled in rows two feet thick, and five feet high, leaving a space between each row for a free circulation of air. He does not doubt but that they would keep in this way for a length of time. He has always made immediate use of them, as old oats are more valuable than new, and, moreover, the saving of oats is in itself a matter of much import.

The success of these trials has determined him to extend the cultivation of carrots, and he has prepared ten acres for the ensuing season.

Mr. Young recommends carrots as a substitute for hay: when they can be procured with little or no expense, this may answer; but he says, when the ground is to be prepared for them at a considerable expense, cheaper substitutes may be

found. Though the expenses are great in cultivating carrots, yet the giving of them in part instead of oats will most abundantly repay them. The expense of each acre in sowing, cleaning and housing, will not be short of 15l.

Whatever system can multiply the produce of one acre into that of two or more, is, he conceives, an object to a country where the consumption of the first necessary of life exceeds what is at present produced within the empire."

REMARKS ON PRUNING FIR TREES, BY MR. ROBERT SALMON, OF WOBURN, BEDFORDSHIRE.

[From the Transactions of the Society of Arts, &c.]

"ON contemplating these specimens, considering the purposes that fir timber is generally applied to, and having some knowledge of plantations of this sort, it must occur that clearness of knots, straightness, length and equal size of its trunk, constitute its perfection; and, if deficient in all these, it is of no value but for the fire. Next to these considerations, and the prospect of an improved knowledge of cultivating this article, it may be a fair question, if our own country is not capable of producing fir timber little or not at all inferior to the foreign fir.

At present fir in this country appears not for any period to have been considered much otherwise than as ornamental. For this purpose they serve but for a certain time, which past, it has been their fate to be cut down long before having attained maturity. But, from the vast plantations now established, it is to be hoped that another century may obtain to English Fir some of the character of the English Oak; towards such end, if attainable, every means should be used, and towards which nothing appears more likely to succeed, than a well-grounded general practical mode of management, from the time of their being planted out, to their greatest imaginable age of improvement. That a knowledge of such may by perseverance be gained, is not much to be doubted: and by inspecting and considering the specimens herein referred to, there appears great reason to conclude, that early and proper pruning and thinning will form a considerable feature in the system to be adopted.

"Now as forms are first instruments in good systems, and that proceedings on fundamental principles (though in the essay they may a little err) are better, in a general view, than occasional success by hazard; so it may be warrantable that

a system for general management may be laid down, although the author cannot possibly have lived to prove all by experience: so the rules hereafter submitted are given, being the result of only a few years' observations.

For planting, from every authority or observation, there can be no doubt that all firs should be planted thick; not more than four or five feet apart.

Where firs of the same kind are planted together, there is less loss of plants from one sort overgrowing and destroying the others; consequently it appears advisable that all the different sorts be planted by themselves. If any admixture be at all admitted, the Scotch and Larch may best succeed: but this is not certain, and they will certainly be best separate on two accounts; first, because they are not so likely to injure each other; and secondly, the Larch may be put in the ground best suited to them, and the Scotch the same.

In making plantations of any particular sort, it may be right to have a few spruce, or other sorts on the outside, to prevent mischief from sudden gusts of wind; but if the situation is not subject to such gusts, the spruce had better be omitted, being mechanical agents only, and by excluding the sun and air they act against the operation of nature.

In these hints ornament is not considered; if such be wanted, and profit also, then the spruce, larch, silver, and some other may be combined.

From some years' observations on pruning and the effects thereof, it appears certain that fir trees, at a certain age, should be pruned to a certain height; and for regulating thereof, the following simple rule is recommended. The pruning to commence when the trees are six years old, or when there is discernible five tier of boughs and the shoot; the three lower tier of boughs are then to be taken off. After this first pruning, the trees to be let alone for four or five years, and then, and at every succeeding four or five years, the pruning to be repeated, till the stem of the tree be clear to forty feet high, after which, as to pruning, it may be left to nature. The rule for the height of pruning, after the first time, to be half the extreme height of the tree, till they attain twenty years growth; and after that time, half the height of the tree, and as many feet more as it is inches in diameter at four feet from the ground. This pruning is known, from repeated observations, not to be excessive; and the rule is calculated to check the too tapering top, and strengthen the slender bottom, by carrying the pruning to a greater proportionate degree, in a ratio compounded of the height and bottom bulk: and by this rule it may be observed, that the trees will be at top cloathed with somewhat less than half their branches.

The proper time for pruning, is between September and April, and the tool to be used, the saw.

Orderly thinning the trees at certain periods is the next essential to pruning, and for this purpose observations have been made on the most orderly and thriving plantations, and the following simple rule is recommended. Keep the distance of the trees from each other equal to one-fifth of their height. In the application of this rule for thinning, it is evident that each individual tree can never be made to comply, for the original distance (even if planted in the most regular order) will allow only of certain modifications, by taking out every other tree, and so on; but even if the obtaining such equal distance was practicable, experience would show that another way should be preferred, of which the eye must be the judge, by taking out such trees as are least thriving, stand nearest another good tree, &c. &c.; at the same time keeping in view the rule prescribed: the following of which rules may easily be proved by measuring a chain square, or any quantity of the land, and counting the trees thereon; then by trying the height of two or three trees in that quarter, and taking one-fifth of such for the distance, it would be readily seen how many trees should be contained in the piece measured: or the practice may more simply be regulated, by taking the distance of eight or ten trees added together, the average of which should be equal to a fifth of the height of the trees.

In these rules nothing impracticable or complicate is proposed.

The author has for years known the expense and produce from trimming only, and finds in Bedfordshire the produce doubly repays the expense; and although some experimentalists may differ from him, or time may show some reason for deviating somewhat from his rule, yet it is presumed all will agree that some simple system is advisable, instead of having plantations and woods mismanaged, to the great loss of the community and the proprietors. If such a system as proposed, be generally promulgated; if not perfect, it will most likely, in time, become so, and thereby have its advantage; and that some advantage may be had in speculation, the following concluding remarks are introduced.

In the common course of gardening, it is understood that pruning invigorates the tree; that trimming off the side branches makes the upright ones shoot the stronger, and by cutting out the dead and decayed wood the tree is kept alive: some of this doctrine will certainly apply to the tribe of firs; it will certainly substitute clean wood for knots, and of all this treatment, from their particular uses, they of all other

trees stand in most need, and will be most improved by it. And should it be admitted that like treatment would on the fir, as well as other trees, produce the like effect, it would lead to a well-grounded expectation that, as well as producing clearness from knots, straightness and length, the same operation would advance the quality nearer to that of foreign fir; for it may be traced, that where trees are tall and clear of boughs or knots, the whole substance of the wood is better and of finer grain, and it appears likely that such will always be the case: the reason may probably be inferred from the sap having farther to rise and descend, and having no boughs to divert or delay it, the circulation must be more fine and rapid, most increase be left in the neighbourhood of the boughs at the top of the tree, and least on the sides at the lower part; consequently adding to the length of the head, and rendering more fine each annual increase to the body; thereby producing a close-grained, clean, long, and regular, easy-tapering useful piece of timber; instead of a coarse-grained, short, sudden-tapering trunk, with a quantity of boughs and knots.

The foregoing observations and rules are meant to apply to fir timber only, but to a certain degree they may be applied to other timber; though by no means to the same extent or age. But if applied as far as the first fourteen years of their growth, and then the pruning altogether omitted, and the thinning-out very much increased, any plantation would be rendered much more valuable than if left entirely to nature."

ON COUNT BENTINK'S EMBANKMENT IN THE COUNTY OF NORFOLK, SHEWING THE VAST IMPROVEMENTS THAT MAY BE EFFECTED IN THIS WAY.

To the Editor of the Agricultural Magazine.

SIR,

THE obtaining of extensive tracts of valuable land from the dominion of the sea, by means of judicious embankment, is an object of such an interesting nature in an agricultural as well as national point of view, that I cannot refrain from sending the very interesting account of an undertaking of this sort executed in Norfolk, under the direction of the late Count Bentinck, and given by Mr. A. Young, with his usual ability, in the survey of that district.

I am, with much respect, your's,

A FRIEND TO IMPROVEMENT.

Norwich, Jan. 29, 1806.

He begins by remarking, that "the tract of land in Norfolk, between the rivers Wyne and Ouze, called Marshland, is one of the richest districts in the kingdom. It spreads also into Lincolnshire, and forms altogether by far the largest salt-marsh we have. As the sea still retires from this coast, it is easy to perceive in what manner all this country has been the gift of that overwhelming element, which in other places encroaches so severely, and is, at high tides, restrained even here with so much difficulty.

"The soil of the whole is the subsidence of a muddy water, with a considerable portion of what the waves, powerful in their agitation, wash from the bottom of the adjoining gulph, which forms the embouchure of two considerable rivers. It is a mixture of sea-sand and mud, which is of so argillaceous a quality, that the surface of it which covers the sand, gives it the common acceptation of a strong clay country. Is its extraordinary fertility," he asks, "at all owing to the marine acid, with which every particle is impregnated? That cause has every where on the coasts of every part of these islands. as well as other countries, some effect. If the sea leaves only a running sand, the saline particles are soon washed away or exhaled; the land may be barren, though never in the degree of vulgar conception. But when the sand is mixed with, or covered by a more retentive substance, such as an argillaceous or calcareous earth, then the particles, whether saline or mucilaginous, are retained, and the surface classes amongst, or rather is at the head of all, fertile soils.

"He observed," he says, "that the whole country has been a present from the ocean: this is obvious from numerous appearances; but those who wish to know its history particularly, should consult Dugdale." And he "may remark, that there are ranges of banks at a distance from each other, which shew the progressive advances which industry has effected, eager to seize the tracts which so dreaded an enemy relinquishes. One of these banks is called the Roman, which naturally brings to our mind the vast exertions which that people made in agriculture, wherever their victorious eagles flew. The distance of this bank from the shore, if it really is Roman, and not a misnomer, is not so great as it would have been, had the sea in all ages been as liberal as it is in this. It probably varies considerably in this respect in different periods: at present it retires very rapidly, so that though Count Bentinck's embankment has been finished but a few years, there will be, in twenty years, a thousand acres more ready to be taken in, belonging to Mr. Bentinck, the present possessor.

" The mud deposited by the sea is at first, and for some years, bare of all vegetation: the first plant that appears is the marsh samphire; by degrees grasses rise, which, from their appearance at the time he viewed them (October), and eaten close down by cattle, seemed to be the common ones of the improved salt-marsh, but not the *diadelphia* family, which come afterwards.

" Long before it is raised enough by successive deposits of mud from high tides, it lets," he says, " to the farmers of the contiguous improvement for 5s. per acre; some years since at 2s. 6d. Broken as it is by holes and little creeks of water, it lets, immediately after embanking, at from 20s. per acre, a few years ago, to 40s.; and 42s. at present." He " observed one or two pieces within Count Bentinck's new bank, that were left in that state for cattle, but in general they were under the plough, and the grass-fields laid down after a course of tillage.

" The business of embanking to take in a new piece of marsh is done sometimes," he remarks, " at the expence of the farmers, who make the bank, to have the land rent-free for 21 years. Adjoining to the Bentinck improvement, is a piece of 80 acres thus taken, but the bank very ill made, at no greater expence than 40s. a rod. Those constructed by landlords were deficient in not having slope enough given towards the water. Count Bentinck laid out his upon a scale never practised there before; and his son, the present possessor, has far exceeded it. The former extends about four miles, and added to his old estate, 1000 acres. The base of the bank is about fifty feet. The slope to the sea, thirty-six feet, forming an angle, as he guesses from his eye, of twenty-five or thirty degrees. The crown is four feet wide, and the slope to the fields, seventeen feet, in an angle, he guesses of fifty degrees; the slope to the sea, very nicely turfed. The first expense of this bank was four pounds per rod, but a very high tide coming before it was finished, not only made several breaches, but occasioned an additional height and slope to be given to several parts, to bring it to the above dimensions, all which made the gross expense about five pounds a rod. The whole cost something above 5000l. The expense of the buildings, and other things, amounted to as much more, for five new farms, with houses, barns, and all necessary offices, were immediately raised; this was, however, going to a greater expense than necessary, for the land would have let as well in two or three farms, as it did in five. Calculating, says he, the expense at 10,000l. and the new rental at 1000l. a year, it is just ten per cent. for the capital. The expences certainly ran too high; for

should be greatly rinsed in the pond, to clean it of any mud or nastiness.

If the flax is spread on poor ley, it will improve it greatly; and the water in which it has been steeped is also a valuable manure, which should be carefully carried or conducted to some ground that needs it, or weeds and straw, &c. &c. thrown in, to absorb it and make dung. The flax should be spread thin and equally, and handled tenderly. If it meet with a few hours of dry weather after spreading, it will be so much the better, as it will make the *harle* firm to bear the rain.

The flax after lying on the field till it is sufficiently blistered in the *boon*, and easily parts with it, should be taken up in a dry state and to give it the greater crispness, may have a little heating on a kiln, immediately before it is wrought, using for this purpose some charred coals, or any fuel that has little or no smoke.

If at any time the flax shall be allowed to ripen so far as to harden its *balls* (as at present) which it ought not, as they should be rippled off before it is put into the water; they make a rich and excellent food for cattle, mixed with boiled chaff, and should be carefully dried and preserved for that purpose.

Expense and Profit of a fourth of an Acre.

	L.	*s.*	*d.*
Rent of ground prepared, usually the price of the seed	0	13	9
Two pecks and three-fourths seed, at 5s. per peck	0	13	9
Cloddings and sowing	0	1	0
Weeding	0	3	0
Pulling and watering	0	4	6
Spreading and lifting	0	3	0
Breaking and scutching, at 2s. per stone	0	16	0
	2	15	0
Produce of a middling crop, 8 stone of 24lb. at 12s.	4	16	0
Profit	2	1	0
Or (per acre)	8	4	0

It is stated that this crop is sown about the end of April or beginning of May, generally after potatoes, or on other land

that is clean, under good condition, at the rate of about ten or eleven pecks to the acre. Three stones from the peck is reckoned an ordinary crop; four a good one; some get five; and the value from 10s. to 12s. the stone. The writer adds that there is one mill for dressing *lint* in Kintyre, and another in Lorn, but in Kintyre the farmers generally dress their lint at home, after the harvest is concluded. This may be owing much to the high charge made for dressing it in the mill, being 2s. 6d. the stone and *drums*, or about one-fourth of the value of the lint. Proprietors of land, he thinks, are much interested in correcting every thing which discourages the farmer from raising more of this valuable crop. Had we more mills, the charge might be reduced by a competition.—Were it as in other places †, so low as 1s. 6d. the stone, it would encourage the farmer to raise a greater quantity.

It is supposed that few things would contribute more to the advantage of this county, than the raising a great quantity of flax, for which the soil and climate are well adapted.—The climate is warm and moist; and we have a great deal of good sandy loam, which is the best ground for flax. If the culture of this plant were extended as far as the other operations of the farmer would allow: or if the ground when tilled, were let to the poor, or to persons who, as in Holland, would make it their sole business to attend to it, it would, he says, prove an immense benefit to the county, and furnish employment to the poor, especially to the female part of them in every stage of its manufacture ‡.—When the crop is tolerably good, the produce of a single acre may be estimated at 15*l.* on the field; at 20*l.* when it comes from the mill; at 60*l.* when spun into yarn; and at more than 100*l.* when wrought into cloth and bleached.—Thus 1000 acres (which would be but 40 to every parish on the continent) would yield materials for a yearly produce of 100,000l.

The attention of the farmer, and the industry of the poor, should, therefore, be directed, as much as possible, he conceives, to a matter of so great and general importance. When this shall be the case, the minds of some of our landowners, who now depopulute their estates, will be more enlightened; and they will perceive, that the riches or productiveness of their estates, must depend more on the num-

† Agricultural Report of Angus and Forfar, ſays, it is prepared for the heckle at from 1s. 4d. to 1s. 6d. the ſtone.

‡ In the higher parts of Perthſhire, adjoining to the County, the ordinary farmers commonly pay all their rent by the ſales of linen yarn.

ber of people than of sheep, by which they are occupied. It is certain, that neither pasturing nor agriculture alone can make any country so rich and prosperous by themselves as when they are conjoined with manufacture and with commerce. But these cannot be carried on in any place which does not abound with people."

In cultivating this plant for the purpose of making cambric and fine lawn, it is observed, that the ground should be a rich, light, and dry soil, sufficiently pulverized by repeated ploughings, when in a dry state, or after potatoes; and if near a wood, it will save trouble. The seed should be sown before the middle of April, about double the quantity usually sown for flax or lint. The ground should be rolled, if dry, and weeded when it is three inches long; after which, forked sticks (about half an inch thick) should be set at four or five feet distance, poles laid along these forks, about six or seven inches above the lint, and distant from each other two, three, or four feet, according to the length of the brush wood that is to be laid over them. This brush wood ought to be laid close and even, rising all about eighteen or twenty inches.

The lint should be pulled as soon as the seed is formed, or a few days after it is out of the bloom, before the lint turn yellow. If any be coarser than the rest, it should be kept separate. It must be pulled above the brushwood, and every handful laid upon it four or five hours to dry, if it is fine weather, spread it out four or five days, putting it into a barn at night, and taking care that it get no rain, which would make it turn black. If it get wet, it is better to leave it on the grass till dry, than to put it in wet. The bundles must be opened in the barn, or made very loose, to keep them from heating.

The pit for watering should be made long before it is used, and will be the better if it has a clean sward on the bottom; if not some straw may be put under it. A small rill of clear water should run in, and off the lint, while in it. The pit may be six or seven feet broad, by three deep. Along the surface of the water, or a little lower on the two sides, run poles fixed down by wooden hooks of this figure 7; and other poles across, with their ends under these, to keep all the lint down, three or four inches under the surface of the water. The time of watering depends so much on the weather, and on the softness or hardiness of the water, that no certain period can be fixed."

The writer concludes by suggesting "that the introduction of the two handed wheel, hardly known as yet in any part of

this county, would contribute perhaps more than any thing to the speedy increase of our flax crops. This simple machine now common in other parts of Scotland, would enable the same number of hands to spin the double of what they do at present; so that there would be a call for raising a double quantity, one half of which would fall to be added to our present exportation, and bring a large yearly revenue to the county, besides enabling the poor to earn twice as much by spinning as they do at present. A small premium to the first, second, and third, who should use these wheels in any parish, might have a good effect. After that, we may perhaps, as in other places, go a step farther, and think spinning lint in a still greater quantity by the use of the water machinery, which is now made to spin flax as well as wool and cotton."

HINTS ON THE USE OF CHALK, AS A MANURE IN THE COUNTY OF HERTFORD.

To the Editor of the Agricultural Magazine.

SIR,

IN your last Number, one of your correspondents has given "some statements," on the application of marle in the county of Norfolk; and as the use of chalk is not less beneficial in other parts of the kingdom, I have here taken the liberty of sending you some circumstances concerning the method of employing it in Hertfordshire, as taken from the Agricultural Survey of that district, where it has been long had recourse to, with such success as to render an indifferent soil highly productive, and with a spirit and perseverance that does the cultivators the greatest credit,

I am, your constant reader.

Herts, March 10. W. W.

THE basis or substratum of almost the whole district consists of an intermixed chalk and earth, which in some places is covered to a considerable depth, while in others it approaches nearly to the surface. This is a circumstance which frequently renders the discovery of the chalk difficult and uncertain; though the persons who follow the business, are in general capable of forming a tolerable correct judgment in respect to it.

The method that is most usually followed in performing this sort of business, is that of procuring labourers who make it a sort of trade, and are usually three in number, which constitutes a company. These are furnished with two wheel barrows, a spade, shovel, and pick axe, which are all the tools that are requisite in the work. On being thus prepared, a central spot is fixed upon to the land intended to be chalked, which is mostly from six to eight acres, where a pit about four feet in diameter is opened to the chalk if within twenty feet, but when not found in that depth, the diggers consider themselves upon an earth pillar, and fill up the pit again, proceeding to make openings in other situations till they meet with success. When this is the case, the sides of the opening are supported by the interweaving of green brush wood in a sort of close basket work. The earth and chalk are then raised from the pit, by the simple contrivance of what is termed a *Jack-rowl* supported on a frame of wood, having a cart wheel attached to one end of it, so as to answer the purposes of a fly and stop. About the *rowl* an inch rope of proper length, is wound, to one end of which is fixed a weight, so as nearly to counterbalance the empty bucket which is placed at the other. These things being in readiness, the pit-man digs up the chalk, and fills the bucket or basket, when the other two alternately draw it up, and wheel the chalk upon the land. As soon as the bucket reaches the top of the pit, it is prevented from returning by a suitable wooden peg being thrust, by the spoke of the wheel, into a hole in the upright frame work which confines it till it is emptied. The pits are sometimes sunk to the depth of thirty feet, and then chambered at the bottoms, that is, the chalk dug out in an horizontal manner, in three different directions, so as to admit of the work being carried on with convenience, and in a safe manner. It is usual to chalk the extent of six acres from one pit, employing sixty loads to the acre; but where larger quantities are made use of, up to the full extent, which is one hundred loads, the extent of land is diminished in proportion. The number of barrow-fulls which form a load is eighteen; and the price for performing the business was formerly 7d the load, all expences being included; consequently the charge of chalking at 60 loads the acre, was 1l. 15s. and at two loads 2l. 18s. 4d. It has however since advanced with the price of other sorts of labour. The chalk is esteemed better the deeper it lies, and that near the surface to be worth nothing except for lime and the repairing of roads, &c. The chalk of the first two or three feet in depth is therefore thrown aside for the

above uses, or to be afterwards returned into the pit on filling it up. The chalkers should likewise be carefully prevented from carrying out the flints along with the chalk.

In its application this substance is used in different proportions by different farmers; but in common about sixty loads put on, at the distance of ten or twelve years, is found the most successful practice. In the extensive experience of Mr. Hill on strong cloggy land, this quantity is found not only to make the land work much better, with less strength of cattle; but also with a light coat of manure of the dairy kind, or spring top dressing laid on occasionally to quicken the vegetation, to afford abundant crops for ten years afterwards, when he can chalk again with the same success.

And as the general management of the county, it is equally beneficial and advantageous.

In the practice of Mr. Boyde, this substance is used in large quantities. He employs it on a light turnip loam, which he intends to lay to grass with barley after the present turnips, and to spread the chalk on the stubble upon the young seeds. He pays for winding it up in buckets, sevenpence a load of twenty-four bushels, and eightpence a foot for the shaft till the chalk is found: the men will barrow it on to the land, at the distance of twenty poles, for eightpence, but then they open a fresh shaft at every forty yards. They have twopence in the shilling for beer; and for filling it into carts and spreading it, fourpence a load more. Forty loads are the common quantity per acre. And he finds that it does more good on his light soils than on the heavy ones; and conceives that it is apt to subside, and after some years be lost, and that it should be spread at such a period of the cropping, as to be kept on the surface with ploughing as long as the course of husbandry will allow it.

It is observed by Mr. Whittington, that chalk used as a manure, is for some time, bad for wheat, though good for every other crop; and considerably the most useful on land that burns, as gravel: it is of little benefit on cold wet soils. On land subject to sorrel, chalk is a sovereign cure, killing that weed speedily: a circumstance favourable to stock, as well as to the soil, for it is very unwholesome for sheep: he has several times lost lambs by their eating it, as it gives them the cholic. He finds fifteen loads of chalk per acre, and repeated once in ten or twenty years, much better than a large quantity at once. The chalk drawers in this part of the county, will cover eight acres with barrows from one pit in the centre. And Mr. Marsh, lays fifty to sixty loads an acre, at twenty-two buckets or heaped bushels per

load, usually in the fallow year for turnips, and spreads dung on the chalk, which is found to work singularly well with chalk, but chalk alone does much good for turnips. Upon his farm the chalk shafts are fourteen to twenty feet deep.

With the hard chalk about St. Alban's, fifty loads are used per acre, being wholly drawn up in buckets.

Mr. Biggs, near that town, spreads fifty loads each of twenty-two buckets, of one bushel and a half, at eightpence a load, barrowed on to the land; he pays threepence a foot for the shaft which is seldom more than six or eight feet to the chalk; the men will do four or five acres from one shaft. And Colonel Dorrien, at Berkhampsted, has a practice of carting some hundred loads of chalk, in the autumn, into his farm yard, to fodder upon, and then mixes the chalk with the dung. Around Berkhampsted, the expence of chalking amounts to one shilling for opening the pit. For a load of twenty-two barrows, the farmers pay eightpence; for spreading twenty loads one shilling; for breaking ditto, eightpence; for filling pits, 1s. 6d. for every twenty loads that come out; and they give also small beer, or a penny in the shilling on the whole amount, the whole is wheeled on to the land; and generally six or seven acres are chalked from one shaft. And Mr. Rooper, at the castle, has found from much experience, that chalk acts with the greatest effect on the flinty, gravelly loams, by *cooling* them as he expresses it; but on strong and clay soils, by drying them. It is spread even on soils where the chalk itself is near the surface. And Mr. Cotton, of Hempstead, thinks also, that it does most good on gravels: there is, however, much uncertainty in its effects. He once chalked a field of clay, and it did not bear a good crop; but a neighbouring farmer did the same thing, and got a fine crop of wheat the first year; yet wheat is sometimes apt to be hurt, from the chalks being broken up by the frost, and consequently, by the wheats being rendered light and root fallen. It is agreed that land chalked wants the more dung on that account."

This substance is much used about Beechwood, in the proportion of from 20 to 40 loads an acre: it lasts ten or twelve years, and does best on wet loamy land; but this sort requires more frequent chalkings than any other. It does well on clay, and lasts longer; and has much effect in making the land plough more kindly. About Hitchin, they chalk on gravel, and with much success. Mr. Chapman spread it on a field last year, and sowed turnips, and the benefit was to that first crop so great, as to be seen in the plant to an inch: this was a sharp gravel. And he knows a field

of strong clay chalked many years since, in which the improvement is clearly seen at present.

At King's Walden, William Hale lays 50 loads an acre on clay, and binding flinty land, and finds its only use is to make these soils work well, which it effects perfectly; eighteen buckets here make a load, and contain about a bushel each. It is laid on at the rate of 7½d. per load; and lasts twenty years.

But about Rickmerworth, chalk does best on gravelly land, at the rate of 50 loads an acre; a load contains 22 buckets. Mr. Sedgwick is clearly of opinion that carting will not answer; he would never cart on any account, as barrowing is so much the better. The chalk lasts good for fourteen years. It is also used on the strong clay adjoining Middlesex, and with great success. And at Albury, much of the clays have been chalked, but they say that the only benefit perceivable, is to render them drier, that they may be ploughed more early; and that, in general, they work mellower.

At Clothall, Mr. Smith chalked a fallow of wheat, at a rate which amounted to 70 loads. He finds it does best on binding loams, composed of clay and sand; 18 buckets, of near two bushels each, make a load. It lasts fifteen years.

It seems not improbable but that the methods of raising chalk and putting it upon the land, by means of barrows, as here premised, might be had recourse to with advantage in some of the marley districts, in saving much of the vast expense of the teams employed in such severe labour, and in promoting the business among the smaller or less extensive farmers in such situations.

the value of the marsh, at two shillings and sixpence an acre before embanking, reduces it to less than nine per cent.; after which, there is still to be deducted, the almost periodical repairs, which remarkably high tides still occasion, and which may be averaged at once in ten years. So that when we consider it not as a purchase of a new estate, but an agricultural improvement of a waste, the profit is not equal to what might be made on other species of waste lands.

"This is probably owing, he supposes, to the husbandry of these stiff wet soils being very ill understood, and managed in a manner that is reprehensible in almost every particular.

"Instead, he well observes, of a system of miserable tillage, with weeds, the chief signs of fertility, the plough ought to be introduced only as a preparation for the most perfect grass system that can be devised. These lands, when well laid down, will fatten the largest bullocks and sheep in England, which is the right employment of them; and in which application they would be better worth thirty shillings than in their present state twenty shillings. Hence it should be an improving landlord's business to farm the marsh till he got it to a very fine grass, laid down himself, for he scarcely ever saw a tenant that would do that well. Ray-grass, and the weedy rubbish of a loft, which he calls hay-seeds, with, perhaps, some common clover, are what he has recourse to; and, under such management, the wonder is, that he ever gets a pasture worth even twenty shillings. In all improvements, where the previous steps are very expensive, like embanking a marsh, draining a bog, &c. it is essential to profit, that the land be advanced to the highest perfection possible, as those preparations to culture cost no more for a great than a small rental.

"Count Bentinck, continues he, had one idea in the execution of his work, which had considerable merit; he planned a navigation from a quay to each of his farms, over the whole estate, by a large ditch capable of admitting long-boats, some of which he actually built ready for the business: by this means the farmers would be able to carry their corn, or bring manure from Lynn, if they chose to do it, without the least land-carriage; but his death, which was occasioned by too assiduous an attention to building the bank, living in a tent, in a bad season, and aguish situation, without the precautions of adapting his diet to those circumstances—prevented the execution.

"One circumstance of folly in his neighbours, says Mr. Young, prevented the improvement from being so con-

siderable as the Count had planned. At the further extremity, towards the Wisbeach river, there is a common belonging to the parish of Terrington, to which the sea, by retiring, makes additions similar to those by which individuals have profited.

" A continuation of his bank, in nearly a right line to the Wisbeach river, would have taken in about five hundred acres of that common. Mr. Bentinck applied to the parish for their consent to do it, which would have been the means of shortening his bank. Though several individuals would have been glad of making use of so favourable an opportunity, the body refused their consent. They were even so preposterous in their opposition, that when he afterwards offered to be at the sole expense, provided they would give him a lease of twenty-one years of the land recovered, they still refused it. Upon which, he was obliged to follow the irregular outline of his own property. The motive of the parish for refusing their consent to a proposal so advantageous to themselves, arose from this circumstance. It is of great extent; the proprietors adjoining the common, make, at present, nearly the whole advantage of it; but when embanked and let, those at a distance would come in for their share, a jealousy of which, occasioned the failure of the scheme." It is here stated, that this tract has been since embanked, and allotted by an act of Parliament, passed in 1790.

" The spirit and unlimited attention, even to the loss of his life, with which Count Bentinck planned and executed this great work, ought, he properly observes, to render his memory dear to every lover of agriculture. His active mind had taken a strong and most useful turn towards that art; apparent, not only in this great and successful project, but in the original invention of an admirable machine for drawing up trees by the root, which executed that difficult work with expedition and cheapness.—*Minute, in* 1784.

" *New Embankment.*—The men were paid, he adds, 4s. 6d. a floor of four hundred cubical feet, but they find wheeling planks, barrows, trussels, &c. &c. When formed, the front slope is sodded, for which they are paid 4s. a floor of four hundred square feet, earning from 5s. 6d. to 7s. a day. And some small expense follows for beating it firmly down. The whole expense of bank, sluice, and all, 3,300l. The quantity of land taken in, two hundred and seventy-three acres of marsh, and eighteen of bank. The previous value absolutely nothing; now, Mr. Maitland, steward to Governor Bentinck, was at once offered 4l. an acre for four years; or 3l. an acre for six years. The former amounts to

4,368l. in four years, or the whole expense, and 1000 guineas over. Some buildings, however, in this case, to be erected: the Governor let it to his old tenants at 40s. an acre, without any expense of building, a permanent rent, and under restrictions in cropping: confined to cole-seed and corn; of which, to take seven crops, laying down to grass with the seventh, to remain seven or fourteen years, and when broken up, to lay down an equal quantity of their old farms. This, upon the supposition of the grass failing, but if good grazing land, to remain unploughed. This system of cropping he must think much over-doing it, if rich grazing-land is the view. There is a great treasure in the land, and it should have no more tillage than necessary to prepare it for grass: if that grass does not turn out of a luxuriance and sweetness sufficient to carry a full stock of bullocks, then is the time for a tillage system; but he conceives, that after seven crops of cole and corn, it will not be found *fine* bullock-land. All ideas of the fertility being exhaustible are idle and vain; you cannot, says he, make it bad land; but there is a great difference between common grazing pastures, like some in these marshes, and such as will carry an ox of one hundred stone.

"The Governor has the agreeable prospect of taking in three hundred acres more in six or seven years. The space is fast covering itself with grass; and wants very little more than to have the creeks silted up*, which adds so considerably to the convenience and value of the land, that if this tract was taken in now, it would not let for more than 20s. an acre; but a few years hence it will be worth 40s. But to assist the operations of the tide, in thus silting up the creeks, much attention is necessary to accelerate the effect; and he found Mr. Maitland engaged in this operation: where the sea-water remains in a creek after the tide retires, the creek will not silt up nearly so fast as when channels are made for conveying it quickly away: by making stanks across the large creeks for giving a new direction to some of the water, and cutting channels from hole to hole for their drainage, this is effected. Mr. Maitland shewed him the surprising difference in the silting up of creeks without water, compared with those where it remains. The floorings from which the bank was raised four spits deep, are now, in only two years, nearly silted up in some places, and in others, not more than a foot deep: by these attentions, regularly put in execution, the

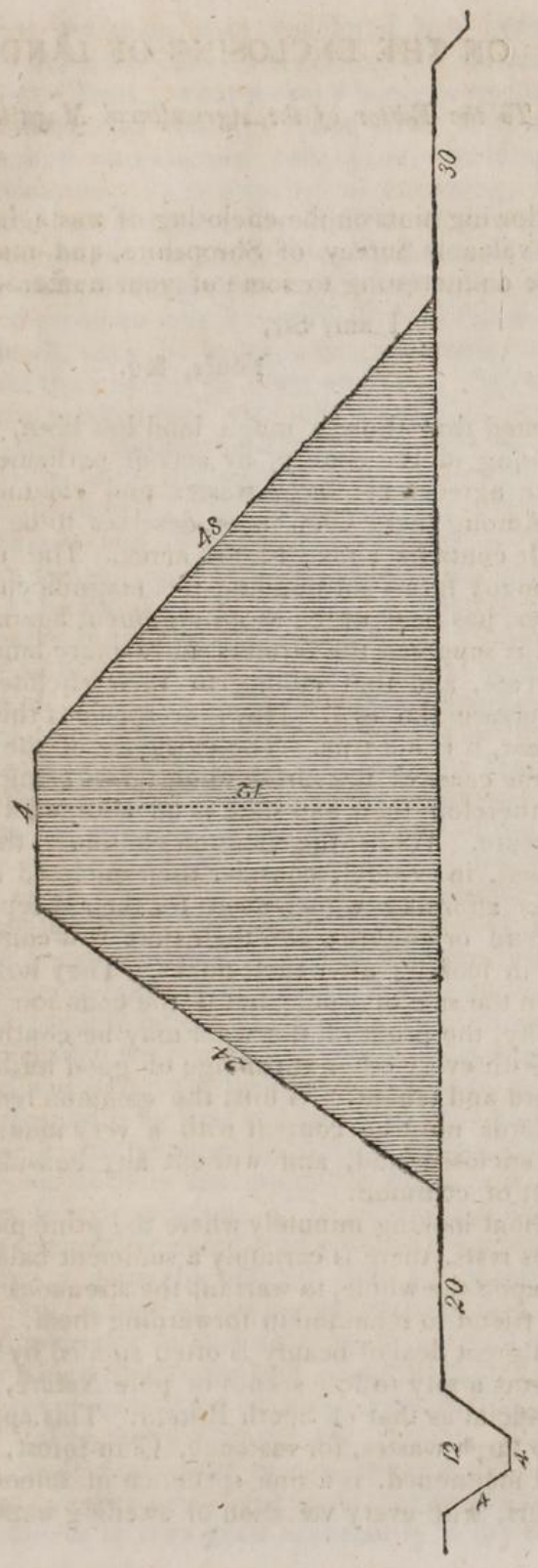
* It is proper to obſerve, that the effect of the water on this coaſt, depoſiting its ſediment, is here called ſilting; which upon the Humber and the Trent, is termed warping; they are the ſame operation of Nature. Theſe waters are muddy to an extraordinary degree.

tract preparing to be taken in, will be ready many years sooner than it otherwise would.

"Governor Bentinck has, he observes, a very attentive and understanding agent in Mr Maitland, as his plans sufficiently prove. These are, to build a small house close to the new bank, for a steward, at an angle, to command a view both ways; and where one or two cottagers should be always ready for executing the works necessary in assisting the silting of the tides, and any little reparations, or rather precautions, that the banks may want; to make a road from the highway to the new bank; this is done. To build a granary on the shore for the tenants to lodge their corn, for taking it by water to Lynn. And lastly, to plant the old banks, rendered useless, unless in the case of breaches, to supply the want of wood on this estate of fertile land.

"In regard to the cultivation of this fine estate, he wishes he could add, that it is worthy of the soil! but this is far from being the case. The tract taken in, in 1800, was ploughed directly, and sown that year, part with cole for seed, and part with wheat; and in the spring of 1801, part with oats. The cole-seed crops were great; and the wheat some of the best in the country. This year (1802) it is under cole, wheat, and oats again; the wheat and cole the best. It is let from 2l. 2s. to 2l. 12s. 6d. per acre: tithe, 4s. 6d. per acre; and rates, 2s. in the pound. The expense of the whole, 4000l."

The following representation, shews the nature of the embankment in a much more clear manner than can be done in words.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ON THE ENCLOSING OF LAND.

To the Editor of the Agricultural Magazine.

SIR,

THE following hints on the enclosing of waste lands, occur in the valuable Survey of Shropshire, and may not perhaps be uninteresting to some of your numerous readers.

I am, Sir,

Yours, &c. X. Z.

IT is stated that though much land has been, and is still enclosing in the county, by acts of parliament, as well as private agreement; large wastes and commons yet remain. Among these Clun forest deserves to be particularly noted. It contains above 12,000 acres. The uncultivated state of many farms surrounding this magnificent waste, the writer says, has been urged as an argument against its inclosure. It is supposed the farmers have more land than they can cultivate, and that adding to their enclosed grounds, would increase the evil. However specious this reasoning may appear, it is not true. The existence of the unenclosed land, is the cause of the surrounding farms being uncultivated, and therefore their bad state is an additional motive for the enclosure. Whilst the common continues, the adjoining farmers will, in general, consider their enclosed lands, principally, as affording winter-meat for their sheep, and that without care or culture; and their time will continue to be taken up in looking after their flocks. They now pay their rents from the sale of wool; but if the common was holden in severalty, the profit of the wool may be continued or increased, with every other advantage of good husbandry both to landlord and tenant. Whilst the common remains open, the landlords must be content with a very inadequate rent for their enclosed land, and without any consideration for their right of common.

" Without looking minutely where the principal benefit of enclosures rests, there is certainly a sufficient balance of advantage upon the whole, to warrant the strenuous endeavours of every friend to mankind in forwarding them. It must be owned, a great deal of beauty is often spoiled by enclosures; and it seems a pity to lose scenes of pure Nature, in a country so artificial as that of South Britain. This applies chiefly to very large wastes, for instance, Clun forest, which has been just mentioned, is a fine specimen of smooth and extended turf, with every variation of swelling banks and re-

tired dingles; but when it is considered how little profit is produced to those who have a legal right in these wastes, or to the public at large; what a scope is given to industry by their enclosure; and that the population of this country seems to require an extended cultivation, the latter motives must preponderate. The expense of enclosing, indeed, is often such, as to postpone the individual return for some time! but the public are immediate gainers; and where that is denied to the private persons concerned, their distant interest will still prove an ample reward to their families.

"I enclosed, says the writer, a small common a few years ago, without the expense of posts and rails. When the line of fence was marked out, a trench was dug of considerable width and depth. Strong bushes of hazle, willow, hawthorn, or whatever could be met with in a neighbouring wood, were planted in this trench. The loose soil was then placed to the roots, then a bank of turf was raised on both sides, rather higher than the soil adjoining the stems. By these means, the roots of the quick are placed in cool and moist soils; the turfs on each side form rather a hollow line, whereby the rain is directed to the plants; whereas, if a bank is made first, and the hedge planted afterwards, the roots have not the same quantity of loose soil to strike in, and what soil they have is dry; so that many of the plants die, or do not thrive. When the fence was so far advanced, young hawthorns, or hollies, or their berries, were put between the stems of the old quick, the tops of which were then cut off, leaving them about stake-high, and these tops made bearding, *i. e.* were stuck on the top of the turf-bank, on each side, thickening the present fence, and protecting the future. Of between two and three miles of fencing made in this manner, on very high ground, scarcely any plants failed, though the age of them, the rude manner in which they were transplanted, by being stocked out of old woodland, the distance of carriage, and the frequent interruptions by frost and snow, to their being replanted, were very adverse circumstances. As the value of most coppice-wood is daily declining, the writer looks upon this as a valuable appropriation of it, wherever it can be done; one lot of ground is cleared, and another is enclosed. Young hawthorns are generally planted from 6 to 8 inches distant, in a single row, which he has found much too thin. He would advise a double row at that distance, or a single row as thick again, by which means one half may be plashed at a proper age, and the other half cut off stake-high, saving the expense of cloven stakes, and giving permanent ones. Willow-stakes he would in general prefer to oak, because they will almost always grow, especially if the sort is suited to the soil; for some willows or sallows grow luxuriantly in dry soils. A lit

tle observation will point out the sorts better than any description, where the species are so numerous. Miller mentions sixteen sorts, and says the basket-makers distinguish at least thirty. Holly seems the best plant for hedges, in every respect excepting quickness of growth. It is more beautiful than any other; it is a better barrier, a better shelter, and will endure in the worst situations. Deciduous thorns are more formidable to cattle than smooth-quicks, but sheep will browse them equally with the smoothest plant; they will force their way through them. A great deal of wood is lost by thorn hedges, and the damage done to the hedge by its adherence, is nearly equal to what the fleece receives. Mr Wilding recommends alder for fences in moist situations, as it is not liable to be browsed by cattle or sheep; and crabs, and the black-thorn or sloe, for exposed situations. Stone walls are, perhaps, the best boundary fence in all new enclosures, where there is a substratum of proper material, or where it is near; and considering the want of absolute dependence upon all fences that are planted, and the almost constant expense of repairing, clipping, or plashing them, the cultivators of walled farms may view themselves with a much greater degree of self-complacency than has usually been allowed them. Though every proprietor should preserve or raise timber in proportion to the size of his domains, yet he is no friend to trees in hedge-rows. They hurt the fence; the fall of the leaf injures the late grass, and somewhat taints the sweetness of butter made at that time of the year;* they are of little value as timber, from the difficulty of preserving them from the axe or pruning-hook; and they prevent a lofty hedge, which is a better shelter, and which is some protection from trespass by hunting; an evil of little consequence where the country is slightly cultivated, but a very serious one in districts of improved farming. If many farmers are cautious of turning out horses to grass, from the injury their feet do, the galloping over young clover, or tender turf, is surely very objectionable. That farmers who are fond of the sport, or who look upon it as the means of selling a horse at a high price, should not complain, or should miscalculate, does not alter the fact. And the number of fields that are laid open to each other, and the hedges that are to be repaired after every day's diversion, where the sportsmen are numerous, or inconsiderate, is subjecting one set of men to real inconvenience for the diversion of another set of men."

* "Ash and beech I look upon as most pernicious."—Mr. Wilding.
It should be recollected that all kinds of fir, if browsed by the cattle, spoil the milk.

HINTS ON THE RAISING OF TIMBER, &c.

To the Editor of the Agricultural Magazine.

SIR,

AS the raising and preserving of timber are objects of considerable importance at present both in a national and individual point of view, the following hints taken from the valuable Report on the State of Agriculture and Rural Economy, of the County of Salop, may not be uninteresting to some of your readers.

I am, yours,

A CONSTANT READER.

IT is stated, that "though there may be a call to plant in this county, still the duty is not so imperious a one, that it should be universally entertained. Like many general duties, it should yield to circumstances; and trees should not be reared in any quantity upon land that may be made subservient to agriculture or profitable pasture. When we are independent of foreign corn, we may calculate more minutely, probable importations of timber. When trees can be planted to most public advantage, it generally happens that the scite is consistent with individual interest, and beneficial to public beauty. Proprietors of land should not make their plantations upon the plan of a garden near towns where the surrounding objects must be shut out; they should study the general effect of the country at large. Plantations upon a flat generally occupy land that may be turned to better account, and they hide the view of the country. Upon the sides of hills, they substract little from human sustenance, and may nod to the beauty of the prospect, if properly managed; for instance, it is best that the ridge of a hill that is planted should appear above the trees, unless the wood is of oak, or of such kind of trees as form round in the top. Of pines, or firs, the Scotch is the only one† that does continue to grow spiry, and wherever their upright shoots are seen in contact with the sky, the harshness of these sharp points ill accords with the soft and swelling out-line of the clouds. In some counties the whole face of *Nature* is spoiled by the hedge row elm, in every stage of nakedness or partial growth. With us, the hedge row timber is not so unsightly, but it often hinders the view of hill, of wood and dale, and is generally found much damaged in consequence of lopping, and it is injurious rather than serviceable, to

† The cedar of Lebanon is sometimes spiry, but more frequently flat or rounded.

a tenant, for the fall of the leaves in Autumn, prevents the grass from being eaten close down, and the butter from cows, in a pasture, where many leaves fall is often tainted thereby. It seems therefore better, that the proprietors of estates should endeavour to prevent what, in their several situations, may be a proportionate quantity of timber in woods, rather than trouble themselves with raising or sustaining hedge row timber. There is a false notion prevails, that shredding or trimming the side branches from popular trees, promotes their growth; whereas the bulk and roundness of every tree will be in proportion as the side branches are regular and undisturbed. A tree that has lost all its branches on one side only, will be flat on that side and round on the other. Weymouth pines I have understood are the best timber for masts, but do not bear a westerly wind. Larches are quick growers at an early age, and good timber, but wants shelter from the west winds.—Silver firs grow fast when they are of some age, and I am told flourish in as high situations upon the Appenines as any tree whatever, except beach and sycamore. The Scotch pine is hardy and of equal beauty with any, when used fairly, but has rarely sufficient room. Its wood will work smoother than larch, but is softer. There are many thousand acres of coppice wood in this county. Their value depends much upon situations; but perhaps they do not pay more than 7s. an acre yearly, upon the average. As firewood, the demand is diminished, from the increased consumption of coal, and which is still increasing by means of turnpike roads and canals; and for forges, wood is in less request than heretofore. Many sorts of iron are now manufactured with preparations of coal, which could only be worked with fires of wood twenty years ago. It is no improbable supposition, that the demand for coppice wood will continue to decrease, in proportion as the art of making iron is better understood.

"Timber, in this county, like all others, has of late been infinitely more destroyed than preserved, nor does it seem to have been considered as an article of future value; crops of grain, &c. producing a more expeditious return of profit to the cultivator, the advantages to be derived from planting, have seldom occupied his thoughts. Planting indiscriminately, is as absurd as a total neglect of it. Attention should be paid to the soils, situation, and other circumstances; for instance, if a field is so circumstanced that manure cannot be brought to it but at an amazing expense, if the soil is of a wet nature, and consequently the working of it attended with uncertainty, and at the same time is poor, in all probability (upon calculation) it may be found more suitable for

trees than to any other mode of cultivation. There are few trees which do not succeed well in Shropshire, provided proper attention is paid to the planting, and afterwards securing from cattle and sheep, many of which are brought from Wales, and having been accustomed to the hills and bare pasturage, can with ease get over any common fence, and are very apt to do so for the sake of a little fresh grass which they may pick up amongst the plants.

The best fence I have found, has been a single post and rail, with a paling of the roughest and cheapest materials, one cord driven into the ground, and the other nailed to the rail. A ditch about sixteen inches wide and of the same debth will be necessary to keep cattle from rubbing off the pales. A quickset or white thorn hedge should be planted within the pales, to supply their place when they decay. Thus will the plantation be effectually secured against cattle and sheep which prevent the growth of trees, not only by injuring them, for when once the bark has imbibed the oil of the wool or skin, all growth is at a stop, and to this cause may be attributed the dwarf state of trees upon commons. Double digging and trenching is an expensive business at first, yet I have no doubt that were two acres to be planted, one in the common way, and another after having been well trenched, that the quantity of wood in the course of fifteen years, would be nearly double upon the latter to the former; though the trees might have been taken together from the same nursery, and as much as possible upon an equality.

"Though all trees grow well in Shropshire, yet I know of none so luxuriant as the beech upon a dry soil, and there are trees which are supposed to have been planted about ninety years ago which girth nine feet, at the height of six feet from the ground.

"By property being much intermixed in Shropshire it follows, that gentlemen cannot be resident upon, or in the habit of seeing such parts of their estates, very frequently as are at a distance from their houses; this operates much to the injury of the timber; for tenants have no scruples about lopping the best trees for fuel, or other purposes, provided it can be done with impunity, notwithstanding coals may be had on moderate terms; in addition to this, they not only cut off luxuriant boughs, but perform it in the most idle and prejudicial method possible, by striking downwards, and consequently leaving the stump in a ragged state, exposed to the weather, and act as a conductor of the rain to the heart of the tree." If a bough is to be detached, the cut should be made with a sharp instrument on the lower side, and as

smooth as possible, in which case no rain would probably fall upon it, but should that happen it would not lodge, from the surface of the wound not being of a nature to retain it; as it would be after being cut with a saw, or as before described: the wound might be effectually secured by Mr. Forsyth's composition, or some other of a similar nature. Ash, is universally esteemed a prejudicial tree to the farmer, though at the same time the most useful to him of any that grows; all implements of husbandry being principally composed of it; proper places should therefore be set apart, and appropriated to the growth of it, and as it succeeds well on turf or boggy land, it would be no difficult matter to find spots suitable to it.

"It is much to be lamented, that the narrow leaved elm is a tree so difficult of propagation, and that it be raised in no readier manner than by layers. No trees does so little injury to land or hedges, and no one is of more value, except the oak."*

It is further stated that as farmers are frequently in want of small wood, it may be proper to appropriate an acre and a half to be planted with ash and spring coppice wood, that a quarter of an acre may be cut every year, which would supply handles for spades and other such implements, and the tenant would then have no excuse for lopping the trees upon his farm.

With respect to oak, strong soils are best adapted to its growth, but better employed in the growth of corn, where the plough can work, or in pasturage. It may still however be profitable to keep rugged sideland ground for the growth of it.

* The narrow leaved or Worcestershire elm does not grow kindly except in sandy or light loamy soils and good gravels. A tree of far superior value, is the broad wych elm, very common in this country, though unknown in many others. For naves of wheels, it is perhaps the best wood known, and will grow in almost every kind of soil, though it exceeds best in a stiff or clayey one.

THE EXPENSE OF CROPPING SEVENTEEN ACRES OF LAND IN THE YEAR 1795, ON THE EXPERIMENTAL FARM OF THE MARQUIS OF SALISBURY, IN HERTFORDSHIRE.

To the Editor of the Agricultual Magazine.

SIR,

THESE statements, which are given by the writer of the able Survey of that County fully shew that experimental attempts may be conducted with much profit to the under-

taker; while they have the happiest effects in promoting the knowledge and improvement of the art.

I am, yours, W. W.

	L.	s.	d.			
7 Acres dunging, 15 loads per acre	26	5	0			
17 ditto ploughing, at 12s. ditto	10	4	0			
17 ditto harrowing, at 1s. 6d. do.	1	5	6			
20 Bush. of Potatoes, at 3s. 6d.	3	10	0			
24 Pounds of parsnip seed, at 1s.	1	4	0			
24 ditto of carrot seed, at 1s. 3d.	1	10	0			
6 ditto of cabbage seed, at 5d.	1	10	0			
				45	8	6
4 Acres of carrots hoeing and cleaning, 30s.	6	0	0			
4 ditto of parsnips, 30s.	6	0	0			
6 ditto of cabbage and beet 20s.	6	0	0			
1 ditto of potatoes, 20s.	1	0	0			
2 ditto of lucerne, 20s.	2	0	0			
				21	0	0
				66	8	6
17 Acres.						
4 horses 5 days ploughing up carrots	3	0	0			
Women for picking up and cutting, ditto	11	3	6			
3 days a team carting home, ditto	1	16	0			
4 horses 6 days ploughing up parsnips	3	12	0			
Women for cleaning ditto	7	0	0			
4 horses 1 day ploughing beet root	0	12	0			
2 men 6 days packing carrots	0	18	0			
6 men forking carrots, 12 days each	5	8	0			
3 days, a team carting horse parsnips	1	16	0			
6 men forking parsnips, 12 days each	5	8	0			
2 men packing up ditto 6 days each	0	18	0			
Women cleaning and cutting beet root	2	0	0			
				43	11	6
				110	0	0
Rent of 17 acres, at 30s.				25	10	0
				135	10	0
Profit				462	10	0
Total expense				598	0	0

Produce of the same.

	L.	s.	d.
1200 Bushels of parsnips, at 1s.	60	0	0
2560 ditto of carrots, at 1s. 6d.	192	0	0
400 ditto of potatoes, at 2s.	40	0	0
41,000 cabbages, at 1½d. each	256	0	0
200 bushels of beet root, at 1s.	10	0	0
10 loads of lucerne, at 4l.	40	0	0
Total produce	598	0	0

Prices of Raw Hides, Hay and Straw, &c. for March 1807.

	First Week	2d Week	3d Week.	4th Week.
Raw Hides.	*s.d.* *s.d.*	*.d.* *s.d.*	*s.d.* *s.d.*	*s.d.* *s.d.*
Fed Heifers & Steers, pr st.	3 0 to 3 2	2 10 to 3 4	3 0 to 3 4	3 2 to 3 4
Middling — —	2 4 to 2 6	2 4 to 2 8	2 4 to 2 8	2 4 to 2 8
Ordinary — —	0 0 to 2 0	1 10 to 2 0	2 0 to 2 2	2 0 to 2 2
Market Calf — —	12 6 each	12 6 each	12 6 each	12 6 each
Eng. Horse — —	15s to 17s	15s to 17s	15s to 17s	15s to 17s
Lamb Skins — —				
Sheep Skins — —	4 0 to 6 9	4 0 to 7 0	4 0 to 6 6	4 6 to 7 0
Price of Hay and Straw.		*l. s. d.*	*l. s. d.*	*l. s. d.*
St. James's—Hay —	4 0 0	4 2 6	4 12 6	4 2 6
Straw —	3 6 0	3 4 6	3 3 9	2 15 0
Whitech.—Hay —	4 5 0	4 5 0	4 10 6	4 13 0
New —	0 — 0	0 — 0	0 — 0	0 — 0
Clover —	5 4 0	5 10 0	5 13 0	5 3 0
Straw —	3 3 0	2 18 0	3 2 0	2 19 0
Newbury.	*l. s. d.*			
Wheat — — —	65s to 94s	66s to 96s	64s to 93s	64s to 91s
Barley — — —	35s to 38s	35s to 39s	34s to 38s	34s to 39s
Oats — — —	26s to 31s	26s to 31s	27s to 31s	29s to 33s
Beans — — —	—s to —s	—s to —s	—s to —s	—s to —s
New ditto — — —	—s to —s	—s to —s	—s to —s	—s to —s
Peas — — — —	—s to —s	—s to —s	—s to —s	—s to —s
Salisbury.				
Wheat — — —	72s to 82s	72s to 82s	72s to 82s	72s to 82s
New ditto — — —	—s to —s	—s to —s	—s to —s	—s to —s
Barley — — —	36s to 39s	36s to 39s	36s to 39s	36s to 39s
Beans — — —	—s to —s	—s to —s	—s to —s	—s to —s
Oats — — —	32s to 37s	32s to 37s	32s to 37s	32s to 37s
Peas — — — —	—s to s—	—s to —s	—s to —s	—s to s—

CRITICAL CATALOGUE.

The Engliſh Practice of Agriculture, exemplified in the Management of a Farm in Ireland, belonging to the Earl of Conyngham, at Slane, in the County of Meath: with an Appendix, containing, firſt, a Comparative Eſtimate of the Iriſh and Engliſh Mode of Culture as to Profit and Loſs; and, ſecondly, a regular Rotation of Crops, for a Period of ſix Years. By RICHARD PARKINSON, Author of *The Experienced Farmer*, and other Works of Agriculture. Octavo. Longman and Co. Paternoſter-row; and J. Harding, St. James's-ſtreet, London. 1806.

WE have had occaſion already to notice the author of the preſent work, as an American farmer; and we here meet with him as the conductor of an extenſive concern of the ſame kind in Ireland. Into this ſituation, as well as that, he appears to have been thrown by chance, as is fully ſhewn by the following account, given by himſelf:

"In America I had," ſays he, "printed a ſecond edition of *The Experienced Farmer*, conſiſting of a thouſand copies, of which I had diſpoſed of five hundred there, and the remaining five hundred I brought with me to England; but, on my arrival at Liverpool, I found, as they had been printed in a foreign country, that I could not land them, the Act of Parliament for the protection of literary property in England not admitting of their ſale. I was the author of the work, and could prove myſelf to be ſo, and I applied, therefore, to the Commiſſioners of the Cuſtoms on the ſubject; but they gave me a direct refuſal. I then addreſſed myſelf to the Lords of the Treaſury, and had leave to carry them to Ireland. I accordingly repaired to Dublin, and, having placed my books in the hands of two very reſpectable bookſellers of that place, Mr. Porter and Mr. Archer, I was preparing to return to England, when, on my taking leave of Mr. Porter, he aſked me if I had ſeen Mr. Grierſon, the King's printer? As he was not a bookſeller, I obſerved, that I had no buſineſs with him. He aſked me, however, to call upon him; and, with ſome perſuaſion, I ſtepped to his houſe, and fortunately found him at home. He had purchaſed my *Experienced Farmer* ſome time before in England; and being fond of the ſcience of agriculture, he aſked me, in a very preſſing manner, to dine with him the day following, which I did; and, from his unbounded hoſpitality, I remained with him ſeveral weeks. During my ſtay, he often mentioned to me the famous fair of Ballinaſloe, which was approaching, and to which he was deſirous I ſhould go with him. I ſhould meet there, he ſaid, with a number of reſpectable farmers and graziers, ſhould ſee thouſands of ſheep, abundance of cattle and horſes, a ſhew of cattle, ſheep, and hogs, for prizes, and a ploughing match. Theſe were powerful inducements; and we ſet off, with Captain Frazer, in the Canal-boat, from Dublin, in which we had good company, good accommodations, and a very agreeable paſſage to Tullamore.

" As we paſſed, I obſerved a great deal of bogland unimproved, but very improveable.

" From Tullamore we travelled in a poſt-chaiſe the whole way to Ballinaſloe.

" The fair anſwered every expectation that my friend Grierſon had led me to form of it. There were many good ſheep, and ſome very fine cattle. Previouſly to the day of ſhew, Mr. Grierſon had contrived to get me admitted a member of the reſpectable farming ſociety of Ireland; and when the judges were choſen by the Committee, for the ploughing match, I was appointed one of them, as well as jointly with the Earl of Conyngham, a judge of the hogs. Having thus an opportunity of converſing with his Lordſhip on the ſubject of animals, he gave me a very kind invitation to Slane, where, he ſaid, he had much finer hogs than any ſhewn at Ballinaſloe; and he, at the ſame time, told me, that he wanted a partner to aſſiſt him in the farming of his domain at Slane, and ſhould be happy to treat with me upon the ſubject. I had heard that this was one of the fineſt places in Ireland, and I promiſed his Lordſhip that I would come and ſee it."

On performing his promiſe, the writer found it every thing that could be wiſhed for, both in reſpect to ſituation and natural comforts. The following is the account he gives of it, which, however, is no great compliment to the management that had been previouſly purſued upon it:

" The eſtate," he ſays, " conſiſted of almoſt five hundred Iriſh acres, paſture and tillage. The Iriſh acre is 7,840 ſquare yards; the Engliſh acre, 4,840, which gives a proportion of five to eight, and ſomething more, ſo that 500 Iriſh acres amount to 809 acres, 3 roods, 28 poles, and a fraction $\frac{308}{4840}$ Engliſh.

" His Lordſhip rode round the domain with me the day after my arrival, and in the morning of the next day, gave me the following ſtatement of its different diviſions and the number of acres, and we agreed upon the terms of our partnerſhip.

			Of which		
			Tillage.	*Meadow.*	
	A. R. P.	A. R. P.	A. R. P.	A. R. P.	
The Lawn	15 3 0				
Quarry Pasture	2 1 30	51 3 10		25 3 25	the remaining 25A. 3R. 25P. in plantation.
Ice-houſe Meadow	13 3 0				
Mount William do.	19 3 20				
Little Barries	8 1 2				
Big do.	16 1 28	30 1 35		29 1 35	the remaining 1 acre in plantation.
Coach Field	5 3 5				
Croſs Park		45 3 0		45 3 0	
Barſtown Mountain		95 0 30		65 0 30	the remaining 30acres furze.
Sheep Meadow		3 0 0		3 0 0	
Carrick Dexter		37 3 0	37 3 0		
Big Park		34 1 0	34 1 0		
Chapel Field		25 1 0	24 0 0		1a. 1r. waſte.
Deer Park		80 0 20	50 0 20		300a. waſte.
Paddock		24 3 0	19 0 0		5a. 3r. waſte.
Hill Meadow		36 0 0		25 0 0	11 acres plantation.
Calf Cloſe	8 2 6	14 3 28		12 3 28	2 acres waſte.
Deer Park Paddock	6 1 22				
		479 1 3	165 0 20	207 6 38	106 3 25

	A. R. P.		A. R. P.
The whole	479 1 3	therefore consisted of	
		165 0 20 tillage land,	together, 373 1 18
		207 0 38 meadow,	
		106 3 25 plantation furze and waste.	
	479 1 3		
To Woodlands, &c.	20 2 37		
	500 0 0		

" And there was thus according to the abſtract, out of a farm eſtimated at 500 acres, a total of uſeable land, only 373 acres, 1 rood, 18 poles.

" This we eſtimated at 1,400l. a year, or 3l. 15s. per acre; which, allowing 4l. 3d. for the wood not mentioned, and five acres of mowable poor land with trees upon it, fit to be ſtocked only two months in the year, will make up the ſum.

" The ſtate of the farm, for ſeveral years previouſly to my entering upon it, had been as follows:

" The Deer Park, in the year 1795, old ſward, planted with potatoes; 96, barley big; 97, oats; 98, oats; 99, oats; 1800, nothing; 1801, potatoes: in all this time never dunged.

" Paddock, 1795, barley; 96, oats; 97, barley; 98, oats; 99, potatoes; 1800, barley; 1801, wheat: in all this time never dunged.

" Lime-kiln Field, or Carrick Dexter, 1798, old ſward (but had been laid down without ſeed of any kind ſome years before, and left full of couch graſs, thiſtles, wild muſtard, ketlocks, and particularly docks; the roots of which, at the time I entered, were three feet under ground, while the part above ground was as thick as a man's leg; from their ſtrength they had obſtructed the plough, which had paſsed them like the roots of trees. The thiſtles too were in ſuch beds, or clumps, as I had never before ſeen; in ſome ſeaſons when in corn crops, it has coſt half a guinea an acre, to cut them out of the crops; in the year 1799, oats; 1800, oats; 1801, oats and barley, never dunged.

Chapel Field 1799, barley and oats; 1800, potatoes; 1801, barley and oats, never dunged.

" Big Park, 1799, potatoes; 1800, barley and oats; 1801, oats; never dunged. In reality no part of this farm had been dunged for a term of years, as the two tenants for the laſt ſeven years, had been in the practice of carrying all the produce off the farm, of mowing the graſs land and ſelling the hay; while the dung from the ſtables, belonging to the manſion-houſe and farm, had been uſed for the garden which is extremely large."

The terms of the undertaking are not however ſtated by the author, but he entered in the concern on the 1ſt of November 1801, under a variety of difficulties, which are invariably the reſult of previous bad huſbandry. The writer after this proceeds to detail the ſteps which he took in bringing this tract of land into a ſuitable ſtate of cultivation, in which we ſee little to notice, except the difficult and aukward manner in which they were begun and executed. Indeed the author is ſometimes ſo curſory, and at others

ſo involved in his deſcriptions, that it is often no very eaſy matter to fully comprehend his meaning.

The following is a practice which he ſtates to have found uſeful:—"Having prepared harrowing horſes, to harrow in the ſeed, I went," ſays he, "to England, the laſt week in February, ordering ſome men to begin to ſow peas and vetches as ſoon as the mould would permit; and, on my return, the 28th of March, the Chapel Field, was ſown with grey peas, in the proportion, as I had directed, of twenty ſtone to an acre. This was done more with an intention of ſmothering the weeds than for a crop of corn, and it proved effectual. The peas grew luxuriantly, and in the beginning of May, were about four inches high; but weeds of every deſcription, and particularly couch, ſpringing up among them, it was hard to judge whether the weeds or peas would be the maſter crop.

"As ſheep will not eat this kind of pea, I turned three hundred ewes and lambs into the field, which excited the ſurprize of all who beheld it; for this kind of farming being wholly new to the people of this country, they ſuppoſed the crop would be deſtroyed; and when they ſaw it had the deſired effect, that the ſheep ate the couch and weeds only, their ſurprize increaſed.

"The peas being thus the maſter crop, grew very luxuriantly, and although they yielded ſo little corn as hardly to be worth threſhing, the produce was very great in ſtraw; ſo great, that in many places the weight of it (the root end rotting when the peas were in bloſſom) ſmothered the land in ſuch a manner, that the field was rendered a much better fallow than many acres that had been tilled by the plough and harrow during the ſummer, which proved a wet one.

"From what I obſerved in this inſtance, I am of opinion, when land is proper for peas, that, by remarkably thick and early ſowing, as early as the ſeed can well be got on the land, and afterwards weeding with ſheep, a fallow may be nearly completed, thiſtles excepted, in a wet ſummer; and if it prove a dry ſummer, there will be a great chance of a good yielding crop of peas, and not a very bad fallow, beſides the advantage of adding largely to the dung-hill.

"This experiment was the reſult of neceſſity. As all the land wanted fallowing, I did it merely to get ſo many acres out of my way. I had never any occaſion to try it on any farm I had occupied before; for in agriculture there can be no worſe management, than attempting to make more fallows than a farmer's team can well effect in the ſeaſon.

"In my Experienced Farmer, I ſtated ideas on the ſubject of exhulation by the power of the ſun, obſerving, that if you place a board on a piece of land in the ſummer, and fallow the reſt of the field, the part where the board has lain will produce the beſt crop; and I am now certain, from the experiment of the peas, that a ſmothering crop has a ſimilar effect.

"The remaining part of the big park was ſown with vetches, with an intention to mow for fodder and ſeed, and to fold ſheep on in the ſummer. The part where the ſheep were folded anſwered the deſired effect, and my mode of folding was this:—Having mowed a

proper ſpace, I encloſed it with gates or hurdles, then turning in about three hundred ewes, the vetches placed in racks made for the purpoſe of feeding ſheep, were given them to eat; and, every day or two, I removed the ſheep to another ſpace encloſed in the ſame manner. To aſcertain the effect, I had wheat ſown on this land, and ſome land adjoining, that had been well dunged for potatoes, and had been a complete fallow; but the crop was ſtronger where the ſheep had been folded, and the vetches had grown, than where the potatoes had grown, though the land had been of the ſame quality in the beginning. The remaining part of the vetches, mown for a crop, did not anſwer ſo well for ſmothering the land, as the peas in the other field had done; for as ſheep will eat young vetches, they could not be put on to weed them: and I am of opinion, had peas been ſown for a crop inſtead of vetches, the advantage would have been apparent in the wheat, and a much greater addition have been made to the dunghill; for the weeds, not being eaten by the ſheep, grew up through the vetches. The peas, indeed, yielded a bad produce in corn; but the vetches yielded a worſe, not exceeding, had they been all threſhed, a buſhel an acre. I am of opinion, therefore, that ſowing of peas upon clayey ground, or heavy land, is ſuperior to fallowing it, beſides the advantage of the crop, if ſown thick, and weeded by ſheep."

The author proceeds to ſtate a variety of modes of management which he purſued, with which are blended details of the difficulties that were thrown in his way, by the awkwardneſs and ignorance of the Iriſh labourers; and he makes many aſſertions, and draws a variety of concluſions, but often in a haſty manner, and without adequate knowledge of the ſubjects. The following is a ſhort ſpecimen in reſpect to thinningof weeds.

"There is no doubt that there are ſeeds of plants contained even in the ſubſtance of ſtones. Once, when I was at Buxton in the depth of winter, I obſerved muſhrooms abſolutely growing out of the ſtones of the wall in the hot bath-room; which muſt have ariſen from the heat of the place, for had theſe ſtones been expoſed to the common air, no ſuch plants would have been ſeen; at the ſame time the producent cauſe muſt likewiſe be ſought for in the ſtones, as muſhrooms have no ſeed."

On the ſtate of grazing in Ireland, and the difference in reſpect to it and the Engliſh mode, we have the ſubſequent account blended with many opinions and notions of the author.

"The true ſyſtem of grazing ſeems, ſays he, to be little known in Ireland, or at leaſt not attended to in any part where I have been, though the country abounds ſo much with cattle. The ſoil is every where of an aqueous nature, whether it be found to conſiſt of clay, gravel, ſand, or of a mixture of all. I ſuppoſe this ariſes from the under ſtrata being by nature moiſt, as all moiſture muſt aſcend before it can deſcend, as may be obſerved in a houſe built on damp ground. For this reaſon, in the tillage ground of Ireland, leſs depth of earth is required for the nourithment of the plants, than in that of a dry country. Here ploughing deep only adds to the moiſture, and diminiſhes the fertility of the ſoil;

which I will inſtance in planting of trees, where the trenching of the ground cauſes the rain and wet to penetrate much deeper, and to give moiſture to the root for a much longer time, than if it were not trenched. Now as the roots of trees take their nutriment much deeper than grain, an operation is neceſſary with reſpect to them, which would be prejudicial in the culture of the more ſuperficial productions of the earth, the object in both being to throw the ſoil beſt adapted for the purpoſe wanted into a proper place. The aqueous nature of the Iriſh ſoil cauſes plants of almoſt every kind to grow quickly in the ſummer months; and on this account it is a fine country for all green crops, ſuch as graſſes of all ſorts, clover, vetches, peas, potatoes, turnips, &c. Now deep ploughing may contribute to the benefit of graſſes, where more moiſture is required, but I am of opinion, that deep ploughing is, in this country, the cauſe of many thouſand acres of corn being lodged or laid flat in the ſummer; and that the dampneſs of the earth cauſes the ſtraw to be weak, and occaſions mildew in wheat. I obſerved the graſſeſs in Ireland, even on the richeſt ſoils, to be ſmaller and weaker in the leaf and ſtem than ſuch as are produced in England. In America the ſoil is in general extremely dry; and wherever it has any fertility in it, the plants grow remarkably ſtrong in the ſtem. Timothy graſs is a production which grows naturally at Slane; but I brought ſome ſeed from America and ſowed it on much richer land than it grew on in its native country, and the produce was much finer in the ſtem than the graſs from which I had the ſeed in America. This fairly proves, that though much moiſture occaſions the quick growth of plants, it likewiſe draws the ſtraw up weakly.

"The reaſon why I have taken this circuitous way, when about to lay down ſome known rules for grazing, is, that I might firſt endeavour to prove, that there is not ſo much danger in this country in making uſe of the ſcythe, as is apprehended, from the fear that the power of the ſun might burn up the graſs. It will be allowed, that whenever thiſtles and other noxious weeds, which the cattle do not eat, (and indeed they cannot reach within ſome inches of the ſtem by reaſon of their pricklineſs), grow on grazing land, much of the paſtures ſo infeſted muſt be uſeleſs. Now were theſe thiſtles mown off at an early period, the cattle would eat a part of them when cut, and the remainder would wither away, whilſt on the patches where the thiſtles grew, freſh young graſs would ſtart up. It is frequently the caſe in Ireland, that one third of a paſture is covered with thiſtles: here there is an obvious neceſſity for the ſcythe to be made uſe of early, and the cloſer to the ground the better; becauſe the ſtubble that is left, only prevents the cattle from eating the young graſs. This may be obſerved in a meadow where the mowers have left *ſwath-balks*, for thoſe places are to be ſeen the whole ſeaſon through, ſo that it is a great miſtake not to mow the thiſtles and graſs as near as the ſcythe can go; for it may also be obſerved in any paſture where are often ſeeding, that ſome rough graſs will remain in that paſture for years, apparently of litile utility to the cattle, whereas if the ſcythe hah been made uſe

of on thoſe ſpots, the graſs would ſoon have become finer, and the cattle would as regularly eaten that as any other; which is corroborated by the circumſtance, that in paſtures which are meadowed and mown for hay, the cattle eat the graſs from every part.

It may be neceſſary to obſerve, that, in the firſt month, while the graſs is young, the cattle fatten much quicker than ſome months after; the cauſe of which is this, that the fineſt graſſes are all firſt eaten away, and the rough and coarſe graſſes remain, which the cattle only eat from neceſſity, when their choice food is gone. Any obſerving man may ſee, that the animals are feeding on the parts of the paſture where the ſhorteſt graſs grows, in preference to thoſe ſpots where the thiſtles and long graſs obtain, which frequently remain on the paſture for a very long time, and until there is no other graſs: and the grazier may often perceive, that the long and coarſe graſs remains till the month of April following, when the cattle indeed eat it; but at that time it is not the old graſs they take by choice, but the young graſs that is coming up among the old, for, if it could be done, they would leave the old graſs; but it proves difficult to ſeparate.

"To prove this farther: were graſs to be mown or cut in the month of Auguſt, and ſuffered to remain on the ground till the month of April following, graſs ſo treated would not be found to be fit for the food of any animal; and the graſs I mention is frequently neglected in this manner, and abſolutely dead at the ſame time. Indeed, during the ſummer, the cattle will keep eating all round thoſe bunches of graſs; and if much pinched towards the winter, they will eat it all off by the ſpring; but they never do ſo by choice, but from neceſſity. It is therefore obvious, that ſuppoſing one third of the land grazed be neglected, and ſuffered thus to be overgrown by thiſtles and other noxious weeds, it would, if kept mown, and the weeds were deſtroyed, either feed more cattle, or fatten thoſe upon it more quickly, or perhaps both. I know many inſtances of this; but I will mention one in particular.

"On an eſtate that my father bought, there were about eight acres of land, on ſome parts of which buildings of different deſcriptions had ſtood, and ſome old dunghills, which were probably neglected. In one of thoſe parts the graſs was of ſuch nature, and ſo intermixed with weeds, that the beſt land in the paſture was uſeleſs; but by the regular, and early, and continual deſtruction of the weeds during the ſummer, that paſture became one of the beſt fattening paſtures in the country; for, after ſuch neat management, it has nearly fattened two ſets of oxen, which, with eight ſheep, formed the general ſtock on ſeven or eight Engliſh acres. It was ſeldom that any bullocks were put upon it of leſs weight than from ſixty to ninety ſtone (of fourteen pounds to the ſtone); and I knew one inſtance of a bullock, taken out of the ſtraw-fold in the month of April, and fattened on that paſture, which, when killed in September, weighed ninety ſtone, and had nineteen ſtone of fat.

"One morning, when I breakfaſted with Mr. Granger, he informed me, that the gentleman who had been grazing cattle on Mr.

Bligh's land, at Britiſh, had given it up, as the land did not fatten cattle well, from its being too ſtrong. I did not wonder at it; for when Mr. Bligh ſhewed me his land (which was the beſt I had ſeen in Ireland), in the latter end of July or beginning of Auguſt, the paſtures were, at that time, in a rude ſtate, very full of long graſs, and, in fact, appeared to be of a nature not at all likely to fatten any thing. Now the grazier ought to have moved all his cattle at that time into one paſture, after having mown one; for it is neceſſary to let the cattle remain in the paſture, that is undergoing the operation of being mown, till the graſs mown be ready to take off, as they will eat it and thrive on it, when firſt mown, for ſome days; then having another paſture to mow, the cattle ought to be put into the one that is mowing, and then mow another; and by the time the laſt paſture is mown, the firſt will have got a ſort of fine young eddiſh, which is a kind of graſs cattle will fatten on more in a week, than they will in a month on thoſe weeds and long graſs, that have been trodden and beat by the cattle dunging upon it, &c. &c. The fault lay more in the management of the land at Britiſh, than in the land itſelf; for I have never ſeen any land of too rich a nature to fatten cattle, if properly treated.

" In mowing rich land, there is alſo a quantity of uſeful hay to be got from it, well worthy of the labour neceſſary to procure it, and which would make an addition to the dunghill; and though the paſture, where the graſs is mown, may not want the dung, ſome other part of the farm might benefit by ſuch management; whereas, if the weeds and graſs remained, they would, doubtleſs, enrich a part of the paſture that did not want enriching.

" It may be ſaid, that a dry ſeaſon may come, and this graſs may be wanted; but there is little to be feared in that reſpect in a country like Ireland, and eſpecially in a ſoil like that in queſtion, beſides, by puſhing the earth forwards an earlier opportunity is afforded of eaſing the paſture, by leſſening the number. There is not ſo great a neceſſity of uſing the ſcythe ſo much on grazing ſoils of a poor quality, but whenever weeds grow and graſs is left uſeleſs, it is neceſſary on any land. Such lands as Mr. Bligh's would doubtleſs fatten three beaſts on two acres, but that proportion of cattle is more liable to injure ſuch paſture than they would land that takes three acres to fatten two beaſts. On poor land more graſs is required to be on the ground, as it does not grow ſo quickly, and it is more neceſſary to keep a covering of graſs on ſuch land, but by mowing any land it ſwetens the graſs and makes it grow more quickly, and the graſs ſo growing, after mowing, is of a more fattening nature. There is, however, very little land that I have ſeen in Ireland, that grows graſs of a nature ſo overſtrong as to want fining by mowing: but a great proportion of it wants relief from the thiſtles; and were ſuch paſtures to be regularly mown, the thiſtles would ſoon be fewer in number, and thoſe remaining much weaker in their ſtem.

And on the proper diviſion of land, in a grazing point of view, he thus proceeds; " the next beſt land I have ſeen in Ireland, is at the Biſhop of Meath's. His farm is more properly divided, and better fenced in than any other I have ſeen in that country; it ſeems

alſo. from ſome cause or other, to be more free from thiſtles, perhaps from meadowing at times, which will frequently kill the thiſtles.

" There are probably many cauſes why grazing is not carried in Ireland, to the ſame perfection as in England. Amongſt theſe, one is, that the fences are not ſufficient to keep the cattle ſeparate in many places, which is a great obſtacle to the fattening both of cattle and ſheep; becauſe, in the firſt place, where cattle go in large herds, one reſtleſs animal will diſturb the peace of the whole number; and, ſecondly, it frequently happens, that they will reſort to ſome particular part of the paſture which is the richeſt, and thereby deſtroy the graſs that grows on it. I know an inſtance of a paſture belonging to Sir John Knightly, of Fawley-hall, in Northamptonſhire, which contains three hundred and fifty acres. It was in hot weather, in the month of july, that I ſaw it, and there were then about one hundred and twenty bullocks in it. In the middle of it was a large pond of water; the bullocks, by plunging themſelves into this water, completely deſtroyed from ten to fourteen acres of land, which was the fineſt part of the paſture. Now, had this immenſe paſture been divided into ſmall ones of ten acres each, there is no doubt that all the bullocks would have fattened much quicker; and in fact, have improved the land, inſtead of partially deſtroying it. Such paſtures of ten acres, would, doubtleſs, each of them have kept ſix bullocks; there would, therefore, in the thirty-five diviſions of this paſture, reckoning ſix bullocks for each, have been two hundred and ten bullocks kept, inſtead of one hundred and twenty.

" I am of opinion, that two of any kind of cattle will fatten quicker on the ſame ſort of land than any greater number, and ſo in reſpect to ſheep. Large numbers generally lodge together in ſome dry part of the paſture, and by ſo doing, add to the richneſs of that, which was probably the richeſt part before, and rob the poor land of the dung it ſtands in need of: beſides that, the dry and elevated part, which they in preference reſort to, will be cut up and beaten with their feet, and become in conſequence, uſeleſs for paſture. The grazier in England, derives very great advantage from having proper diviſions of his land. In the marſhes in Lincolnſhire, the paſtures are generally from four to ten acres each, though there are ſome larger. During the winter, the greater part of the land is uſed for feeding ſheep for the ſpring. The beſt of it is regularly ſtocked, in the proportion of two ſheep of two years old to an acre, at Michaelmas; and all the cattle are kept from them. As the ſheep are generally very fat at that time, it is not expected that they improve much after Chriſtmas; but the graſs and weeds in thoſe paſtures being always mown once during the ſummer, and generally twice on the beſt land where the fat ſheep depaſture, but never after Auguſt; and no horſe being ſuffered to be on the land after that month, the graſs there at Michaelmas, is from three to four inches long, and regularly ſo all over the paſture.

" The dung of the horſes or cattle being alſo broken and diſperſed about, and the thiſtles, (if any) all ſtubbed up, a practice that is repeated again early in the ſpring, the land appears upon the whole

as beautiful as any garden-graſs plat. Land of an inferior quality in thoſe marſhes, is treated in the ſame manner, with ſheep of a year old, intended for the next winter's fattening, and no ſtock beſides ſheep are to be ſeen for miles together; the horſes, cattle, pigs, &c. being all in folds and in houſes during the winter. There are no hedges in thoſe parts; but the land is all divided by ditch-fences, and ſo contrived, that water can be led into them from the drains by ſluices. The water comes from high lands, at a diſtance of many miles, as there are few or no ſprings in the marſhes. A large proportion of thoſe marſhes were formerly covered by the ſea, but by making banks to keep the ſea from overflowing them, they have become very fine land; indeed, the moſt valuable part of England. Some of this land will, for a month or ſix weeks, in May or June, keep ten of the fine ſheep I have mentioned, on an acre. There is little or no tillage land in thoſe parts; the whole is graſs land."

After paſſing over ſome accounts of the Iriſh farmers, and a great number of cuſtoms and practices, on which the author has given his opinions and obſervation, with his *uſual* freedom and *penetrating* diſcrimination, we find him and the Rector of Lincoln College, Oxford, "a man of *extraordinary* ſcience," offering the ſcheme of a college, for the inſtruction of youth in practical farming, a plan which has long ſince been ſuggeſted by other ſpeculators.

The Appendix, which occupies nearly a fourth of the work, contains ſome calculations that may be uſeful to the young farmer. And by way of Preface, we ſuppoſe, as there is no other, the author has given an account of the Scarifier and Harrows which he made uſe of, as well as of ſome improvements on the Rotheram plough.

On the whole, the work contains some hints and directions in the conducting of a farm buſineſs, that may be found uſeful by thoſe who have had little experience, and we are diſpoſed to think Mr. Parkinſon a much better farmer, than writer on the ſubject.

HISTORY
OF
Agriculture.

PROCEEDINGS OF AGRICULTURAL SOCIETIES.

LORD SOMERVILLE's CATTLE SHEW.

ON March the 1ſt, in the afternoon, the cattle, ſheep, and pigs began to arrive at Mr. Sadler's Repoſitory yard in Goſwell-ſtreet, which are to be there exhibited, as candidates for prizes, patriotically offered by Lord Somerville, for encouraging early and economically fattening of animals, and other objects, equally important. By duſk oxen, &c. had arrived, belonging to

Lord Viſcount Sackville 5; Major Woodgate 4; John Conyers 1; William Coles 2; John Weſtcar 2; Henry King, jun. 2; Samuel Chandler 2; John Terret 2; W. Roſe 1; Mr. Miller 2; and Mr. Lamb 2.

Cows and heifers belonging to Lord Somerville, 1, (an Italian heifer); Lord Braybrook 2; Lord William Ruſſell 1; John Weſtcar 2; Henry King, jun. 1; Robert Tubbs 1; Joſhua Trimmer 1; Mr. Lamb 2; and the Rev. Mr. Towers 1.

A bull belonging to John Conyers, Eſq.

Merino, or Spaniſh ſheep, belonging to, Lord Somerville 10 rams; and Mr. Beckenham 2 rams, and 1 ewe.

Fat wether ſheep, belonging to, Lord Somerville 5; Col. Montague Burgoyne 12; Charles C. Weſtern 5; Thomas Purdy 5; and Mr. Monkton 5.

A Ram, belonging to Sir Thomas Carr.

Ewe-Hogs, belonging to, Lord Somerville 5; Lord Braybrook 5; Sir Thomas Carr 5; Col. Montague Burgoyne 3; Charles C. Weuern 5; William Runciman 5, Thomas Purdy 5; Finch Hatton 5; Mr. Beckenham 6; Mr. Farncomb 5; and Mr. Saxby 5.

Pigs, belonging to, Sir William Curtis 4; Charles C. Weſton 4; W. Coles 2; Robert Tubbs 2; L. Wright 1; and Mr. Solly 1.

The next morning, March 2, the gentlemen elected as judges, carefully examined all the animals for which prizes had been offered, and the certificates of the work performed by oxen, the diſtance each had travelled to the ſhew, their ages, food, &c. &c. and their awards were ſealed up, to be opened by Lord Somerville after the dinner. Among the company we noticed

Lords Somerville, Winchelſea, Hardwick, Sackville, Brabrook, William Ruſſell, &c.; Sirs Thomas Carr, John Sebright, Watkin William Wynn, &c.; the Portugueſe Ambaſſador, Mr. Smirnove, Profeſſor Warberg, Francis Sitwell, Edward Loveden Loveden, John Conyers, John Randal, William Moreland, James Newſome, T. A. Knight, Weſtcar, J. Elman, J. Elman, jun. T. Ellman, Rev. Bate Dudley, Thomas E. Waters, George Tollet, —— Dorrien, &c. &c.

The five judges appointed to decide on the merits of the animals exhibited, were Sir John Seabright, James Froſt, Mr. Walker, Henry Norton,

and Mr. Bond (the two laſt are butchers); and they ſpent the whole of the day in a careful examination of the animals exhibited, but without getting through their taſk before dark; rendered difficult, not merely by the great number of animals which they had to examine, but by the nearly-balanced merits of different individuals in the ſeveral claſſes. It was underſtood that written inſtructions had been given to the judges, by the Noble Lord who beſtows the prizes, that they ſhould have due regard in their deciſions to the printed conditions, reſpecting the quality as well of weight of the carcaſes of the fat animals, and of the wool on ſheep, and to the labour performed by the oxen, &c.

The fat pigs were many of them greatly admired, particularly a true Eſſex pig, belonging to Peter L. Wright, Eſq. A Holderneſs heifer, of Lord Braybrook's, and his fat cow of the ſame breed, remarkably fine in her hind quarters, attracted much attention.

Lord Somerville exhibited the carcaſes of five fat Merino weathers, which he had cauſed to be killed on his farm in Somerſetſhire, and ſent up for the dinner this day at the Freemaſon's Tavern. They were found, on inſpection, to be very fine in the grain, and well fattened.

Several very uſeful implements were exhibited; particularly a patent Hampſhire waggon, (forming alſo two carts when ſeparated), made after the pattern of that, which Edmund T. Waters, Eſq. exhibited laſt year, and which has ſince been frequently ſeen in London, drawn by oxen: the model of which waggon, and of the drag attached to the wheel, was furniſhed by Lord Somerville, who ſeems particularly to have patronized this invention.

Mr. M'Dougals ſhewed one of Lord Somerville's patent ploughs, with a chain draught; and a five-row horſe drill, with two ſets of hoppers, for ſowing pulveriſed manure along with the ſeed.

Mr. Plucknet ſhewed a hand dibbling machine, calculated for depoſiting powdered manures, along with the ſeed; and a ſix-row horſe drill machine, with manure boxes.

Mr. Paſmore ſhewed a patent iron chaff cutter, eſſentially like Mr. Salmon's, rewarded by the Society of Arts, and ſince made by Rowntree, of Blackfriar's-road; to the frame of Mr. P.'s machine, a bean cruſher is attached.

R. Langriſh ſhewed a turnip or clover drill, for dropping ſixteen rows of ſeed in a ſeven feet ſpace, in imitation of broad-caſt; and a four-row adjuſtable turnip drill.

Mr. Leſter ſhewed a very large chaff cutter; and he diſtributed propoſals for a work on thraſhing.

Mr. John Jones diſtributed a printed account of the thraſhing-mills, which he has erected with ſucceſs for ſeveral different agriculturiſts in Eſſex, Suſſex, Hants, and Glouceſterſhire.

Meſſrs. Gibbs exhibited ſeveral ſpecimens of Swediſh turnips, kohl-rabi, mangel-wurzel, &c. and of ſeveral agricultural ſeeds.

Meſſrs. Joyce and Stodart exhibited ſeveral pieces of fine broad cloth, of various colours, manufactured by them from Lord Somerville's Engliſh grown Spaniſh wool, and ſome from the fleeces of His Majeſty's flock. A piece of white kerſeymere from the ram and ram-hog fleeces of Lord Somerville's flock was particularly admired for its fineneſs.

Meſſrs. Woolley and Co. ſhewed ſeveral pieces of fine broad cloth, manufactured from the Merino, Merino-Ryland, and Merino-South-down fleeces, of Mr. George Tollet's flock.

The above pieces of cloth ſatisfactorily prove the fallacy of thoſe who aſſert, that the fineſt cloths cannot be made of wool grown in England.

David Gil's and Co. ſhewed ſeveral ſkins of leather, of different colours,

manufactured from Mr. Tollet's Anglo-Merino ſheep ſkins, in imitation of the Spaniſh leather, which were much admired for their beauty.

The properties of Fletcher's prepared gypſum, as a manure, were explained in a note ſtuck up; the premiums by the Smithfield Club, for their next Chriſtmas ſhew, and the buſineſs of the meeting of the Club, this day, were explained by notes.

Lord Somerville ſhewed ten Merino rams, much ſuperior in carcaſe to the generality of theſe ſheep, and unexceptionable in wool, which are to be let, according to the printed conditions circulated in the yard. A paper, containing the number, weights, and prices of the Merino fleeces, which Lord Somerville's flock has produced, was ſtuck up.

A great number of perſons of diſtinction, and experienced Agriculturiſts, appeared in the Yard, previous to the dinner at Freemaſon's Tavern.

Twenty-five Agriculturiſts dined together the firſt day at the York Hotel, in Bridge-ſtreet. Richard Aſtley, Eſq. in the chair.

Meſſrs. Bridge and Parſons, among other ſamples of Agricultural ſeeds, ſhewed ſpecimens of ſpring ſeed-wheat, which has been found on trial to ſucceed perfectly.

Out of each of ſix pens of ſheep ſhewn, two were killed; and their carcaſſes were exhibited, with labels as follow:

George Tollet's two Merino-South-Downs:

Carcaſe and head	101lb. and 91lb.
Fat	15lb. and 17½lb.

Mr. Monkton's two South-Downs:

Carcaſs and head	102lb and 106lb,
Fat	18½lb. and 16lb.

Mr. Weſtcar's two South-Downs:

Carcaſe and kead	86lb. and 87lb.
Fat	16lb. and 17lb.

Mr. Thomas Purdy's two South-Downs:

Carcaſe and head	113lb. and 185lb.
Fat	23lb. and 16lb.

Mr. Samuel Bayley's two South-Downs:

Carcaſe and head	107lb. and 112lb.
Fat	18½lb. and 17½lb.

Lord Somerville's two Merino-Rylands:

Live Weights	138lb. and 136lb.
Carcaſs and head	89lb. and 86lb.
Fat	9lb. and 16½lb.
Skin	19lb. and 14lb.

Among the numerous company, we noticed Lord Doynevor, the Lord Mayor, Sir John Sinclair, Alderman Boydell, Bernard Howard, George Gunning, Profeſſor Davy, &c. &c.

About three o'clock a part of the company, who are Members of the Smithfield Club, withdrew, and held a meeting at Freemaſon's Tavern, Lord William Ruſſell in the chair.

The five judges of the next ſhew were appointed, the accounts of the paſt year audited, and the following were elected Members, viz.

Sir Watkins Williams Wynne, Bart. Francis Sitwell, —— Todd, Joſeph Pinſent, John Edmonds, James Butler, Morris Birkbeck, Philip Jones Saguers, William Boultbee, George Warrener, Samuel Bayly, James Burton, and Peter Leward Wright.

About half paſt five o'clock 307 perſons ſat down to a moſt excellent dinner, provided with the utmoſt liberality by Lord Somerville, in Freemaſon's Hall.

Among the company we noticed—Ambaſſadors, &c.—Prince Paul Eſterhazey, Count Poniſtowſki, Baron Reventz, Count Reventz, Count Stahremberg, M. Coutinho, M. Smirnove, &c.

Duke of Argyle.

Marquis Sligo and Lanſdown.

Earls—Briſtol, Darnley, Derby, Eſſex, Forteſcue, Hardwicke, Macclesfield, Manvers, Selkirk, Winchelſea, Cholmondeley, Bridgwater, &c.

Viſcounts—Palmerſton, Sackville, Bulkley, Primroſe, and Grimſton.

Lords—Kinnard, Crew, De Dunſtanville, Heathfield, William Ruſſell, Grantley, King, Brabrook, Elliott, Borrington, Grantham, St. John, H. Petty, &c.

Sirs—Hippeſley Cox, William Curtis, John Sinclair, R. Milbanke, D. Wedderburn, J. Seabright, W. Leighton, &c.

Biſhop of Landaff.

Meſſrs.—E. L. Loveden, C. C. Weſtern, Hon. G. Elliot, T. W. Coke, M. Burgoyne, R. Byng, Hon. S. Wortley, W. H. Lyttelton, Hon. G. Elliot, S. Whitbread, Rev. Bate Dudley, J. Perry, Pinſent, Newſome, Profeſſor Davy, J. Elman, J. Elman, Jun. J. Fordyce, Arthur Young, John Farey, Benj. Bryan, G. Garrard, M'Dougal, Plucknett, G. Villers, Col. Mitford, Webber, Convers, Warmington, Cullen Smith, Wakefield, Waters, Giblett, Giblett Jun. Peſter, Wace, Boys, H. King, Jun. Ayres, Hemſborough, Garment, Reynolds, Chapman, Bond, Wheeler, G. Tollet, A. Knight, Joyner, Warren, Jacobs, &c. &c.

As ſoon as the cloth was withdrawn, Lord Somerville gave——

The King.

The Plough, worked by good Oxen.

The Illuſtrious Strangers preſent.

The Fleece, covering a good carcaſs, and plenty of fat.

The Farming Society of Ireland, and its worthy aſſociate—the Duke of Bedford.

Huſbandry and Commerce, and may their intereſts be inſeparable.

His Lordſhip then roſe, and after adverting to the great difficulties which the Judges had experienced, owing to the great and nearly equal perfections of the animals ſhewn, opened the Judge's report, and read therefrom the award of prizes to Lord Sackville, as the grazer, and to Andrew Knight, as the worker, of the Hereford oxen, each an elegant ſilver cup, which were immediately delivered by his Lordſhip.

His Lordſhip then propoſed the "health of Mr. Arthur Young," and proceeded to read the adjudication of prizes to John Weſtcar, as the grazer, and to Mr. Watkins, as the worker, of two Hereford oxen, and immediately preſented the cup to theſe gentlemen.

His Lordſhip next preſented Mr. Birbeck with a cup, for his Merino South-down ſheep; and another to Charles Callis Weſtern, (which the Rev. Bate Dudley received in his abſence) for five South-down ſhearing wethers.

After reading the Judge's award, reſpecting Merino ſhear-hogs, by which the prize reverts to Lord Somerville; his Lordſhip preſented the cup to Mr. Mitford, for his perſeverance in carrying the Merino breed to perfection.

The remaining prize cup was delivered to Mr. Sully, for his white pig.

On account of the great quantity of buſineſs which the Judges had to go through, his Lordſhip ſtated, that the claims of that meritorious claſs of men the ſhepherds, muſt neceſſarily ſtand over till the next year.

His Lordſhip next adjudged one of the extra cups to Mr. Farncomb, for his five South-down ewe-hogs, and expreſſed his hope, that it would induce him to ſend ſheep to the next ſhew.

The other extra cup his Lordſhip preſented to Mr. George Tollet, in a manner the moſt flattering to that gentleman; obſerving, that it was ſmall in value, compared to his merit in promoting the Merino breed.

The "Health of the Judges," being drank, Sir John Seabright, on behalf of his coadjutors, roſe, and thanked the company, aſſuring them, that any defects in their deciſion, ſhould be interpreted, rather to error in judgment, than to want of attention or to partiality.

His Lordſhip next gave, "The memory of thoſe good huſbandmen, Mr. Culley and Mr. Duckett."

Two bundles of Siberian ſpring wheat, in the ear, were next produced, which his Lordſhip begged to put into the hands of the Earl of Winchelſea, and Mr. Adams, for them to ſow, and report the produce thereof, on a future occaſion.

Mr. Selby propoſed the health of Lord Somerville, which was drank with the moſt rapturous applauſe, and three times three.

His Lordſhip having reſumed the chair, thanked the company, in a neat ſpeech, and gave "Profeſſor Davy."

In the courſe of the evening, the Smithfield Club's Bill of Premium for their next ſhow; the Duke of Bedford's propoſals to let and ſell cattle, at his Woburn park farm, in June next; and Lord Somerville's premium for the next year, were delivered round to the company.

We have ſeldom ſeen a large company more heartily enjoy the buſineſs, and their entertainment, than on this occaſion, and the good wine with which they were well ſupplied, kept them together until a late hour.

Kent Society, for the Encouragement of Agriculture and Industry.

Right Hon. the Earl of Romney, Lord Lieutenant, &c. &c.
Filmer Honywood, Eſq.
Sir Edward Knatchbull, Bart. M. P.
Sir William Geary, Bart.
William Honywood, Eſq. M. P.
} Patrons.

Right Hon. the Earl of Thanet, Preſident.
Henry Godfrey Fauſſett, Eſq. Deputy Preſident.
Sir Henry Oxenden, Bart.
Rev. Sir John Fagg, Bart.
} Stewards.

At a General Meeting of this Society, holden at the Fountain Tavern, Canterbury, on Saturday the 21ſt of May, 1807,

Preſent, the Right Hon. the Earl of Thanet, Preſident, in the Chair.

Reſolved, That the following premiums be offered to be given at the enſuing anniverſary;—

CLASS I.

SERVANTS IN HUSBANDRY.

To two married and two ſingle ſervants in huſbandry, who have lived with the ſame maſter or miſtreſs with good characters the greateſt number of years (not leſs than five), and ſtill continue in the ſame ſervice, and ſhall produce ſatisfactory certificates, Two Guineas each premium.

To two female ſervants in huſbandry, who have lived in the ſame ſervice the greatest number of years (not leſs than five), with good characters, and ſtill continue the ſame, and ſhall produce ſatisfactory certificates, Two Guineas each.

To one boy in huſbandry, under the age of ſeventeen years, who ſhall have lived in the ſame ſervice (being his firſt) the greateſt number of years (not leſs than five), and ſtill continues the ſame, and ſhall produce a ſatisfactory certificate, One Guinea.

CLASS II.

LABOURERS IN HUSBANDRY.

To three labourers in huſbandry, who have worked for the ſame maſter or miſtreſs the greateſt number of years (not leſs than five), and ſtill continue to do the ſame, and ſhall produce ſatisfactory certificates, Two Guineas each.

CLASS III.

COTTAGERS.

To three labourers in huſbandry, who have brought up the greateſt number of their own legitimate children (not leſs than ſix), to the age of ſix years, in habits of honeſt induſtry, with the leaſt relief from their reſpective pariſhes, Two Guineas each.

To the widow of one labourer in huſbandry, who has brought up the largeſt family on the ſame conditions, Two Guineas.

BEE PREMIUM.

To the labourer in huſbandry, who ſhall produce a certificate, ſigned by the miniſter and church-wardens, or two reſpectable inhabitants of the pariſh, of his having in his own poſſeſſion, on the 1ſt of May next, the greateſt number of living ſtocks of bees, the ſame having been his own property for five months previous to that day, Two Guineas.

Certificates for any of the above premiums (blank forms of which may be had on application to the Secretary), to be ſent to the Secretary on or before the 12th day of May next.

Reſolved, That the ſum of Five Guineas be given to the owner of the beſt cart ſtallion, kept for public ſervice in Kent, and produced at the Anniverſary.

N. B. The owner of the horſe who obtains this premium, will be required to engage to keep him for public ſervice in the county for one year, from the time of his receiving the premium.

Reſolved, that Five Guineas be given to the owner of the beſt two yearling cart-colt or filly, bred in Kent, and produced at the Anniverſary.

This premium to be continued the next two years.

Reſolved, That a premium of Five Guineas be given to the owner of the beſt yearling ſhort or fine woolled ram, bred in Kent, not fed with cake or corn, and produced at the Anniverſary.

Reſolved, That a premium of Five Guineas be given to the owner of the beſt pen, of not leſs than three fine woolled tegs, bred in this county, not fed with cake or corn, and produced at the anniverſary.

The ſheep for the above premiums to be ſhewn without their wool, but the fleeces to be produced, and ſatisfactory certificates of the mode of feeding.

Theſe four premiums will not be given, unleſs more than two are produced for each premium, without thoſe ſhewn appear to the judges to be highly deſerving.

Candidates for any of the above premiums are to give notice in writing to the Secretary, on or before the 12th of May next.

The Anniverſary of this Society will be holden at the Fountain Tavern, Canterbury, on Friday the 22d of May, being the Friday in Whitſun-week, at eleven in the forenoon, by which time the ſtock are deſired to be produced, or they will be excluded from the premiums.

The limits of this Society extend to all parts of the county of Kent.

ALLEN GREBELL, Treaſurer and Secretary.

AVERAGE PRICES OF CORN, by the quarter of eight Winchester bushels; and of OATMEAL, per Boll, of 140 pounds Avoirdupoise.

From the Returns received in the Week ended, March 21, 1806.

INLAND COUNTIES.

COUNTIES.	Wheat.		Rye.		Barley.		Oats.		Beans.		Peas.		Oatmeal	
	s	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Middlesex	82	10	48	0	37	11	32	2	43	2	56	10	26	3
Surrey	86	8	42	0	40	0	33	4	40	6	55	6		
Hertford	77	5	43	0	40	0	27	8	37	9	46	0		
Bedford	76	3	52	0	38	2	26	8	41	2	49	6		
Huntingdon	76	4			36	8	23	10	36	11				
Northampton	73	0	51	9	35	8	23	10	38	6	39	0		
Rutland	74	3	48	0	37	0	23	0	42	6			62	0
Leiceſter	73	7	46	11	38	5	24	9	38	7	59	6	49	1
Nottingham	76	1	47	0	41	6	28	10	43	6	40	0		
Derby	78	4			42	10	27	8	48	6	46	10	36	11
Stafford	76	10			42	11	28	7	47	10			39	10
Salop	72	4	56	0	41	0	29	6	55	1	44	5	66	4
Hereford	74	1	46	4	36	10	27	6	48	0	43	3	64	11
Worceſter	76	9			41	1	33	6	44	3	50	8		
Warwick	80	7			41	1	29	8	48	8	58	8	47	11
Wilts	76	6			38	2	32	10	53	0	44	0		
Berks	84	4			37	6	31	10	47	3	51	5		
Oxford	80	2			34	5	29	10	42	3	48	0		
Bucks	79	6			36	10	28	8	44	10	48	3		
Brecon	73	7	51	2	38	4	21	4			40	0	46	2
Montgomery	69	2			36	9	25	10			41	7	50	10
Radnor	69	8			36	10	22	1			41	7		

Maritime Counties.

Eſſex	78	8	41	6	36	10	29	9	41	9	49	0		
Kent	85	0	47	0	40	3	35	6	39	6	58	0		
Suſſex	80	10			41	0	34	3			56	0		
Suffolk	77	9	44	0	35	10	31	0	35	5	44	7	64	1
Cambridge	73	8	43	6	34	6	20	9	34	1				
Norfolk	74	0	47	3	34	10	24	3	34	11	43	9		
Lincoln	70	5	46	4	36	10	22	10	38	10				
York	71	4	44	7	37	9	26	0	41	10	56	6	38	9
Durham	77	9					26	9						
Northnmberland	71	10	50	5	37	4	27	8						
Cumberland	69	2	52	4	39	1	27	6					21	4
Weſtmoreland	77	5	57	6	40	6	29	8					22	6
Lancaſter	75	9			37	4	27	6	45	6			22	5
Cheſter	72	2			44	0	28	7					22	3
Flint	69						25	6						6
Denbigh	82	9			44	7	25	7	51	3	40	0	45	10
Angleſea														
Carnarvon	74	8			39	0	20	4					47	8
Merioneth	78	8			42	0	23	9			48	0	46	1
Cardigan	77	5					16	6						
Pembroke	67	3			34	7	18	10						
Carmarthen	76	0			34	10	19	0						
Glamorgan	73	5			35	7	19	4						
Glouceſter	78	7			38	6	27	11	45	11	43	6		
Somerſet	79	5			36	4	26	0	42	0	68	8		
Monmouth	75	9			38	0	25	7						
Devon	82	11			35	0	28	0						
Cornwall	81	0			36	3	21	7						
Dorſet	78	6			35	6	33	5	52	0				
Hants	81	7			39	0	33	11	44	0				

Prices of Hops, Meat, Seed, Leather, Tallow, &c. for March 1807

Price of Hops.	1st Week	2d Week	3d Week	4th Week
Bags.	s. s.	s. s.	s. s.	s. s.
Kent — —	108 to 120	10 to 121	90 to 116	90 to 116
Suffex — —	100 to 112	100 to 112	90 to 106	90 to 106
Effex — —	100 to 112	100 to 112	90 to 106	90 to 106
Pockets.				
Kent — —	110 to 130	110 to 130	100 to 130	100 to 130
Suffex — —	105 to 120	105 to 120	95 to 120	95 to 120
Farnham — —	180 to 200	180 to 200	160 to 189	160 to 189
Seeds.				
Broad Beans, (per quarter)	28 to 68	28 to 68	28 to 68	28 to 68
Long Pods	30 to 48	30 to 48	30 to 48	30 to 48
Tares — —	36 to 50	42 to 62	42 to 46	42 to 62
Rye Grafs — —	12 to 28	12 to 28	12 to 28	12 to 28
Carraway, (pr cwt.) —	40 to 42	40 to 42	40 to 42	41 to 42
Coriander —	10 to 11	10 to 11	10 to 11	10 to 11
Trefoil —	6 to 26	6 to 26	6 to 26	6 to 26
Red Clover — —	32 to 90	32 to 90	32 to 90	32 to 86
White ditto —	42 to 100	42 to 100	42 to 100	34 to 116
White Muftard Seed, pr bu	9 to 12	9 to 12	9 to 12	9 to 12
Brown ditto	10 to 17	10 to 17	10 to 18	10 to 18
Canary Seed				
Turnip, —				
Rape Seed, (per laft) —	20l to 29l	20l to 30l	23l to 31l	—l to 31l
Meat at Smithfield,				
To fink the offal, p. ft. 8lb.	s. d s. d.	s. d. s. d.	s. d. s. d.	s. d. s. d.
Beef — —	4 4 to 5 6	4 4 to 5 4	4 4 to 5 4	4 0 to 5 0
Mutton — —	4 8 to 5 8	4 8 to 5 8	4 8 to 5 6	4 4 to 5 4
Veal — —	5 0 to 6 6	5 0 to 6 6	5 0 to 6 0	4 6 to 6 4
Pork — —	5 0 to 6 0	5 0 to 6 0	4 8 to 5 8	4 8 to 5 8
Lamb — —				
Head of Cattle—Beafts about	1,600	1,7 0	1,900	2,200
Sheep and Lambes	12,500	16,500	13,000	18,000
Price of Leather.	*d.* *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*
Butts, 50lb. to 56lb. each	22 to 23	22 to 23	22 to 23½	22 to 23½
Ditto, 60lb. to 65lb each	24 to 26	24 to 26	24 to 25	24 to 25
Merchants Backs —	21 to 22	21 to 22	21 to 22	21 to 22
Dreffing Hides —	17 to 18½	17 to 18½	17 to 18½	17 to 18½
Fine Coach Hides —	18½ to 20	18½ to 20	18½ to 20	18½ to 20
Crop Hides for cutting	21 to 23½	21 to 23½	21 to 23½	21 to 23½
Flat Ordinary —	17 to 18½	17 to 18½	17½ to 20	17½ to 20
Calf Skins, 30 to 40lb. *p.* doz.	26 to 36	26 to 36	36 to 42	36 to 42
Ditto, 50lb. to 70lb. do.	33 to 39	33 to 39	33 to 40	33 to 40
Ditto, 70lb. to 80lb. do.	32 to 34	32 to 34	33 to 40	33 to 40
Sm. Seals (Greenland)	42 to 45	42 to 45	— to —	— to —
Large do. (per dozen)	5l to 7l	5l to 7l		
Goat Skins *per* doz.		— to —	— to —	— to —
Tanned Horfe Hides prhide	20s to 37s	20s to 33s	24s to 32s	24s to 32s
Price of Tallow.	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
St. James's Market —	3 7	3 6	3 8	3 6½
Clare Market —	3 7½	3 6	3 8	3 6
Whitechapel Market —	3 6½	3 5	3 7½	3 5½
Per ftone of 8lb. Average	3 7	3 5½	3 8	3 6
Town Tallow —	60 0	60 6	60 6	59 6
Ruffia (Candles) —	56 0	53 0	53 0	52 0
Ruffia ditto (Soap) —	59 0	— 0	52 0	52 0
Melting Stuff — —	44 0	44 0	43 0	44 0
Ditto rough — —	30 0	30 0	28 0	28 0
Garves — — —	11 0	11 0	10 0	11 0
Yellow Soap — —	76 0	76 0	78 0	78 0
Mottled ditto — —	88 0	88 0	88 0	88 0
Curd ditto — —	92 0	90 0	92 0	92 0
Candles per dozen — —	10 6	10 6	10 6	10 6
Moulds — — —	11 6	11 6	11 6	11 6

ALPHABETICAL INDEX

TO THE

FIRST VOLUME, SECOND SERIES,

OF THE

AGRICULTURAL

MAGAZINE.

DIRECTIONS FOR PLACING THE CUTS.

ON *SUNDAY, MARCH* 22, 1807,

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BRITANNIA,

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