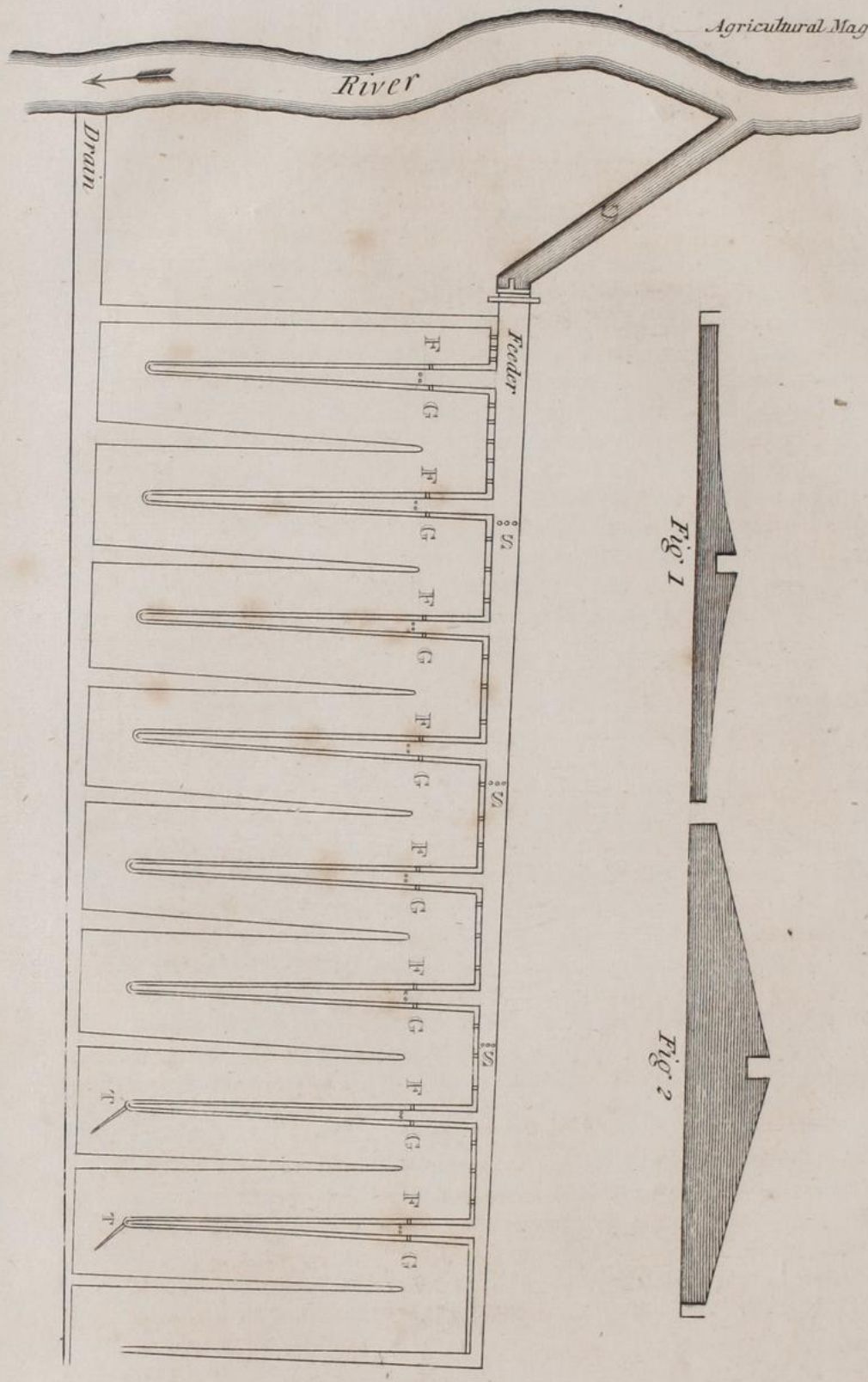

Fig. 1

Fig. 2

Neele sc. 351 Strand.

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THE

AGRICULTURAL MAGAZINE.

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METHOD OF FLOATING, BY WHICH ELEVATED LANDS MAY BE SUBJECTED TO IRRIGATION.

[WITH A PLATE ANNEXED.]

To the Editor of the Agricultural Magazine.

Sir,

THE method of floating hereunder explained, is so simple and beneficial, that I thought it would be acceptable to you as a continuation of the subject, introductory of your last number.

This plate represents a meadow regular in its surface with the current of the river, but too high to be floated from the part of the stream immediately opposite to it. In order therefore, to procure a fall, the water is taken out at a more elevated part of the stream by a conductor, as at C, into the feeder, which is cut along the highest parts of the meadow, and has a flood hatch in the mouth of it to admit or exclude the water at pleasure. This conductor we will suppose, for illustration, has only four inches descent in the whole length, but the stream in the same distance has ten inches fall, so that six inches of power are gained by means of the conductor, which is a fall abundantly sufficient to float a meadow. By this mode of gaining descent, thousands of acres may be floated which might be thought impossible to be done.

Fig. 1 and 2 represent a transverse section of two ridges, with their sides or beds an inclined plane. The floating gutters, or troughs, (marked F G) are drawn with double lines; and the stops in these and the feeder are denoted with small circles and the letter S. The drain cuts are described with single lines.

Exeter, May 5, 1804. Yours, &c.

D. Y.

ON THE RUTA BAGA AND MANGOLD WURZEL.

To the Editor of the Agricultural Magazine.

Sir,

I BEG leave to state a fact, which probably some of your readers may consider to be interesting.

In the Spring, 1803, a Swedish Nobleman, *Le Chevalier d'Edelcrantz*, a most intelligent agriculturist, made me a present of some seed of the Ruta Baga, or Swedish Turnip, a

plant which is generally supposed to resist the inclemencies of our winters equal at least to any yet known as food for cattle; also a specimen of the Mangold Wurzel* (Racine de disette) both then recently brought from the continent. The respective specimens were sown on the same day, and in a similar situation. The seedlings from both in due season were transplanted at proper distances, and proved equally promising till the succeeding winter, which indeed was not remarkably severe, but the ground in which they were planted was entirely overflowed at one period, by the waters of the Avon, sharp frost soon after following.

Towards last Spring I discovered the Ruta Baga evidently to decline, and at no great distance of time afterwards every one of the bulbs were completely reduced to a putrid pulp. †

I fully expected, *â priori*, that the Mangold Wurzel would have been the first to give way to hard weather, under any view of competition with the Ruta Baga. But in fact I lost not a single plant, nor scarcely a leaf. At this time they are all in a healthy and very vigorous state, and promise to produce an abundant crop of seed.

Many years ago, when Dr. Lettsom introduced the Mangold Wurzel to public notice, I began the culture, but the experiments received not the proper degree of attention, and consequently proved abortive. Having lately resumed this culture, I incline to think that, as a winter and spring food for cattle, the plant deserves all the praise ascribed to it by Dr. Lettsom.

Sheep, hogs, and neat cattle are fond of the leaves and root. It is easy of cultivation, suitable to any soil of moderate depth, not much subject to the ravages of insects in any stage of its growth, and yields a very large crop, amounting, under favouring circumstances, in some instances, to forty or fifty tons per acre.

Its subordinate uses would be for the table, root and foliage, no unpleasing variety, and, the excise regulations permitting, an elegant *Aqua Vitæ* might be extracted from a maximum crop, to the amount, perhaps, of two to three hundred gallons, *(import strength)* per acre.

On the continent ‡ I understand a *Colophony* of Sugar has been extracted with a certain degree of advantage, but the *Chevalier d'Edelcrantz* (now in Bath) informs me that, in the

* Prussian Sugar Beet.

† This would not have happened in a dry healthy situation.

‡ When the Bulb is said to produce about 3 per cent. of its weight on the average in concrete Sugar. The writer has known it to produce a higher proportion.

process of refining, the most experienced artists have not hitherto discovered an *œconomical* method of crystallization.§

I remain, Sir, your obedient Servant,

NEHEMIAH BARTLEY.

Bath, May 11, 1804.

§ Since receiving the preceding paper, we have been favoured with a second letter from our intelligent Correſpondent. He informs us that he has ſhewn a copy of the preceding communication to the Chevalier d'Edelcrantz, who informs him that the German Chemiſts are acquainted with the means of cryſtallizing the Beet Sugar; and (in confirmation of what he ſtated above) "that the matter employed, (Alcohol) is much too expenſive to anſwer commercial and general purpoſes." E.

ON THE USE OF THE BAROMETER AS APPLIED TO AGRICULTURE.

To the Editor of the Agricultural Magazine.

SIR, *Fakenham, April* 25, 1804.

IT has been long since justly observed by some author, I know not whom, that one seldom takes up a book of *any kind*, without learning something new, or enlarging his stock of ideas. Such at least I generally find to be my own case, and in this particular instance, I have certainly been benefitted, inasmuch as I have by accident fallen upon an explanation of difficulties, which have not a little puzzled and set wrong the plain farmer, however satisfactorily the philosopher may reason upon them. Dipping into the European Magazine for October, 1802, I met with "a dissertation on the use of the Barometer as applied to agriculture," signed OBSERVATOR. Its purpose is not so much, perhaps, to give a philosophical or even a plain account of those seeming inconsistences which we notice in the rising and falling of the Mercury, as to mark the subsequent changes *we ought* to expect in the weather, which apparently contradict the prognostications of the *prophetic tube*.

I shall only extract such parts as relate more particularly to this subject, "The slightest observation will convince every man, that each year and the various seasons of the year, have a peculiar character as to rain, drought, heat, cold, &c.; and as the quality of the seasons has a most sensible effect on the productions of the earth, it is evident that it must be of the greatest advantage to the farmer to foresee the changes that may be expected, *because he can thereby regulate his labours accordingly*.* When the character of the season is once as-

* How strongly this applies to the *drill system* in particular, almost all your readers will immediately feel, a *little* rain soon overturns the preparations of the week past; and the present wet and unkind season will have effectually pointed out to the farmer, the advantage of foreseeing with tolerable

certained, the returns of rain or fair weather may be judged of with some degree of certainty, *in some years,* but scarcely guessed at in others by means of the Barometer; for in general we may expect that when the mercury rises high, a *few* days of fair weather will follow. If the mercury falls again in two or three days, but soon rises high, without much rain, we may expect fair weather for *several* days; and in this case, the clearest days are *after the mercury begins to fall,* (contrary to the general expectation, perhaps.) In the same manner, if the mercury falls very low with much rain, rises soon, but falls again in a day or two, with rain, a continuance of bad weather may be feared. If the second fall does not bring much rain, but the mercury rises gradually pretty high, it prognosticates settled good weather of some continuance when a heavy rain has fallen upon the mercury's sinking, and its continuing steadily low, the weather is sometimes fair and promises well; but no prudent farmer should trust to such appearances. There is, indeed, a caution, which every observer may profit by. When the mercury rises high in the barometer, the moisture on the surface of the earth disappears; this, even though the sky be overcast, is a sure sign of fair weather; but if the earth continues moist and water stands in shallow places, no trust should be put in the clearest sky, for it is in this case deceitful.

"In the latter end of March, or generally in the beginning of April, the barometer sinks very low with bad weather,* after which it seldom falls lower than 29 deg. 5 min. till the latter end of September or October, when the quicksilver again falls low with stormy winds, for then the *winter constitution* of the air takes place. From October to April the great falls of the barometer are from 29 deg. 5 min. to 28 deg. 5 min. and sometimes lower; whereas during the *summer constitution* of the air, the mercury seldom falls lower than 29 deg. 5 min. It therefore follows from hence, that a fall of *one tenth* of an inch during the summer, is as sure an indication of rain, as a fall of between *two and three tenths* is in the winter.

"It must be observed that these heights of the barometer hold only in places nearly on a level with the sea; for experiments have taught us that for every eighty feet of nearly perpendicular height, the barometer is placed above the level of the sea, the quicksilver sinks one tenth of an inch. Observation,

accuracy the approach of rain. At this moment the barometer standing steadily at 29 deg. 4 min. foretells that the barley, *yet unsown,* is likely to remain so for some time, unless *other means than drilling* are resorted to; whereas the former part of this month has been peculiarly favourable to the operations of the drill machine.

* This year is certainly an exception.

therefore, alone, must determine the heights of the mercury which in each place denote fair and foul weather.

"Very heavy thunder storms happen without sensibly affecting the barometer, and in this case the storm seldom reaches far: when a thunder-storm is attended with a fall of the mercury its effect is much more extensive. And here I must mention an observation which I have often seen verified; viz. that when the quicksilver falls very low, the weather continuing mild, and the wind * moderate, a violent storm happens at that time in some distant place: this will account for a seeming false prognostic that the barometer has been often unjustly charged with."

To the foregoing observations, Mr. Editor, which I have reason to believe are tolerably correct, I have little more to add, than in general to remark that a barometer is, in my opinion, as useful an appendage to an agriculturist, as almost any of his implements, for unless his operations are conducted with an *observant eye* to the present or *probably* future state of the *weather*, as well as soil, the produce of his labours will fall short of his expectations, or (what is equally fatal to him) will suffer from ill-timed, though otherwise commendable exertions to *house* it.

However fickle this our climate may be, (and our fathers insist on its being more so at this day than when they were boys) still I believe the truth of the assertion, "that Great Britain, the year throughout, is blessed with a larger portion of weather in which the open air may be enjoyed, than falls to the lot of any other country under the sun." This being granted, with joyful hearts may we apply Horace's "*O fortunati Agricolæ*," to ourselves, and be thankful to Providence who thus ordereth our seasons. Our chief concern is to make the best use of them, and whether ploughing, sowing, reaping, or harvesting, be the order of the day, to be particularly observant of the means put into our hands of ascertaining the best times for each operation, and above all, never to pass by a *present opportunity*.

By way of appendix to this trifling essay, allow me to copy from the same work (Europ. Mag. Dec. 1802) the following recipe for the cure of flies on turnips, *as* trifling, perhaps, as my essay: for I confess my incredulity as to the efficacy of such a preventative. "To a quart of turnip seed add one ounce of brimstone, finely powdered; put both into a bottle, large

* OBSERVATOR has been guilty, I think, of a very great omission in his remarks, in taking no notice whatever of the effects which *heat*, *cold*, or *wind* have respectively upon the glass, independent of the *arid* or *humid* state of the atmosphere. Perhaps one of your numerous correspondents could supply the deficiency; for without such further information, I acknowledge the present communication must remain a very imperfect director to the inquiring student of barometers.

enough to afford room to shake them well together every day, for four or five days previous to sowing, keeping the bottle well corked." There is another offered, but it is only a repetition of the very stale story of elder-leaves; I shall not therefore burden your readers with it.

I am, Sir, Yours, &c. &c.

AGRICOLA NORFOLCIENSIS.

METHOD OF QUICKLY PRODUCING FRUIT FROM TREES DISPOSED TO RUN TO WOOD, OF OBTAINING GOOD SHOOTS, AND OF IMPROVING THE TIMBER TREES.

(Continued from page 210.)

6. IF the second year the tree or branch upon which the operation has been performed, is not covered with a sufficient quantity of fruit buds; make in the spring a new excoriation either on the same place as that of the preceding year, or in any other. In case of necessity, it may be repeated at the beginning of each succeeding spring, till the tree or branch be found sufficiently fruitful.

There will seldom be occasion to repeat the operation. The first wound is usually efficacious, and the tree plentifully covered with fruit the second year.

7. If the operator be fearful of making the wound too large, and that it will not be closed before autumn, he may make it very narrow; and if before the month of Mesidor the new ring or skin have reached the edge of the lower bark, a little more of the latter may be taken away at the same time, recollecting, that the increase of the skin is extremely small after the two first months.

This process employed in this manner, with the precautions I have stated, is infallible, quick in its effects, and not attended with any injury or inconvenience.

8. In pruning fruit trees, it is of no use to cut out the luxuriant wood, or to endeavour by means of pruning to divert the sap. They should be suffered to grow freely for a year, but the following spring the bark may be cut away at the base of each of these branches, and thus by interrupting the course of the descending sap, you will obtain from them excellent shoots, and frequently fine early fruit.

9. When a shoot is grafted, the sap which it contains descends, and forms at the bottom a skin which issues from between the wood and the bark. On this skin rise small protuberances, each contains a ligneous fibre, proceeding from the stem of the shoot: this fibre increases in length, and becomes a root. Substances of a drying nature frequently kill the shoot during the temporary exhaustion by the descent of the sap for the formation of the skin and roots, and before those roots

have derived nourishment from new juices. If only such shoots be grafted which have the skin formed at their base, the roots will strike out at an earlier period, the shoots will not be so long deprived of sap, and they will be sure to thrive, being only a short time exposed to the action of destructive matters.

Conformably with this principle in the spring of the year 9, (1801) I grafted several branches which I had left on an apple tree trained as an espalier. In the spring of the year 10, (1802) the grafts had grown very much, and the branches had increased so as to be two centimetres in diameter. From the bottom of the earth, I took away the bark for the space of two centimetres, not wishing the wound to cicatrise. A skin of about three millemeters in breadth was formed on the upper edge, and the same year the branches bore a great quantity of apples, which would have ripened, had they not been blown off by a violent wind.

These branches are two metres in length, and have shoots branching from their tops; I cut them this autumn (1803) below the ring, taking care not to injure it, and planted them without taking off any of the small branches. They are very green; the buds are already large; I hope they will form standard trees.

This process of the annular excoriation may be employed with success to hasten the maturity of grapes a fortnight or three weeks, and to ripen grapes trained on a trellis, which often remain unripened to the end of the season.

The fruits of trees or branches on which this operation has been performed are always earlier by 15 or 20 days, and larger than those produced by trees that have not undergone the operation. May not this be the method employed by the hoary philosopher, described by Virgil? He had discovered the secret of obtaining the earliest roses in the spring, and the earliest fruits in autumn.

Primus verè rosam atque autumno car pere poma.—GEORG.

In confirmation of the above statements, I shall relate some of the experiments made by me. As the subjects of them, I selected healthy trees fourteen or fifteen years old, planted in open ground in a light and rather damp soil, some of which had several times flowered, but never borne any fruit, most of them never having produced buds for fruit.

It was in the spring of the year 9, (1801,) that I made all the annular excoriations of which I am about to state the results.

Experiment 1. On the 12th Mesidor, year 10, (1802,) I gathered ten very juicy and perfectly ripe apricots from a branch of a tree submitted to the annular excoriation. At that time the apricots on the rest of the espaliers were still small and green, and the earliest were not ripe before the 30th Mesidor. The branch from which I had pared the bark was four centimetres in diameter; it bore twice as many

apricots as the other branches of the same espalier of equal magnitude; its fruit was one third larger and earlier than that of the rest of the tree, by 18 days.

Experiment 2. In the spring of the year 9, (1801,) I pared away the bark from the bottom of one out of two branches forming the head of a standard apple-tree. The other branch of equal extent and thickness with the first, and forming the other half of the tree, was not put under this experiment. That year, like all the preceding, without exception, there was no fruit on either of the branches.

In the spring of the year 10, (1802,) the young shoots were nearly of equal size on both the parts of the tree, and I cut out none of them.

On the 20th Mesidor, on that part of the tree subjected to the experiment, there were thirty apples, principally on the young branches which bent beneath the weight. One of those apples taken at random weighed nine ounces; the only apple that was at the same time on the other branch, weighed only two ounces.

The young branches on that side of the tree not having undergone the operation, had grown out one third larger and thicker than those on the side where the excoriation had been made.

Experiment 3. On a very healthy apple tree that had never borne fruit, and was divided into four branches, equal in size and extent, I made in the year 9, (1801) two annual excoriations on two of the branches. That year there was no fruit, because there were upon the tree no fruit buds forming the preceeding year. The young wood grew nearly equally on all the branches of the tree.

In the spring of the year 10, (1802) I pruned one of the branches on which I had made the annular excoriation; and one of the others, leaving the new wood on the two remaining branches.

1. I observed that the branches submitted to this operation and pruned, had produced very few shoots, and that these were both short and small. The branch which had not undergone the operation and pruned, had produced a great number of vigorous shoots.

2. The young shoots, left on the other branch submitted to the operation, had increased very little in their dimensions, while those of the branch on which I had not operated, had grown very much.

3. The two branches on which the operation had not been performed produced no fruit; of the two other branches, that which had been pruned bore fewer apples than that not pruned, the young shoots of which were covered with fruit.

I am, Sir, Yours, &c.

April 14, 1804. ARBUSTIVUS.

COMPARISON OF AGRICULTURE IN THE COUNTIES OF PERTH AND NORTHAMPTON.

To the Editor of the Agricultural Magazine.

SIR,

IN the progress of your work, you have occasionally introduced remarks on comparative agriculture, and I must acknowledge, that the farming of my own country has been sometimes depreciated. It has been my lot to see something of the practice both in England and Scotland, and without any disposition to undervalue the attainments in the former, or to over-rate the talents in the latter, I have extracted the annexed comparative view of farming in one of the best of your provinces, and on that portion of my native territory with which I am most acquainted; and I shall submit it to the attention of your respectable and intelligent readers without a single additional observation, confident that while they are disposed to do justice to the County of Northampton, the soil and practice of the Carse of Gowrie will not be despised.

Perth,
March 23, 1804.

I am, Sir, yours, &c.
A SCOTTISH FARMER.

ROTATION OF CROPS.

IN NORTHAMPTONSHIRE.

The old enclosed lands are generally kept in a state of pasturage.

The open field lands, at least that part of them which is considered proper for tillage, is under a constant course of corncropping, as follows, *viz.*

1st year, fallow or turnip.
2d —— wheat, part barley.
3d —— beans, with a few acres in oats.

The newly inclosed lands are principally employed in the cultivation of grain, and cropped in the manner under mentioned, *viz.*

1st year, fallow, part turnip.
2d —— wheat, barley after the turnip.
3d —— beans and peas.

IN PERTHSHIRE.

On the rich lands in the Carse of Gowrie.

1st year, fallow.
2d —— wheat.
3d —— beans or pease.
4th —— barley, with 20lb. clover red and one bushel rye grass.
5th —— clover.
6th —— oats.

On the lands adjoining, the following rotation is adopted.

1st year, pease, or other green crop.
2d —— wheat.
3d —— barley, with grass seeds, as above mentioned.
4th —— clover.
5th —— oats.

On the enclosed land.

1st year, turnip.
2d —— barley, with 8lb. red clover, 8lb. white, 4lb. rib

4th year, barley, with 18lb. red clover.
5th —— clover.
6th —— ditto.
7th —— part beans and part oats.

LABOUR, &c.
IN NORTHAMPTONSHIRE.

Butcher's-meat, from 4d. to 5d. per lb.

Poultry, from 1s. 2d. to 1s. 4d. each.

Eggs, from 6d. to 8d. per score.

Butter, from 8d. to 10d. per lb.

Cheese, from 4d. to 5d. per lb.

The wages of a ploughman from 8l. to 10l.

A young man or boy, from 4l. to 5l.

A female servant, from 3l. 10s. to 4l. 10s.

A day-labourer, in summer, without board, from 1s. 2d. to 1s. 4d.

Ditto in winter, 10d. to 1s.
A man for the harvest-month, from 2l. 2s. to 2l. 10s.

A woman by the day, 1s. without board.

Grain is threshed at from 1s. 3d. to 2s. 6d. *per* quarter.

When the ploughmen receive board-wages, it is generall at the rate of 6d. the week all the year round; but they are maintained in bed, board, and washing in the farmer's family.

The ordinary breakfast and supper is cold meat, with bread and cheese; and for dinner, either roast or boiled meat,

grass, and 1 or 2 bushels rye grass.

3d year, grass, generally made into hay.

4th, 5th and 6th, pasture.

7th, barley.

8th, oats.

LABOUR, &c.
IN PERTHSHIRE.

Butcher's meat, from 3d. to 4d. per lb.

Poultry, from 1s. to 1s. 4d. each.

Eggs, from 6d. to 8d. per dozen.

Butter, from 6d. to 8d. per lb.

Cheese, from 2½d. to 3½d. per lb.

The wages of a ploughman, from 8l. to 10l.

A young man or boy from 3l. to 4l.

A female servant, from 3l. to 4l.

A day labourer in summer, without board, from 1s. to 1s. 2d.

Ditto in winter, 8d to 10d.

A man for the harvest work (which is generally finished in 20 working days) receives about 1l. 5s. and a woman about 17s.

Grain is threshed at from 1s. 4d. to 1s. 8d. per quarter.

When servants are boarded in the farmer's house, the ordinary fare is, for breakfast and supper, *pottage* made of oatmeal, salt, and water, which is eaten with milk. For dinner, *soup*, or as it is provincially called, *broth*, made with pot-barley, vegetables, and butcher's-meat. But the more general practice is to give each

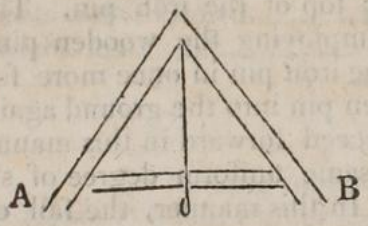
with pudding. Ale is allowed them on many occasions, and small beer they have always at command.

Labour commences about the same hour at the different seasons, in each of the counties.

ploughman a certain allowance of oatmeal, (about 36 ounces a day) and three pints of sweet milk, or double that allowance of butter-milk. They lodge and eat in a house disjoined from the farm-house, and cook their own victuals.

For the Agricultural Magazine.

DESCRIPTION OF AN IMPLEMENT FOR TAKING THE LEVELS FOR WATERING GROUND.



IT is one of those implements that are more adapted for use than show; but which, as being perfectly within the reach of every man, both in respect to its price and the manner of using it, I consider of inestimable value. It has been already recommended to the notice of the public by the respectable President of the Board of Agriculture, but it can never be too generally known.

It consists of two legs of deal, about 12 feet long, joined together at top, and below connected by a cross bar, as represented above. From the angle at the top is suspended a plummet, by a small cord, and a mark being made in the middle of the connecting bar, it is plain, that when the two legs, A and B, are level, the string of the plummet will strike the mark on the bar, and not otherwise; so that the level is thus very easily ascertained.

The method of using it is thus. At the level of the water where you are to begin, drive a pin into the ground, on which one of the legs of the frame can rest, then bringing the other leg round till it touches the ground on a level with the top of that pin, there drive in another pin, and having adjusted the level perfectly, make use of this last pin as a rest for the one foot, and turn the other about till you find the level in the same way; and so on you proceed, following always the direction that thus will be indicated. In this way you discover at once, without trouble the precise direction your water course

should hold, without being at the expence of digging through heights or filling up hollows.

If you mean to conduct the water perfectly level, you have only to follow the pins thus placed implicitly. But if it is your intention to give the canal a certain degree of declivity, say a quarter or half an inch or more, in twelve feet, instead of wooden pins, in this case make use of one pin of steel, having the inches, halves, and quarters marked on the sides regularly, from the square top downwards. Having provided at the same time a number of wooden pins cut neatly over at top, quite square; after having fixed your iron pin quite level with the first, drive a wooden pin into the ground close by it, making the head of it go a quarter or half an inch lower than the top of the iron pin. Then pulling out the iron pin, and employing the wooden pin as a rest for one of the legs, put the iron pin in once more for the other leg, and driving a wooden pin into the ground again at a quarter of an inch lower, proceed forward in this manner, and your canal will have the same uniform degree of slope throughout its whole extent. In this manner, the fall can be regulated to any assignable degree.

ON WASTE LAND IN THE NEIGHBOURHOOD AND WITHIN THE COUNTY OF MIDDLESEX.

To the Editor of the Agricultural Magazine.

SIR,

IN your last Number you have inserted, from T. Y. of Southgate, some observations on the chase or common in his own immediate neighbourhood, and on two other large districts of waste in the neighbourhood of London.

In the course of my reading and observation, I have been enabled to communicate the names and computed quantities of the commons in the vicinity of the capital, and if you think the account acceptable for the purposes of your periodical work, it is very much at your service. In the account of T. Y, he has stated the quantity of land unimproved on Enfield Chase, at from 2 to 3,000 acres. The annexed statement extends the quantity to 4,000. I hope he is more correct than the authority from which I have drawn my information in this particular.

Hounslow Heath, which is said to contain about	6,300 ACRES
Sunbury Common	1,4[illegible]0
Finchley Common	1,240
car. over	8,940

Brought forward,	8,940	ACRES
Harrow Weald, and part of Bushy Heath Commons	1,500	
Riselip Commons	1,500	
Uxbridge Common	350	
Harefield Common	200	
Hillendon Heath	160	
	12,650	
The remains of Enfield Chase, still uncultivated, from actual mensuration, are		
The allotment to Enfield parish	1,532	
Ditto to Edmonton parish	1,231	
Part of the allotments to the Crown	1,047	
Ditto to Hadley parish	190	
	4,000	
Making together,	16,650	
Hampstead Heath, Roxhill Green, Pinner Common, Pinner Marsh, Sudbury Common, Apperton Green, Wembley Green, Kenton Green, Greenhill Green, Uxbridge Moor, Memsey Moor, Gould's Green, Peil's Heath, Hanwell Common, and Worwood Shrubs	1,350	
	18,000	

The whole extent of this irregularly-shaped county comprises 280 square miles, or 179,200 acres. By the preceding account it will be seen, that about one-eighteenth part of the whole county is uncultivated, although the whole is susceptible of a high state of improvement and cultivation.

From the abundant intelligence on the management of waste lands in the several volumes of your work, it is quite unnecessary for me to enter into the parochial and feudal claims, which occasion this neglect in the neighbourhood of the most opulent city of the world.

I am, Sir, yours, &c.

Cornhill, April 12, 1804. ARATRI AMICUS.

CATTLE IN NORFOLK.

To the Editor of the Agricultural Magazine.

SIR,

I AM led to think, from the spirit of candour which pervades the letters of Chorographus, that if I attempt to supply the deficiency to which he himself adverted, by some

account of the Cattle of Norfolk, he will not be offended. He said, " the animal produce is equally astonishing, (with the vegetable produce) twenty thousand head of fat bullocks, and thirty thousand head of sheep, from these districts, are annually sent for the London markets." How far he was accurate, will be seen by the following estimate, which has been made of the proportion sent out of the county, in which have been included some other articles intermediately connected with the subject.

	£.
5,000 Home-bred bullocks, at 12l	60,000
15,000 Scotch and Irish ditto, profit upon each may be stated at 6l	90,000
30,000 sheep, at 2l	60,000
Swine	12,000
Dairy articles	5,000
Poultry and game	3,000
Wool	20,000
Herrings exported	50,000
	£.300,000

In this county, sheep deserve the principal consideration, because, from natural causes, it is not only at present, but must continue an important branch of Norfolk farming. Much information may be collected in your Magazine on this subject, and I hope it will be attended to where it is so essential to rustic improvement. Crossing the breed (we are told in Norfolk) should be done with great caution, and in general it is best to keep each sort of cattle as distinct as possible in its kind, as every sort possesses some particular advantages, but when land becomes much improved, stock may be improved in proportion; and in some instances, the breed may be crossed with propriety, but there ought always to be some similitude between the cattle which are crossed. It is a manifest incongruity, to match a horned bull with a Suffolk polled cow, or a Norfolk and Leicester sheep, or a Norfolk and a South Down, or any long-woolled sheep; but a Leicestershire sheep may be matched with some propriety with a Cottswold and a South Down Sheep, with a Berkshire and Hertfordshire Ryland.

Those who are at all acquainted with the luxuries of the metropolis will be surprised, under the recollection of Christmas dainties, at seeing poultry and game stated only at 3,000l. and will be inclined to think, that the turkies alone would amount to that sum. The fact, however, is, that there is a species of factor called a poulterer, who obtains a very large portion of the profit on this bird. The success in the nurture, and the excellence in the flavour of the poultry of this county, is to be ascribed both to the dryness of the soil, and to the range

the birds enjoy, by which they are enabled to select for themselves the species of food best suited to their health and improvement.

It will astonish most of your readers, that in these districts where swine are most of all prolific, the inhabitants have not yet resorted to the expedient of converting pork into bacon. The breed here acquires nothing of the breadth and general magnitude attained in Hertfordshire and Hampshire: it is small and thin haired, but although it is little esteemed beyond the borders, it is found sufficiently profitable within the limits of the county.

On the horned cattle, with which I shall conclude this brief article, I have read the following correct observations.

"The cows which are natives cannot be much admired; they are small, with turned up horns, and generally of a red colour, but of late years the Suffolk polled cow of the dun colour is much introduced; it is not quite so hardy, but where the pasture is tolerably good is certainly more profitable."

Oxen are very little used in this county for labour, and those grazed are chiefly brought from Scotland or Ireland, which are in general found to answer better than those which are home bred. They are commonly bought in the autumn, and if they are in forward condition, one acre of turnips will put from 5l. to 6l. profit on an ox, by Lady day or May day following.

Those which are not so forward are kept upon offal turnips in the Winter, and fatted in the marshes by harvest, when they double their price during the year, which in either case I consider to be a very profitable scale of grazing.

I am, Sir,
Yours, &c.

Lynn, April 10, 1804. F. C.

REMARKS ON THE GARDENS OF THE NEAT HOUSES SITUATED AT MILL BANK, BETWEEN WESTMINSTER AND CHELSEA.

To the Editor of the Agricultural Magazine.

Sir,

I Have seen with extreme mortification from intelligence communicated through a variety of channels in your miscellany, the large quantity of unproductive land within the narrow circuit of this little island. With this deserted waste, I have contrasted the exuberance of the kingdom of China where mountains are levelled, and the fertility of nature is improved to an extent which, until lately, was supposed only to exist in the imagination of the poet, and the fictions of the traveller. I have often been solicitous to suggest to my own mind, the

most successful means by which the public supineness might be dispelled, and by which the public zeal might be awakened. Interest in this commercial country is the magnetic principle possessed of irresistable powers of attraction, and it appears to me at this moment, that no arguments I could employ would be so likely to be effectual for the important purpose to which I have adverted, as to shew the immense fortunes which have been raised from a foetid and baleful morass in the immediate vicinity of the capital. The Board of Agriculture has directed its attention to this important subject, and the article here furnished, is drawn from the materials at their office.

The gardens called the neat houses, situated between Westminster and Chelsea, have their soil supplied from the slime of the Thames, and they are secured from future inundation by an earthen wall raised a few feet above high water mark, and of the breadth of about 15 feet at the top, and 25 at the basement.

Most of the land thus secured against floods, is peculiarly suited to the purposes of the kitchen-gardener. In the situation now under review, the occupiers can by a little attention to the sluices fill their ditches, dip-holes, and wells, with Thames water, and detain it in such places to within about eighteen inches of the surface, and by that means save a great deal of labour in watering their crops. In addition to this the water they use (from the Thames) is also of a more enriching quality than can be met with in most other places.

This land has been as long, or perhaps longer in the occupation of kitchen-gardeners than any other land in Britain, and for a great length of time has been supplied with dung, as much in quantity and as often repeated, as in the opinion of the occupiers could be applied with advantage to the crops. The quantity thus used, is annually upwards of sixty cart loads per acre.*

Thus by an union of *natural fertility with heat* (raised by *dung*) and a due degree of *moisture*, are the occupiers of these grounds enabled to raise the *greatest* crops in the *least* possible time. This district being also nearer the market than most others, it has from a combination of such advantages, a decided preference over every district in the kingdom.†

* The gardener to whom I am indebted for the most of this account, fetches six hundred loads of dung annually from town, and uses it all on nine acres of ground. These carts are drawn by two horses, and the loads are about half the size which the farmers draw to greater distances with three or four horses.

† It is also situate on the south west border of the town, consequently the cold north east wind so hurtful to vegetation in exposed situations is considerably moderated, or rarified, before it passes over these grounds. They are also naturally low and sheltered.

Crops. Soon after Christmas, when the weather is open, they begin by sowing the borders, and then the quarters, with radishes, spinage, onions, and all the other seed crops. As soon afterwards as the season will permit, which is generally in February, the same ground is planted with cauliflowers, from the frames, as thick as if no other crop had then possession of the ground. The radishes, &c. are soon sent to market; and when the cauliflowers are so advanced as to be earthed up, sugar loaf-cabbages are planted from the aforesaid *seed* crops. When these are marketed, the stalks are taken up, the ground cleared, and planted with endive and celery from the said *seed* crop; and daily as these crops are sent to market, the same ground is cropped with celery for winter use.

The foregoing rotation or order in which the land is cropped, may be considered as the general practice of the gardeners in the district, although there are individuals who differ from it in several respects; as the state of the markets, the price of the articles, or their own inclination and opinion directs them. But one thing they unanimously agree in, namely, that to *dung plentifully* and with discretion; *to dig the soil well and to sow good seed,* is the only practice on which a reasonable expectation of good and plentiful crops can be founded.

Next to the grand object of good land, clean, full of dung, and but little above the water, the kitchen gardener esteems shelter from cold winds as highly essential towards bringing his crops rapidly forward, and into the highest state of perfection. Hence it has been the constant practice in order to attain this desirable object, to erect a considerable number of reed fences (though they have lately substituted paled fences in their stead,) which they place in such positions as are best calculated to prevent the currents of cold chilling winds from passing over their grounds.

The following estimate was made by a gardener who occupied nine acres, situate about two miles farther from market, as his opinion of the produce of the soil at the neat-houses before mentioned, viz.

	£.
The radishes, &c. . .	10
Cauliflowers frequently 70 or more, but say	60
Cabbages	30
Celery, the first crop, not unfrequently upwards of 60, but say . .	50
Endive	30
Celery the *second* crop . . .	40
Total annual produce of one acre	£. 220

This he stated as an estimate rather under the mark. Some seasons occasion a considerable loss, perhaps of one crop; but as this does not often occur, he was of opinion that upon the whole, 200l. an acre was a very low estimate of the average annual produce of these gardens.

With the produce or amount of a gardener's crops, I confess I am not practically acquainted; and therefore, I must beg that the foregoing account may be taken as the result of the enquiries which I have been able to make.

The very great expences of, in labour, manure, &c. which kitchen gardeners are at, is evident to every one who lives in the neighbourhood of them. Probably their expences may be thus devided, viz. in labour, 35l.; teams and dung 25l.; rent, taxes, and tithes, 12l.; marketing and expences, 8l.; together, 80l.; which taken from the foregoing sum of 200l. leaves 120l. per acre as interest of capital and profit.

The farming gardeners, or those who work their soil principally with the plough, are situated rather more distant from London; occupy larger tracts of land, and are content to follow something like the following method or order of cropping namely:—In the months of January and February, they crop their land with *early peas*, to be gathered green in pods, and sold in the month of June. The haulm is hooked up, and as soon as it is dry, it is carried off the ground and stacked for the fodder of horses, on which they thrive nearly as well as on hay. The ground being cleared, is ploughed and planted with *turnips** which are sold off in autumn, at which time the ground is again ploughed and planted with *collards*.

When the crop of peas is of the marrowfat kind, they do not come so early as before mentioned, and are, therefore, generally succeeded by a crop of savoys, or late cabbages. In gathering green peas, six or seven acres will employ twenty persons daily, (Sundays not excepted) and they are paid from one shilling, to sixteen or eighteen pence per sack, of four bushells, for gathering them. The price varies according to the bulk of the crop, and also according to the kind of pea, or size of the pods. Those of the marrowfat, or larger kind, at one shilling, and the smaller sort at sixteen or eighteen pence per sack. They are sent to market in these sacks by both land and water carriage, from every distance, perhaps, not exceeding twenty-five miles, and are sold in the market at from five to seven shillings per sack: in which manner this crop returns from less than 5l. to upwards of 20l. per acre.†

* All these operations are done in a few days, or finished within a week from the time when the last peas of the piece of land are gathered.

† The produce of a field of six acres, in June, 1796, that was not at all remarkable for more than a common crop.

Turnips are pulled up by the hand, the top-root cut off, washed, and tied in bunches of ten or twelve in each. They are then sent to market in carts which carry about forty dozen of these bunches, and thus produce from two, to four guineas each load, or from twenty to upwards of fifty pounds per acre.

I think there are about eight thousand acres in four counties* cultivated in this manner, producing, per acre, about fifty pounds. There are perhaps thirteen hundred acres in the vicinity of London, cultivated by the spade in the most perfect manner, which do not possess the advantages which I have before stated to belong to the soil at the Neat Houses, but which are rather under the medium between the soil at the Neat Houses and the land occupied by the farming gardeners, producing an hundred pounds per acre.

There are also about five hundred acres more, which, possessing some of the advantages of the soil at the Neat Houses, hold a medium station between that and the last mentioned thirteen hundred acres, and which, being cultivated in the same manner, produce a return of about one hundred and fifty pounds an acre. This sum is disposed of thus, viz. in labour, 40l.; in teams and dung, 25l.; marketing and expences, 5l.; rent, taxes, tithes, 10l.; together, 80l. leaving for interest of capital, and profit 70l. per acre.

Gardens at the Neat Houses 200 acres at 200l. per acre - - - -	£.40,000
Surry side of the Thames, 500 acres at 150l. -	75,000
Round the outskirts of London in four counties, 1300 acres at 100l. - - -	130,000
Wholly cultivated by the spade, 2000 acres at 120l. 10s. per acre average - -	245,000

		£.	s.	d.
Number, forty eacks, of four bushels each of pods, sent to market and sold from 6s. to 13s. average 7s 6d each .		15	0	0
Haulm, stacked and given to draught horses one ton per acre worth two thirds as much as hay, but say . .		3	0	0
	PRODUCE.			
EXPENCES.	Ploughing once from clover ley . .	0	10	0
	Seed, four bushels at 12s. . .	2	8	0
	Drilling, covering, &c.	0	7	0
	Hoeing twice	0	10	0
	Pollding at 18d. per sack, on forty . .	3	0	0
	Marketing, distance ten miles land carriage	1	5	0

* Middlesex 1800
Surrey 3500
Kent 1700
Essex 7000

8000 acres.

Farming gardeners, their land partly cultivated by the spade, but mostly by the plough, 8000 acres, at 50l. per acre - - - -	400,000
Total 10,000 acres producing annually	£.645,000
To which sum add for fruit gardens	400,000
	£.1,045,000

And the total will shew that the consumption of the metropolis and its environs, in fruits and vegetables, is upwards of one million pounds sterling per annum.

I think these several estimates cannot be too high for the produce raised by the labour of the kitchen-gardeners round London; as they are known to live, and provide as well for their families on five acres of the best ground, nine acres of the second best, or twenty acres of an inferior soil, as the generality of farmers can do on an hundred and fifty, or two hundred acres. This cannot fail of placing the gardeners art in the most favourable point of view; as no other application of land, nor of labour, does, or can supply, so large a surplus revenue towards supporting the non-productive part of the community. The labour and profit of the dealers, the porterage and additional carriage. greatly increase this sum to the consumers; but in what ratio or proportion, I have not been able to learn, though, in the article of turnips, I have known the farming gardener to receive forty-five pounds per acre for that commodity, when the consumer was paying to the retailer after the rate of one hundred and fifty pounds per acre*. In other articles no doubt something like the same proportion holds good. Upon mentioning this to a gardener, he replied, "No, no, not so much as that neither." The same person observed, that the retailers who keep shops, and stands, never buy more than they know they can sell *well*. And therefore both growers and consumers are much indebted for the moderate price, and the consequent increased consumption to the Jack Ass drivers, barrow-women, and other itinerant dealers in these articles, who buy of the gardeners in the market, and hawk through the streets of London, and its environs, vegetables and fruit at a very moderate price.

It is, Sir, to one of the most laborious and ingenious of your correspondents that I am indebted for the curious facts in this paper. If I can form any judgment from the circumstances with which I am acquainted of the spirit by which he is actuated, he will be happy to see the means of extensive circu-

* Four hundred and eighty (forty dozen) branches at 1½, is 3l. a cart load. fifteen such loads per acre is 45l. They were retailed at five pence which is at the rate of 150l. per acre.

laston adopted, that the world may know how nearly connected private emolument is with public improvement; in order that the same activity and intelligence which prevail in the neighbourhood of the capital may be diffused throughout the empire.

I am, Sir, yours, &c.

Chelsea, OLITOR.
April 5, 1804.

ON TITHES. IN ANSWER TO CLERICUS.

To the Editor of the Agricultural Magazine.

SIR,

I CANNOT pretend to be so well *versed* in the customs and regulations, under the Jewish dispensation, as your correspondent "Clericus." I humbly conceive, however, that it is not very difficult to show that these regulations are not obligatory upon the inhabitants of this country in the payment of tithes; and when we compare the turbulent, inglorious reigns and misfortunes of the Princes of the House of Stewart, *who derive their power from acts of parliament,* we cannot but admire the *prudence* of the Clergy in waving all considerations as to the *origin and antiquity* of tithes, and thus letting their claims to them rest solely on legislative regulations. Probably, they conceive they are equally under the guidance of prudence in not acting upon that "dormant right" which Clericus says "exists" to *assess tithes on the increase of the people of England, arising from a commerce, &c. to the amount of, perhaps,* 150 *millions per annum.* Whether your correspondent has correctly stated the rights of the clergy in this and other respects, I cannot say, as I have not lately had leisure to investigate the matter, but I presume, that his statement includes all those "dormant rights" they so frequently allude to, and for not exercising which they extol their *moderation* instead of their *policy.* I am inclined to believe, however, that most of these "dormant rights" would not bear a close investigation in our courts of law. But supposing them well founded, does Clericus really believe that the people of this country, would now suffer them to be exercised? that they are able and willing to bear great additional burdens for the purpose of maintaining the independence and happiness of their country, and the superior rank she holds among the nations of the earth, will not be doubted; but that over and above these and their other burdens, they would submit to so enormous a tax *in addition to the present revenues of the church,* as that mentioned by "Clericus," I cannot believe. And as some men who are esteemed good judges fully agree with A. Meridionalis "that if the *summum jus* (I hate such words as

these in a work devoted to farmers) were exercised with respect to tithes one year, their commutation would follow the next," I should be glad if the clergy were so " pressed" by the " seculars" as to be induced to use the threatened " weapon" —that weapon, Sir, which " Clericus" says " the laws of the country has confided to their hands"—under such circumstances it has been deemed highly probable that the table of the house of commons would be much too small to contain the very numerous petitions which would speedily be presented from all parts of England, *to a commutation of tithes.* Undoubtedly, Sir, such petitions would produce the desired effect, for the people would steadily persevere (if they could once be induced to begin) and all references to the book of Leviticus and the origin of tithes, would be vain. The establishment of England would be easily convinced by the example of upwards of three-fourths of the Christian world, that the interests of the clergy and the sacred cause of religion, could be well upheld without tithes. Indeed, Sir, it would be unnecessary to travel far from home for information on this subject, for the case of the inhabitants of Scotland (whose conduct relative to tithes operates as a severe satire on the supporters of the tithe system of England,) proves the position to be founded on truth. I have said *well upheld,* but I scruple not to say that the Christian religion and the respectability, peace, and opulence of the clergy, might be *much better* supported without tithes, than under our present systems—at page 166 of your fiftieth number, I ventured to recommend a mode of *commutation* which I humbly conceive would effectually promote these desirable purposes; and I hope I have proved that the payment of tithe is highly detrimental to the improvement of the country. Will " Clericus" undertake to prove that the payment of tithe is not greatly prejudicial to such improvement? and if he admits the truth of my position will be convinced that it would be improper or unjust in the legislature to pass an act to *commute* tithes? under such an act the proprietors of tithes would receive the full value of their property, on agriculture, population and national strength would be greatly augmented, and a bar raised to that ill will and litigation which so frequently prevails between pastors and their flocks, I cannot conceive that any well founded objections can be urged against such an exercise of legislative power, and it now seems to be the general opinion that if such power is *not* exercised in commuting tithes, the time is at no great distance when the murmurs of Englishmen will not only be " deep" but " loud." Your correspondent says that the clergy are not " to be deprived" of their present rights " without their consent," and heartily wish that they would " lead the way," but if they will not pursue so advantageous a course,

can it be maintained, that the public good should be sacrificed to the "right" and obstinacy of the tithe holders?—Will "Clericus" say, that our legislators have acted unwisely or unjustly, in promoting the public interest by infringing private property in the operation of canal, road, and numerous other bills, which direct full compensation to be awarded? I beg leave to recommend "Clericus's" letter to the particular notice of Agricola Meridionalis, from whom your readers may reasonably expect a full and masterly discussion of this important subject.

I am, Sir, yours, &c.
AGRICOLA NORTHUMBRIENSIS.

ON THE ABSURDITY OF SCIENTIFIC TERMS IN WORKS DEVOTED TO PRACTICAL FARMING.

To the Editor of the Agricultural Magazine.

SIR, *March* 26, 1804.

I AM sorry to observe, that neither "Hibernicus" nor "Lucus Medicus." nor any of your philosophical friends, hath condescended to inform me concerning the matters I enquired about in your Magazine for November past: they talk of coal and other alkaline salts, and a number of other things, as if they were writing to philosophers. But I must beg leave to remark, that until they pursue the course in instructing the farmers who read your work, which I requested, and fully explain what these substances are, they may just as well send their communications to the lunar regions as to you, *with respect to any good effect they will have in enlightening me and nineteen out of twenty of my brothers of the plough.* Coal a manure, or the food of plants! why good God, Sir, however highly we may think of the general character for wisdom of those whose sentiments we occasionally hear on the subject, and however we may be satisfied that the above correspondents would not sit down to deceive us and write errant nonsense, yet when we almost daily see that the thing we know by the name of coal, is of no utility, if not poisonous to vegetables, what must we think of those men, whom the rest of mankind seem to consider as wise! What must we think, notwithstanding the success of some of them in raising good crops, but that our attention to their doctrines and opinions would be ruinous. This seems to be corroborated by the *dressing* given to some of them by your correspondent R. G. at page 36 of your Magazine for January last; but still I cannot divest myself of the idea, *that there is something in the acquirements of these philosophers which might be rendered useful to the husbandman.* Under this impression, I lately

embraced an opportunity of asking a gentleman, who is generally supposed to understand these matters, what was meant by the coal so much recommended to farmers? His answer was, that it was *carbon* and *diamond,* which left me just as wise as I was when I asked the question; and as he accompanied his answer by a look, as I thought, of contempt, I did not venture to ask an explanation. On the road home, however, my neighbours and I thought that he might just as well have advised us to manure our ground with gold as with diamonds, and the other thing we did not rightly understand, and that he meant to burlesque us. Another person in company, who pretended to be wiser than any of us, said, that he was firmly of opinion, from the *manner* of the gentleman of whom I enquired, that he had merely obtained *a course of words,* and that he was unable satisfactorily to explain what he had frequently mentioned in the conversation of the evening regarding coal, &c. and Mr. Editor, I will begin to suspect that there may be a good deal of this in the way, with your *philosophical* friends, if they do not begin at the right end of their work and explain their letters to us. There is another matter that I will now mention, and on which I doubt not but I will receive through the channel of your work, the opinion of some *practical farmers,* who I hope will mention nothing they do not understand, *or that they are unwilling to explain for the benefit of their brethren and the advantage of mankind.* The subject I allude to, is the quantity of seed necessary for the different kinds of land. Two of your correspondents, Norfolciensis and Northumbriensis, seem to think that bad land should receive more seed than good, at least from what the latter says, as to the plants being at a greater distance from each other (in drilling) on the latter than the former, I suppose this is his opinion. That of the former correspondent seems more fully declared. On this subject, which seems very important, there is a great difference of opinion among farmers, and I have heard many declare their opinion to be quite the reverse of the above; who is right I cannot say, but I should like to see the matter more fully discussed without troubling the above correspondents, whose opinion is already published. I am also anxious to see what Northumbriensis and Meridionalis will say on the remarks "that they have left the horse and ox dispute where they found it, &c." and whether they will be *silent* like Mr. Middleton and the *Berkshire man,* or whether they have resolution to face the keen pen of Norfolciensis, and to lend their aid in forwarding the cause of agriculture by their future assistance to your work

Yours, &c.

A. NOVICE.

REPLY TO AGRICOLA NORTHUMBRIENSIS ON THE NATURE AND DESIGN OF THE COMMUNICATIONS OF AGRICOLA NORFOLCIENSIS.

To the Editor of the Agricultural Magazine.

SIR, *Fakenham, May, 10th* 1804.

I Perceive by your last Number that my unfortunate observations on the question of "horses and oxen," have nettled one of the combatants in an extraordinary degree. I trust you will give me credit, when I assure you, Mr. Editor, that the provoking the resentment of Agricola Northumbriensis was far from being my wish or intention when I wrote them. On looking at them again, I have no reason to think that I either wrote in ridicule or censure of the controversy: I allowed the importance of the question, I merely begged leave to hint, that it had received as full a discussion as the nature of it would admit, and that notwithstanding the weighty arguments, each party had adduced in support of his favourite system, both had remained unconvinced, and that bye-standers had had *enough:* I still assert that the question is undecided, and most probably ever will. The truth appears to be that each system has its advantages and disadvantages, and that the preponderancy of the one over the other is mutual, as situation and soil direct the scale. Let the subject, however, receive all the examination its consequence merits, but let the disputants produce more *matter of fact* and less *argument* in future; and I am sure Chorographus who desires to see the contest revived, will at least agree with me on this point.

I am sorry, Mr. Editor, that the provocation I have received, compels me to take so wide room in your collection of this month; but I must be permitted to ask you, in vindication of my past letters, do I mistake the nature of your publication? Is not the design of it to invite communications from the various quarters, not only of this Island, but of the world, that your readers may gather useful agricultural knowledge of every kind, and be informed of the most excellent modes of tillage practised in every district? Such, Sir, has been the opinion I have formed of it, and under this impression, I have now and then ventured to offer you a description of implements used in this neighbourhood, or the method of wheat and turnip culture pursued in this county; and have sometimes taken the liberty of pointing out an error either of some correspondent of yours, or some author that had fallen into my hands. Of what then, Sir, am I accused? Why of crouding together a variety of topics into one or more letters, asking questions, hurrying from one subject to another, from place to place, forming altogether a farrago of poor stuff, not half so entertaining or instructive as the little scrap of politics which you

give us at the end of each Number, to all which I most humbly plead guilty, and throw myself on the mercy of my judges. Alas, Sir, had I been blest with half the assurance that my Northern Censor possesses, I would have made each topic the subject of a long, very long letter, I would have dispatched *one, two, three* of them as fast after each other as I could have scribbled them; or, had I fortunately conceived but half so good an opinion of my own abilities and knowledge as A. N. certainly entertains with regard to himself, I would never have condescended to ask questions for information-sake of any one. No, Sir, scorning such mean indignity, I would assume the office of preceptor-general to all the agriculturists in Great Britain, I would tell them in the most peremptory stile, that my native country was the only spot in which farmers knew any thing, and that I was the most intelligent of them. Then, Sir, after a little while, I would save you, (I mean if I could write half so readily, or half so *much* as Agricola Northumbriensis) the expence of postage of letters from your numerous correspondents by a very ingenious contrivance: I would undertake to write the *whole* of each magazine myself, and though I should thereby lose the pleasure of contradicting opponents, and *accepting challenges*, of which I am very fond, yet, you know, Sir, I could pay many compliments to myself, which would amply compensate the want of adversaries, and as I should need no instruction, and I like best to read my own composition, I shall have greater satisfaction in paying the eighteen-pence than I ever had when your work consisted of heterogeneous matter, the production of other brains.

But now, unhappily deficient in these high and enviable attainments so conspicuous in A. Northumbriensis, and willing to learn, I gladly have recourse to your miscellany for information, I ask questions with a real design to inform myself, and with the utmost diffidence, if aught I know to which another is a stranger, I offer it to him, sincerely wishing to be of service to the Republic of Agriculture, and daring to believe that if I fail in that point, still are my endeavours to do good entitled to *respect* though not *applause*.

I am, Sir, your's, &c.

AGRICOLA NORFOLCIENSIS.

ON THE FERTILIZING NATURE OF LIME AND DUNG.

To the Editor of the Agricultural Magazine.

SIR, *May* 2, 1804.

HAVING found the study of chemistry so fascinating as to be inconsistent with the necessary attention to business, I determined to relinquish it; my knowledge of that

science is therefore very limited. Notwithstanding this, however, I intended to have addressed you at great length on the ardent and judicious enquiries of "A Novice," which have been overlooked, for several months past, by your *philosophical correspondents.* I am sensible, Mr. Editor, that it would have been greatly beyond my powers to have given complete and satisfactory answers to these enquiries. I entertained hopes however, that my observations would have brought forward so ample a discussion from "Hibernicus" and "Lucas Medicus," &c. as would have been the means of affording full satisfaction not only to "A Novice," but also to many other practical farmers.

The subject having been embraced by another correspondent (D. C.) who will, I hope, be able to do it much greater justice, my sphere is considerably narrowed; and, after stating what I conceive is still necessary to make it somewhat more intelligible, &c. to the mere practical farmer, I shall take the liberty of offering but little more than some remarks on his letter in your last Magazine. I am aware, Sir, that there will be a great diversity of opinion as to the *importance* of an investigation of this nature, *among practical husbandmen,* many of whom consider it highly dangerous to permit the *practice* of the field to rest, in any degree, on the theories and discoveries of the chemical philosopher. For my own part, I am fully satisfied of the vast superiority of *practice,* when founded on the results of well conducted comparative experiments, and accurate observation; I am still, however, of opinion that the researches and discoveries of the "closet" philosopher may be rendered of great service in the improvement of agriculture. Indeed there can be no doubt whatever, but that in other employments as well as the cultivation of the soil, the energies of the human mind are laudably employed in endeavouring *to trace effects to their causes,* and that the attainment of such knowledge, is not only highly gratifying, but often of great utility in leading from injudicious management and applications, to those which are most proper and economical. As most practical farmers are thoroughly acquainted with the modes of calcining limestones, &c. and as D. C. has enlarged in that process, it seems unnecessary to say one word upon that subject. It appears proper, however, to state, (and I hope it will be easily understood by every farmer) that limestones, marble, shells of fish, marl, chalk, &c. are the *calcareous earths* alluded to by him, and that they are found combined with what was formerly called *fixed* air, but what is now denominated *carbonic acid.* This fixt air and the water of composition are expelled during the process of burning, and the weight of these constituents, is, I think, nearly what D. C. has stated, namely half the weight of the stones, &c. in their original state. These burnt stones, &c.

when exposed to the atmosphere (common air) reabsorb moisture and the carbonic acid so greedily, that, within a short time, they are reduced to a powder*. If this powder be exposed to the open air and turned over, it regains, *within a few days,* its portion of carbonic acid, and is then *effete lime,* or more properly *carbonat of lime,* and not materially, if at all, different from the stones, &c. previous to their ignition, except with regard to form and (in some cases) colour. Immediately after burning, where the stones, &c. are deprived of their carbonic acid, the lime is called *quick,* or *caustic.* Hence we see that the lime generally applied in agriculture is, in a considerable degree, *effete,* that in this, as well as in its caustic, state, it may be obtained in a fine powder, and that when applied to the soil in the latter state, it will *soon* become *effete.* If it is more advantageous, therefore, to the farmer, to apply *quick* than *effete,* lime, its advantageous operations must be performed within *a small space of time after its application to the ground.* These operations are stated to effect the destruction of organic matter (vegetables, worms, insects, some grubs, &c.) and their conversion into manure.—*Quick lime* most readily combines with, and destroys, small *oily* seeds, and having *experienced* its injurious effects on turnip seed deposited *one day* after the application of such manure, I am convinced, that it is not so harmless as your correspondent, D. C. has represented, and that it retains a considerable degree of causticity (especially in dry soils and in dry weather) until *two or three days* after it is mixed with the land. Besides its caustic quality, I have long supposed that its power of absorbing moisture from the soil, is, *in dry seasons,* exceedingly detrimental to the growth of turnips. In support of this hypothesis I beg leave to state the following case. In the autumn of 1802, I ploughed six acres of land *similar in soil and condition.* In May and June last it received three ploughings and four acres of it about 160 Winchester bushels of *fallen* lime, per acre. This lime was nearly in a caustic state, it therefore remained two or three days spread upon the surface of the ground. About four or five days after its application, the whole of the ground (which was managed in a similar mode) was dunged with the same kind of dung, and sown with turnip seed also, equal in kind and condition. For many weeks before and after the seed was sown, the weather was uncommonly dry. On the two acres which received no lime, the seed vegetated in the usual time (in such seasons) and the braird was a pretty full one. On the other part of the land,

* The loss of weight sustained by calcination, and the encrease of that of the new burnt stones, &c. may easily be asscertained by weighing before and after each exposure.

however, *though contiguous, and sown on the same day,* it was very *thin,* till rains fell in August, when its *closeness* proved that the seed was not injured, and that the causticity of the lime had been destroyed before it was sown. The turnips on the *two acres* were nearly equal in weight to those on the *four acres,* which I attributed to the lime having increased the avidity of the latter, by absorbing part of the moisture from the soil.

From this and other cases which have occurred in the course of my practice, I conclude, that in such turnip seasons as the last, it is adviseable to withhold *quick lime,* and to apply calcareous matter for the amelioration of the land at some other period within the course of crops.

I have never remarked that *effete* lime which had imbibed a very considerable quantity of moisture previous to its application in the turnip season, proved detrimental to the growth of that plant. I am far, however, from recommending such an absorption of water as would prevent its being applied in *powder,* for when it becomes so wet as to be almost fit for mortar, it cannot be *equally* spread over the land, and more of it is necessary (per acre) to produce a given effect. What your correspondent D. C. has stated respecting the fertilizing principle of lime, will not, as far as I am able to judge, be deemed satisfactory. Its *mechanical* effects in breaking the cohesion of strong and increasing that of light sandy soils, *and thus fertilizing both,* seem almost universally admitted, both by practical farmers and scientific agriculturists. But with regard to its other operations, which philosophers generally deem the most important, and which, perhaps, are extremely difficult to explain, there is, evidently much difference of opinion. After stating the facility with which lime imbibes water, D. C. says, "it becomes slacked, it crumbles and magnifies its surface by these means to the utmost possible extent, in order to impart to the womb of nature all its fructifying principles." Perhaps this, *as far as it goes,* may be very good, and he may, perhaps, build upon it a very plausible theory; but, Sir, I must inform him, that much more than he has yet stated, appears *necessary.*

He next says, "that the effect of lime is to combine with, and destroy the organization of substances, by forming a sope with their fat parts. This shews (says he) the utility of a mixture of dung with lime; for by the assistance of this *caustic* principle, the dung is reduced into a coal, and the carbonaceous ingredient which we are now to understand to be the substantial food of vegetable life, is thus abundantly supplied."

That the alkaline substances, (potash, &c.) and lime will combine with oleagenous matter and form a sope, is pretty generally known; how far, however, this is analagous to the

formation of coal by mixtures of dung and lime, will require much elucidation to be rendered intelligible to the practical farmers; and perhaps philosophy itself, in the hands of the ingenious, would afford some well grounded objections to such analogy. But waving this part of the subject, permit me now to bring your friend's theory to the test of *experience*. This pillar of truth, Mr. Editor, has satisfied much the greatest number of accurate and attentive husbandmen, that one part of what he has stated, namely, that greater fertility is promoted by the application of dung and lime, than by that of dung or lime *only*, is well founded; but it has also convinced them, that *carbonat of lime* is equal, if not superior, to *quick lime*, in conjunction with dung, for increasing the fertility of the ground.

Now, Sir, as your friend D. C. has imputed the fertilizing nature of lime, when mixed with dung in the soil, to its converting the latter into a coal by its "*caustic principle*," I humbly conceive that his theory may be easily overthrown; and I should be glad if he, and your other ingenious philosophical correspondents, L. M. Hibernicus, &c. would endeavour to account for this increase of fertility, in a more satisfactory manner. I hope they will allow me to remind them how necessary it is, in the investigation, to advert to the *very short* interval between the time of applying *quick lime* to the soil, and that of its becoming *effete* or mild calcareous earth; and to ask whether any of them can assert, *from accurate experiment*, that two to four or five days after *quick lime* had been applied in the usual manner, they have, in any case, found it otherwise than *effete*?

As Hassanfraz, Kirwan, and a long list of able philosophers, who have laudably endeavoured to ameliorate agriculture by the application of chemical principles, have asserted that carbon is an *essential* ingredient in the food of all vegetables; and as this opinion seems principally founded on their analysis affording more of that than, perhaps, any other matter, I presume the above correspondents *who are advocates for this theory*, will not deem it altogether impertinent, to ask whether *proper* experiments on animals and their food have demonstrated that the chief constituent part of the latter, is also an analysis, found to be that of the former? and whether, with respect to the food of plants, they reason analogically? It would be improper, in a person so little skilled in chemistry as I am, to remind these correspondents of the various combinations, decompositions, &c. which may, perhaps, render the *proportions* of matter in the food, different from those in the thing fed. They would probably shorten the enquiry by stating the rapid growth of different vegetables in matter impreg-

nated with great quantities of carbonic acid, &c. as demonstrative of the truth of their principles.

Admitting then that carbon is the essential and principal ingredient in the food of vegetables, I shall now venture to advance an hypothesis with respect to the *fertilizing principle of lime*, which, upon the whole, seems more elegant and satisfactory than any other I have seen :—it is that which I have had the pleasure of hearing from the mouth of an ingenious and able chemical philosopher, Mr. John Stancliff. (I believe he is now Dr. Stancliff, of Caius College, Cambridge.)

In the first place, however, it seems necessary to observe, that lime possesses a power of combining with carbonic acid in two proportions; that in one of them it is insoluble in water, and that in another it again becomes soluble. For instance, if mephitic water (which contains carbonic acid gas) be added to lime water, the mixture will appear turbid, and the carbonated lime will fall towards the bottom. But if mephitic water, with a still greater quantity of carbonic acid, be added, the mixture will not become turbid, and that which has already been rendered turbid, will, by such addition, become transparent. Mr. Stancliff supposed "that the basis of the food of plants (carbon) was best presented in the form of carbonic acid gas, and that this is most conveniently applied to the inhaling vessels of the plants in the form of this redundant quantity of carbonic acid in the lime. The lime then he supposed to act thus: by absorbing a superabundant quantity of carbonic gas from the atmosphere, and especially from the decomposing vegetable matter in the manure, (which it in the mean time, probably helps to decompose), it becomes soluble, and capable of closer application to the vessels of the plants, to which giving out its superabundant gas, it becomes again insoluble; and so by perpetual reabsorptions and resolutions, it is capable of continuing its useful action of conveying food to the growing vegetable for an indefinite length of time."

Were I convinced that the lime in the land receives this "superabundant quantity of carbonic gas," and fully informed as to the *reason* why that valuable manure is so much more advantageous in fresh lands, than in those which have been long in aration, probably this hypothesis would be more satisfactory to me: and I should not have entertained such doubts relative to that of D. C. if he had not imputed the beneficial effects of lime applied with dung, to "its caustic principle," for I must repeat *that similar effects result from the application of effete lime.*

An ingenious hypothesis was advanced by Dr. Hunter about fifteen years ago. He supposed oil the chief ingredient in the food of plants, and how far this is reconcileable to the doctrines of Hassenfraz, Kirwan, &c. &c. I leave to better

judges; to Lucas Medicus, and others, who can analyse oils, and perhaps, prove that they contain from 50 to 79 per cent. of carbonaceous matter. The Doctor supposed that lime was advantageous in altering the cohesion of oils, and in rendering oils miscible with water, which he considered as the vehicle of nourishment. It should be remarked, however, that lime will not render oil and water miscible without *agitation*, and doubts will be entertained whether that of the plough and harrow is sufficient. If I am not mistaken, some of the advocates of this theory have endeavoured to account for the superior advantages of applying lime with dung, by stating that the former incorporates the *oil* of the latter with water, by which it is *then* carried into the mouths of the roots and fibres of plants. I have been informed, however, that chemical analyses have proved that dungs and soils contain but very little, if any, oil. Be this as it may, *practice* has upheld what Dr. Hunter has stated relative to the fertilizing powers of different kinds of dung, namely, that of all the different sorts used by farmers in general; those of corn fed horses and *fat* cattle are the most enriching, and that the more oil the food of animals contains, the richer their dung will prove.

On this letter I shall be glad to read the remarks of your philosophical friends, who will doubtless point out and correct the errors in the chemical matter I have ventured to advance, but in doing this, and applying the principles of that science to agriculture, I particularly request that they will divest the discussion as much as possible of *technical terms*, or that they will explain them in such a manner as will render them intelligible to me and my brethren of the plough. If these philosophers will condescend to pursue a plan of this nature on the one hand, while my brother farmers assist me in bringing their theories and principles to the test of experience on the other, we may rationally entertain some hopes that those discoveries of philosophy which can be rendered advantageous to agriculture, will be disseminated among, *and understood by*, those whose pursuits will carry them from your useful pages, "and the closets of the recluse philosopher," to the improvement of the field. Such a plan, Mr. Editor, it is presumed, would be gratifying and *useful*, and when my avocations will permit, it shall receive the support of my humble abilities.

I am, Sir, yours, &c.

AGRICOLA NORTHUMBRIENSIS.

P. S. With respect to making experiments and conducting them on a *small scale*, till the superiority of any particular mode of management is ascertained, I think "A Novice" is perfectly right; and not only in acting upon the knowledge

he may gain from the letters of your philosphical friends, but from the information of practical farmers, as to any *new* mode of management, I would advise him to proceed *at first* upon a *small scale*. Experiments to so small an extent, instead of being dangerous and expensive, appear to me the safest mode of avoiding unprofitable and hazardous practice. They are, however, *though within the reach of every farmer*, much neglected.

A. N.

THE PRESENT STATE OF HUSBANDRY IN BENGAL.

(Continued from our last Number.)

THE succession of crops which engages so much the attention of enlightened cultivators in Europe, and on which principally rests the success of a well conducted husbandry, is not understood in India. A course extending beyond the year has never been dreamt of by a Bengal farmer: in the succession of crops within the year he is guided to no choice of an article adapted to restore the land impoverished by a former crop. His attention being fixed on white corn, other cultivation only employs the intervals of the leisure which the season of white corn allow to the land and to labour; with an exception, however, to sugar, silk, and other valuable productions, to which corn is secondary; but which grown on appropriate lands belong not to the consideration of the course of crops. In this which is not regulated by the better consideration than convenience of time, it would be superfluous to specify the different courses which occur in practice. As little would it tend to any useful purpose to develope the various combinations of different articles grown together on the same field or in the stubble of a former harvest, or sown for a future crop, before the preceding harvest.

A competent notion may be formed of this practice by conceiving a farmer eager to obtain the utmost possible produce from his land, without any consideration for the impoverishment of the soil; able to command at any season, some article suited to the time, and not content to use his field so soon as the harvest makes room for succession, but anticipating the vacancy or obtaining a crop, a quick vegetation during the first progress of a flower plant.

It may be judged that his avidity disappoints itself, both as the several articles deprive each other of the nourishment which would have afforded a more abundant crop of either separately: and as the land impoverished, makes bad returns for the labour and seed. In most situations the land racked in this husbandry soon requires time to recruit; the Indian allows it a lay, but never a fallow. This would be well judged if the management of

stock gave to the lay all the benefit which belongs to this method; and if the inefficacy of the plough which must be preceded by the spade, did not greatly increase the expence of opening the old lays.

The abuse of dung employed for fuel instead of being applied to manure, must have concealed from the husbandmen the benefit of well managed stock: else in his practice of pasturing his cattle in the stubble of his harvest, and in the fields of which the crop has failed, he could not omit to notice the advantage of a farm well stocked. For want of perceiving this benefit, the cattle for labour and subsistence are mostly pastured on small commons and other pasturage, intermixed with arable land, or fed at home on straw or cut grass; and the cattle for breeding and for the dairy are grazed in numerous herds on the forests and downs. Wherever fed, the dung is carefully collected for fuel.

Cultivation suffering very considerably by the trespasses of cattle, through the wilful neglect of the herdsmen, it is a matter of surprise that the enclosures are so much neglected. For a reason already mentioned, cattle cannot be left at night unattended: but in the present practice buffaloes only are grazed at night, cows and oxen are pastured in the day. For these enclosures would be valuable, and even for buffaloes would not be useless, and the farmer would be well rewarded, by suffering the cattle to fertilise all his arable land, instead of restricting the use of manure to sugar cane, mulberry, tobacco, poppy, &c.

Few lands unassisted, are sufficiently fertile to raise these productions; the husbandman has yeilded to the necessity of manuring them. On the management of it, little occurs for particular notice in this, except to mention that khully or oil cake is occasionally used as manure for the sugar cane. A course of experiments would be requisite to ascertain whether the methods actually employed, be better suited to the soil and climate than others, which might be, or have been, suggested, from the practice of other countries, or from the varying practice of different parts of Bengal.

For a similar reason the consideration of other produce, (of which the culture is now general, or which might be generally diffused, as cotton, indigo, arnotto, madder) may also be differed. Enough has been said to shew that husbandry in Bengal admits of much improvement, or rather that the art is in its infancy.

An ignorant husbandry exhausts the land, neglecting the obvious means of maintaining its fertility, and of reaping immediate profit from the operations which might restore it; rude implements, inadequate for the purpose for which they are formed, and requiring much superfluous labour; this again ill

divided, and of consequence employed disadvantageously, call for amendment.

The simple tools which the Indian employs in every art, are so coarse, and apparently so inadequate; that it creates surprise he should ever effect this undertaking, but the long continuance of feeble efforts accomplishes (and mostly well) what, compared to the means, appears impracticable, habituated to observe his success, I cannot cease to wonder at the simplicity of his process, contrasting it to the mechanism employed in Europe. But it is not necessary that the complicated models of Europe should be copied in India, a passion for the contrivances of ingenuity has adopted intricate machinery for simple operations. The economy of labour in many cases justifies the practice, whether an effect be produced at a smaller expence, or more be performed at proportionate expence, but with less labour. In Bengal the value of money and the cheapness of labour would render it absurd to propose costly machinery, but is no objection to simple improvements, which adding little to the cost of the implements, would fit them to perform more effectually and with less labour, the object undertaken. The plough is among the implements which stand most in need of such improvement. The readiness with which he can turn from the occupation in which he has been accustomed, to another branch of the same art, or to a new occupation characteristic. The success of his earliest efforts in a novel employment, is daily remarked with surprise. It is not so much a proof of the ingenuity and ready conception, as the effect of slow and patient imitation, assisted by a versitile habit, necessarily acquired, where the diversion of labour is imperfect, and though its performance may surpass expectation, it must ever fall short of expeditious and finished performances of the expert mechanic, whose skill is formed by constant practice in a more circumscribed occupation.

The want of capital, employed in manufactures and agriculture, prevents, in Bengal, the division of labour. Every manufacturer, every artist, working on his own account, conducts the whole process of his art from the formation of his tools to the sale of his production. Unable to wait the market, or anticipate its demand, he can only follow his regular occupation, as immediately called to it by the wants of his neighbours. In the intervals he must apply to some other employment in immediate request, and the labours of agriculture, ever wanted, are the general resource. The mechanic finding himself as fully competent as the constant cultivator, to the mangement of common husbandry, is not discouraged from undertaking it at his own risk. Every labourer, every artizan, who has frequent occasion to recur to the labours of the field becomes a tenant. Such farmers are ill qualified to plan or conduct a well

judged course of husbandry, and are idly employed, to the great waste of useful time, in carrying to market the paltry produce of their petty farms.

If Bengal had a capital in the hands of enterprising proprietors, who employed it in husbandry, manufactures, and internal commerce, these arts would be improved? and, with greater and better productions from the same labour, the situation of the labourers would be less precarious and more affluent; although the greatest part of the profit might rest with the owners of the capital.

Capital is certainly not less deficient to the internal commerce of Bengal than to manufactures and agriculture. The small capitals now employed require large returns. Blessed as Bengal is beyond any country, with an extensive internal navigation, the want of roads, though a great evil, would not sufficiently account for the very limited intercourse of commerce at present existing. But the small capitals which require great profits explain the want of intercourse.

This conspires with the deficiency of capital in manufactures and husbandry to depress Bengal. For in agriculture particularly, which is the basis of prosperity to a country, the want of capital is a bar to its improvement. Under a system of government which neither drained its wealth nor curbed rational enterprise, Bengal could not fail to revive; the employment of capital in the country would introduce large farms, and from these would flow every improvement wanted; and which must naturally extend from husbandry into every branch of science and commerce.

Without capital and enterprise, improvement can never be obtained. Precept will never inculcate a better husbandry on the humble and unenlightened peasant. It could not without example generally engage a wealthier and better informed class. Positive institutions would be of as little avail. The legislature cannot direct the judgment of his subject, his business is only to be careful lest his regulations disturb them in the pursuit of their true interests.

In Bengal, where the revenue of the state has had the form of land-rent, the management of finances has a more immediate influence on agriculture than any other part of the administration. The system which has been adopted, of withdrawing from direct interference with the occupants, and leaving them to tenant from landlords, will contribute more than any of the remediary regulations which have been promulgated, to abuses and evils which had rendered the situation of the cultivator precarious. But not yet having produced its effect, it requires us to review the system of finances, under which abuses had grown, and placed the occupant in a precarious situation, as discouraging to agriculture as any circumstance yet

noticed: for without an ascertained interest for a sufficient period, no person could have an inducement to venture a capital in husbandry.

I am, Sir, yours, &c.

April 2, 1804.

ASIATICUS.

ON THE INCONVENIENCE OF ABSTRUSE WRITING ON RURAL AFFAIRS.

To the Editor of the Agricultural Magazine.

SIR, *April* 24, 1804.

HAVING frequently expressed to others as well as to you, my extreme anxiety to be instructed as to various substances named by philosophical agriculturists, *carbon, alkaline salts, effete lime,* &c. a friend supplied me, a few days after I had wrote to you, with three publications on manures; one by Dr. Fordyce, one by Mr. Kirwan, and one by the Earl of Dundonald. But alas! Sir, they are not much more instructive to me than if they had been written in Greek or Hebrew —*languages I do not understand*—for they contain so much about oxygen, azot, carbonic acid, vitriolic acid, sulphuric acid, phosphoric acid, hydrogen, and Lord knows how many other substances, with names equally unintelligible, that I soon threw them away in a rage, and wrote to my friend, who is now at a great distance, for a *key* to them. I have not yet received his answer. From what I have seen in these books, however, I think, if I could write the English language as as well as Hibernicus and Lucas Medicus, I could furnish you with papers for your Magazine, as useful as theirs. Such papers would, no doubt, cut a great figure in your publication, and I should then pass for *a learned philosophical agriculturist,* capable of raising vast supplies of manures from *air* and of "causing *even three* blades of grass to grow where only one grew before." But then, Sir, if any poor novice like myself should unfortunately ask what I meant by these terms, I should be quite unable to give any satisfactory explanation, and my communications, like those of the correspondents just mentioned, would be of no utility whatever, *to the practical farmer*; and as I find by your title page that your work is devoted "to farmers and rural affairs," I should consider your conduct exceeding commendable if you refused them a place, unless they were accompanied with such explanations as had been requested, or such as would render them useful. Whether Hibernicus and Lucas Medicus, can satisfactorily explain their letters in your Magazine I do not know, but, as I have already hinted, I cannot but entertain some doubts.

If they can explain them, why have they not done so? I am sure that most of the practical farmers who read your work,

will think my enquiries necessary; and if they cannot be answered, for God's sake, Sir, let us have something that we understand, in lieu of philosophical matter. Try if you can get Northumbriensis and Meridionalis to yoke their horses and oxen again, as soon as their *bones* are covered with new flesh after the "dreadful contest" in which they have been engaged, for that subject is not only important, but well understood by farmers, and some of your readers are of opinion that the dispute has not been brought to a proper conclusion. I have just received your last Magazine, and observing in its "contents" an answer to A Novice, I hastened to read it, and beg to thank your correspondent D. C. particularly for the concluding part of his letter.

But, "Uncertainty" still remains on my mind, and therefore I must beg leave to trouble him for a *full* definition of carbon or coal; for though I have again read Hibernicus's letter, I do not yet understand what that matter is.—Surely it cannot be *pitcoal*, for that is deemed poisonous to vegetables; and if it be what is obtained by burning vegetables, it cannot, I conceive, produce all the wonderful effects imputed to the carbon so much extolled; therefore I suppose *this* is some other kind of matter. D. C. has kindly addressed me as to "calcareous matter and fixed air," but I know not what they are. He has also stated a good deal relative to lime, (which we obtain by burning lime-stone, and leading it out from the lime kiln to fall into a powder,) and used the words *quick lime*, which, I presume, is merely *powder of lime*. But many farmers maintain that *effete lime* is best. Now I expressed a wish to be informed what this kind of lime is, and I am sorry that your obliging friend, D. C. has not given a definition of this substance.

He says, "A Novice considers that the high sounding words of philosophy*, and the hard working deeds of agriculture, are to be expected in the same individual."—And most assuredly, Sir, I do expect such an union, or what would be the use of philosophy to the practical farmer? I apprehend that he has not *attentively* read my letter he refers to; if he had, he would have seen by the superior management I noticed in some *philosophical farmers*, that that union actually existed in some parts of the country, and that *the superiority of their crops*, was my principal inducement for enquiring, with such avidity, as to that species of knowledge on which their management is founded.

Yours, &c.

A NOVICE.

* I mean real philosophical knowledge.

P. S. I beg D. C. will beleive that I do not "undervalue the philosopher, because he devotes his hours to inventive speculation in his closet, &c." My *anxious* wish is, to reap benefit from his researches. I must, however, censure those who publish what they *cannot*, or *will not* explain in a full and intelligible manner, to the *practical farmer*, for whose instruction they profess to write.

ON THE CULTURE OF TURNIPS.

To the Editor of the Agricultural Magazine.

SIR, *May* 12, 1804.

HAVING in the 53d and 55th Numbers of your Magazine, enlarged on the cultivation of turnips, I shall only observe to your intelligent correspondent, P. J. (who, in your March Number says, "I will not, however, yet give up the claim of us Norfolk farmers to superior management of the turnip crop,") that I conceive the mode of culture on raised ridges, or drills, with intervals of about 26 inches—a mode which has for many years been almost universally pursued in Northumberland, Roxburgshire, Berwickshire, and East Lothian, is much superior to any other hitherto pursued in this kingdom; that his remarks in former letters seem more in favour of, than against that mode, that my arguments stand unrefuted, and that his statement as to the superiority of the Norfolk farmers, is *only a postulatum*. But when I contend for the superiority of this mode of raising turnips, I cannot go so far as Mr. Lawrence, who has asserted that "to drill is to *double* the crop;" for the greatest increase of weight it has enabled me to obtain *in accurate comparative practice*, is from one fourth to one third.

Your correspondent having used the words "*management* of the turnip crop," probably he includes the modes of *consuming* as well as *cultivating* that valuable root; I shall therefore offer a few remarks on the former subject.

With respect to the manner of consuming turnips with sheep in this district, I have only to add to what is stated at page 180 of your Magazine for March, that on medium loams upon which it is not adviseable to fold in winter, the same mode of drawing eight and leaving eight drills alternately, is pursued, that if the succeeding weather towards spring, proves favourable, the sheep are *then* folded upon the *whole* of the ground; that the turnips which are carried off to this species of live stock are, almost always, taken to such situations as require manuring, provided they are not so wet or exposed, as to retard the improvement of the sheep, and that in some situa-

tions Swedish turnips in particular, are cut into small pieces, by machines made for that purpose, and given to the sheep in long mangers.

Nearly all the turnips which in this quarter of the country are given to cattle, are carried to hovels and fold yards, and as these have proper covers, and apertures for admitting air, according to circumstances, the beasts may be kept dry and moderately warm, and the turnips consumed in a perfectly clean state.

In Norfolk where great quantities of turnips should be consumed with sheep, they are nearly all used for bullocks, and these cattle are not only, almost all, kept abroad in the fields during winter, but frequently on *stubbles, poaching (sometimes) knee deep.* In these situations, vast quantities of straw are scattered to them in the fields and behind hedges; and I presume that experienced men will not hesitate a moment in deciding in favour of the northward mode of feeding, not only with respect to accelerating the improvement of the animals, but to increasing the quantity of manure.

To the latter subject I beg leave *particularly* to request the attention of your philosophical correspondents. These enlightened Gentlemen will readily perceive, in common with practical husbandmen, that the Norfolk management* will not only greatly diminish the *quantity*, but injure the *quality* of the manure, and therefore I hope they will step forward to my aid, and *expatiate* on the fertilizing process of fermentation, as well as the advantages of a mixture of animal and vegetable matter in dunghills, and thus show some connection between agriculture and chemistry. In this instance, they will, I hope, apply their knowledge with as much effect as "Chorographus"† has done in his observations on *the course of crops in a great part of Norfolk.* In this course P. J. has offered a sort of *apology*, and it must be allowed, that he has stated as much in palliation of his neighbours, as the case would permit. But he is too enlightened, Sir, to believe that it will be received by practical or scientific men, as a *complete* justification of the management so ably, but delicately, discussed by Chorographus. It appears to me, that the subject for consideration is not, whether the farmers who pursue that course are wealthy, (for that may arise from low ranks and some other favourable circumstances,) but simply this: whether the

* Under such management the dung is not so enriching and useful as that raised in fold yards, and afterwards fermented in large dunghills.

† Pray inform this gentleman that I do not think it right to draw up a paper on the agriculture of Northumberland. He has stated, that owing to his detention at the lakes in Westmoreland and Cumberland, his information is not so extensive and correct as it otherwise would have been. After I see his paper, I shall endeavour to supply his want of *local* knowledge.

fertility, &c. they now experience could be increased under a different rotation of crops. I shall be glad to see P. J's opinion on preserving our turnip crops from frost.

Here I intended to close this letter, but having, a few hours ago, received your last Magazine, I hasten to answer the judicious enquiries of Agricola Norfolciensis, who has therein ingenuously acknowledged the superiority of our northern mode of cultivating turnips.

About fifteen to twenty years ago, when I practised that mode at a considerable distance from the Scotish borders, and with labourers not accustomed to that management, I experienced difficulties similar to those mentioned by A. N. Stimulated, however, by information I could fully depend upon, and by the vast crops obtained (on both sides of the Tweed) under that system, I persevered, and surmounted them. In all cases, but especially in such as differ so much from the common mode as that of cultivating turnips on raised ridges, the prejudices of farmers, and the habits and aukwardness of labourers, are great obstacles to improvement, and sometimes the most perfect implements are so much mismanaged as to produce effects sufficient to shake the resolution of the most determined and patient farmers. Soon after I commenced the culture of turnips on raised drills, I overheard my honest ploughman gravely prognosticate my ruin if I persevered in using those d——d "gim cranks," the drill machines, &c. which they *sapiently* pronounced unfit for any useful purpose except that of "pleasing the bairns," and for a considerable time I suspected, that their extreme dislike to them was the principal cause of their being so frequently broken, &c. In such cases the most admirable plan is for the farmer himself to obtain such instruction as to be master of the different operations, or to obtain servants who are *thoroughly* acquainted with them, but as the drilling of corn has been long practised in the southern counties, that mode of cultivating turnips will be the more readily accomplished in those parts.

When the dung is not in a very rotten state, it is put out of the dung cart into the open furrow in a quantity sufficient to manure that and two open spaces on each side, the horse moving quickly in that in the middle, and the wheels in the two outermost open furrows; two rows of dung heaps will therefore manure ten drills which are from about seven to eight yards broad.

To expedite the *equal* spreading of manure over as great a breadth of land, would require two rows of dung heaps in the broadcast husbandry, in which they are not more quickly laid on than in the drill mode under consideration. Expert women, girls, and boys, can spread it (with forks) into the open

furrows at as small an expence per acre as in any other mode. When the dung is short, the rows of heaps are laid from the carts for only *three* drills. Shovels and spades are then used to spread it *equally*, and it is almost unnecessary to say, that manure in such a state requires more labour in spreading than larger dung, *in any mode of culture*. It is important to know that in our mode of drilling, *all* the dung, even in a long state, may be easily covered in, that it is laid close to the roots of the plants, and that less of it will suffice than upon an even surface. The latter mode of ploughing is more expeditious than drilling, if the drills are raised and split with common ploughs, but not if these operations are performed with double breasted ploughs, held by strong and expert ploughmen.

The rolling immediately before and after the seed is sown, reduces the height of the drills very considerably, and in some lands they are very little above the level of the intervals. Upon all soils these intervals are much filled with earth by the first hand and horse hoeing, and the surface of the ground is then pretty even, in which state it may be continued by using the scuffler instead of the double breasted plough, in the second horse-hoeing. This will in a great degree obviate the objections which have been urged against raised drills with respect to the turnips being more exposed to frost than when the surface of the ground is flat. Practice, however, shews the futility of these objections; for much the greatest number of agriculturists in this quarter of the country, persevere in laying the earth close up to the turnips with the double breasted plough in the last horse hoeing. Last year I managed some in *each way*, which were consumed in March last; and I could discover no difference in the effects of frost. Accurate experiments are, I apprehend, wanting to determine whether *good crops* of drilled or Broadcast turnips sustain the greatest injury from such weather; various opinions are therefore entertained on that subject. In *good crops*, under each mode of culture, *sown and consumed at the same time*. I have not been able to discover any material difference, and am inclined to think that large and middling sized turnips are generally injured in an equal degree. It is clear, however, that *very small* turnips are always found in the soundest state after severe frosts. Were I even *convinced* that frost is more injurious to turnips on our drills than to those obtained by keeping the surface of the ground perfectly flat, I would still pursue our northern mode of cultivation, under a firm conviction that the balance in the scale of advantages and disadvantages, would be *greatly* in its favour. Besides it should be recollected that very destructive frosts do not prevail above one year in three or four, and that we seldom perceive their baneful effects until about the middle of February, by which time much the greatest part of

our best turnips is generally consumed. I have sown Swedish turnips for many years past, at various periods of the season, from May 16, till about the middle of June, and have never been able to obtain them of a size nearly so large as that of the American turnip, and therefore in a mode of cultivation where the weight of the crop necessarily depends much more on an *increase of size* than on the *number* of the turnips, I should not deem that a proper kind for the purpose of an accurate comparative experiment between the drill and broad cast husbandry.

It will give me much pleasure to communicate any further particulars relative to our mode of cultivation, drill machines, &c. which *any* of your correspondents may request. The minute description of an addition made to the drill machine, in the last letter of Agricola Norfolciensis, and in several other circumstances of a similar nature, which have been communicated by him and P. J. entitle these valuable correspondents in particular, to *minute* information, in return for such favours. Indeed it is only by pursuing a plan of this nature, that the discoveries and improvements of particular districts can be speedily known in most other parts of the country, and that the vast importance of your publication can be acknowledged by practical husbandmen.

I am, Sir, yours, &c.
AGRICOLA NORTHUMBRIENSIS.

P. S. It is but justice to Mr. Lawrence, to state, that when I reckoned his sentiments too sanguine relative to the advantages of drilling turnips, I had in contemplation none but *fresh* soils—*soils in the most proper state for the growth of that root;* and that it had escaped my recollection, that the old beaten and unprofitable track of our *great grand fathers* was still followed in several parts of the country. I now, however, recollect, that about sixteen years ago I saw turnips cultivated *both in our drill and Broadcast modes,* on some middling turnip land which had been upwards of twenty years in tillage. From the result, I am strongly of opinion that on such soils Mr. Lawrences's expectations would not be disappointed.

A. N.

THE ART OF REARING DOMESTIC FOWLS AFTER HAVING BEEN HATCHED BY ARTIFICIAL HEAT.

To the Editor of the Agricultural Magazine.

Sir,

IN your last Number you were kind enough to insert my communication on the method of hatching fowls; the present paper is devoted to the expedients for rearing them

after they have been so artificially produced. It is obvious, that the hens of the farm-yard will not be sufficient to nurture and protect the quantity of poultry which would be generated under such circumstances. We need not consult the writings of Gesnar, Willoughby, and others, on rural œconomy, as the only exclusive means of gaining information on this subject. Capons have been taught to lead about, watch over, keep warm, and cherish the chickens entrusted to their protection. Monsieur Reaumur has seen 200 chickens thus attended to by three or four capons, which clucked to call their adopted children around them, and when they discovered any delicate nourishment, redoubled the cry of invitation. Even the male species possessed of all their natural powers for sensual gratification, have been found to accommodate themselves to this family duty; and when allured to dalliance and enjoyment, they have satisfied the sensations of the moment, and instantly afterwards have returned to the same occupation. Every industrious housewife who has been accustomed to take lessons on natural history under her own porch, will have frequently observed the docility of this proud and generous ornament of her premises.

Monsieur Reaumur was, however, not satisfied with confining himself to such a resource in an object he considered of so much magnitude and importance. As he hatched the little animal, so he endeavoured to cherish it without the assistance of the parent. He contrived small boxes which he lined with furs, to which the chickens might conveniently retire, because the heat of the rooms in which they were collected, could not be rendered equal, and because they occasionally wanted a substitute for the friendly warmth of the maternal bird.

In fine summer days when the first debility of infancy is overcome, they may be exposed to the open air of a court yard; they should, however, be put under large coops on the warm green sward, with liberty however, from the width of of the interstices, to make occasional sallies for the improvement of their strength. There is no reason to apprehend that they will make any long and dangerous excursions, for they are naturally gregarious. The good housewife has often often observed, that if any of her little feathered flock from superior force or courage, has ventured to play truant beyond the usual boundary, he presently shews by his cries that he is uneasy, seems to listen with great anxiety, and soon discovers the warm mansion she has provided, where he cheerfully joins his companions.

The food to be administered is a material consideration. Chickens are usually more than a day before they take food after extrication from the shell, and the reason is, because they

have imbibed a large portion of the yolk of the egg which remains for some time undigested, and by which they are subsequently nourished. M. Reaumur suffered the period of a day to elapse therefore before he gave food; he then supplied them with a few crumbs of bread, and after some days, he mixed these with a little millet, and soon afterwards they would pick up insects and vegetable diet for themselves.

A little attention to the anatomy of the animal, will shew the small quantity of food they require in this early state. A chicken when first hatched, has the crop or first stomach (formed to supply the want of teeth and mastication in birds,) of the size only of a pea; it is a few weeks before it attains the size of a cherry. With these minute organs, a very trifling portion of nourishment can be admitted.

I will conclude the short remarks on the subject of food, with a single observation, for the sake of œconomy. M. Reaumur found boiling the grain advantageous, and he considered the poultry subisted on nearly half the quantity after this preparation.

The labour attending the scheme here recommended, is very trifling. A single person will have time enough to look after a great number of stoves and an immense flock of the live produce.

Perhaps an employment of this kind is more adapted for villagers than for farmers, and more suited to the neighbourhood of great towns and capitals, on account of the saving of the carriage, and the price which the luxury and opulence of such places will afford for this delicacy of the table. Oxen and sheep may be driven by one person many hundred miles, and may be provided for in their progress at a very small charge; the conveyance of poultry of this kind is attended with very serious expence.

Perhaps the most convenient time for this artificial generation, is that when the birds leave off setting, and the most profitable certainly in the vicinity of great cities: but in this method of hatching, you may exceed the established œconomy of nature, for by the fit regulation of heat in the stoves, you may hatch at all times of the year not only poulets, but turkey poults, ducklings, and green geese, may at any season gratify the palate of the epicure. By due care, the eggs laid at the end of September will do for the stoves of December. If at any time a scarcity arise, it will be for one month, until the hens lay again, the end of January.

This subject in one point of view, is of public importance. Eggs both in town and country, are no inconsiderable part of the national subsistence, and after the scarcity we had so much reason to apprehend, to enlarge the means of subsist-

ence, will appear no small benefit to the statesman, the patriot, and the friend of humanity.

The interruption to laying eggs, is not only from the coldness of the season, but from the periodical moulting. M. Reaumur proposed to accelerate the time of moulting, by plucking away gradually a considerable part of their feathers.

The preservation of eggs is easily effected to any distance of time by a varnish; even smearing the shells with a little butter, or any kind of unctuous matter, will answer this useful purpose. The reason will appear clear to those of your readers who have inspected the paper in the last number. It has been shewn, that an atmosphere of its own surrounds every egg, and that no procreative effect is produced without this humidity which is constantly exhaled. It seems needless to observe, that no egg intended for the stoves should be thus treated. Barren eggs, or those of hens which have never been impregnated by the male, will never become rotten, but the treading of a cock will make all the eggs fruitful for a month subsequent to the act.

There are some philosophical discoveries which are connected with these experiments. It has excited much surprise among the students in natural history, when they have observed the general agitation in a poultry yard on the occasion of a bird of prey flying, scarcely within the region of observetion, over their domestic premises, and it has been doubted, whether this phenomenon were the result of instinct or imitation. Chickens produced in the way we have described, having no communication with the parent bird, would remove this uncertainty.

If we found chaffinches, sparrows, and other small birds, nurtured artificially, building their nests at the usual time, under the circumstances peculiar to each of the species, much of the difficulty in which philosophers have been involved on the wonders of the intellectual world would be relieved, and what has required the investigation of centuries, will be resolved by a few insulated observations. By these we should presently discern the several tastes, inclinations, and modes of industry, and this curious branch of zoology would become a didactic science founded on the most satisfactory principles.

The progress of generation from the days of Aristotle to our own time, has involved the learned in continual disputes. By these experiments, every thing would be develloped (in the Latin proverb, *ab ovo usque ad mala*,) the stoves would afford a complete series, by denudating the yolk in every stage of its progress towards animation.

I am, Sir, yours, &c.

AFRICANUS.

Rouen, April 24, 1804.

STATE OF CORN AND CATTLE IN A DISTRICT OF NORTHUMBERLAND AT THE PRESENT TIME.

To the Editor of the Agricultural Magazine.

SIR, *May* 12, 1804.

ON the 14th ult. I sent you a statement of the corn, cattle, and sheep markets in this quarter of the kingdom, and also an account of the very unfavourable weather which has prevailed in it during the winter and spring. From that date until the 26th of April, the weather was either very wet, snowy, or frosty, and very unfavourable for the sowing of the remainder of the oats and barley seed. On the 20th, 21st, 22d, and 23d of last month, the frost was almost as severe as we generally observe it in any part of winter—vast numbers of lambs in the elevated parts of Northumberland, Berwickshire, and Roxburgshire, were then frozen to death, and I am sorry to say, that upon the whole, the high land lambs in these counties will not exceed from above one half to, at most, two thirds of the usual number. From this deplorable picture I now proceed to relate some changes of a most agreeable nature. From the 26th ult. to the 10th instant, the weather has been highly favourable, a most rapid vegetation has taken place in the spring corn and grass (but the appearance of the wheat is not very propitious) and the dreary aspect of the country has been succeeded by a most delightful and promising verdure. Still, however, the turnip fallows, where sand does not predominate, are rather too wet for a proper pulverization.

Labouring men obtain about the same wages as those paid last year. Those of women are considerably higher now than last season, within the last ten days one great market for fat stock at Morpeth, has been but indifferently supplied, especially with beef, and prices of fat sheep and cattle have, in consequence, risen considerably. At present the latter sell readily at 8s. 6d. to 9s. per stone of 14lb. new shorn sheep at 8d. per lb. sinking the offal—so that two year old wethers of the new Leicester breed now bring from about 50s. to 70s. per head. Swine are still scarcely saleable. Prices of corn have also advanced in this quarter, and are now as follow, wheats 6s. to 6s. 4d. and some 6s. 6d to 6s. 8d. Potatoe, oats (much the best and most prolific variety of that grain) 3s. to 3s. 4d. other kinds of oats, 2s. 6d. to 2s. 9d. Barley to 3s. to 3s. 2d. Rye 3s. 6d. to 3s. 10d. and peas 4s. 6d. to 5s. per Winchester bushel. Draught horses are uncommonly high, as are also those grazing cattle, which are likely to be fit for the butcher, within a month or six weeks; and lean cattle sell more readily and at higher prices than their owners expected. Several oxen

weighing from 120. to 140. stone each, have lately been slaughtered in this country—one of them only five years old, which received no other food but common fodder, grass and turnips, weighed upwards of 132 stone exclusive of fat, blood, hide, &c. The heaviest and best short horned cattle in the kingdom are those in the county of Durham, and the northern parts of Yorkshire. Bulls from those parts, obtained at great prices, have for many years, been extensively used in this quarter, and it is now supposed that our cattle are nearly equal to those of our more southern neighbours. Great numbers of tups of the new Leicester breed are annually let in this country, at from 5l. to 50l. or 60 guineas, and some as high as 150 guineas or more, for the season—and ewes are taken to some rams at two guineas and a half per ewe. This excellent breed of sheep was introduced into this county about thirty-five years ago, by Messrs. Culley, who by extensive farms and the breeding and letting of rams, have, in that period *from a small beginning*, realized a landed fortune of upwards of 3,200l. a year, besides which, they occupy about 4,500 acres of arable land. These gentlemen most laudably excited that spirit of industry and emulation which has tended to the rapid amelioration of our agriculture and live stock. Thus they happily promoted their own and their country's interest. Such intelligence as this paper contains, if transmitted from various parts of the country, would, I conceive, render your Magazine still more useful, not only to breeders and graziers, but to tillage farmers, and I should be glad if several of your correspondents would *frequently* communicate similar information.

I am, your's, &c.
AGRICOLA NORTHUMBRIENSIS.

P, S. Sheep are generally very lean, and it is certain that this year's wool will fall much short of the quantity shorn last season.

QUANTITY OF LAND BEST SUITED TO CULTIVATION BY A SINGLE OCCUPANT.

To the Editor of the Agricultural Magazine.

SIR,

PERHAPS of late years, on the subject of Agriculture few questions have occasioned so much difference of opinion, as that which relates to the quantity of land most suited to be under the cultivation of a single occupant. This is not only of importance to landlords, but to tenants, and it requires no small portion of prudence in the former to counter-

act ambition in the latter. The following observations have appeared to me so perfectly consistent with sound sense and just reasoning, that I have not been able to repress my inclination to give them publicity through the medium of your miscellany.

Those farms are the best size which admit of their being kept in complete cultivation with the full exertion of those by whom they are possessed. If farmers occupy more than they are able to cultivate properly, the public will suffer by the produce being deficient, while the public, as well as farmers, are hurt by farms being less than they can manage, as in this case, some part of their labour, as well as of their capital, is lost.

It is however evident that the size of farms ought to be relative to their situation, to the state of the markets, and agriculture of the district, as well as to the soil. Thus, while in this country, farmers of sufficient capitals can easily manage 600 acres of land that is not uncommonly stiff, or even more, where a considerable part of it must be in grass and green crops, from their not being able to obtain more than their farms produce; those who from being near large towns can procure dung for having nearly their whole grounds yearly in corn, find the half of this quantity sufficient. And it is also evident, that the present population of Britain rather requires the same course of agriculture, nor does it admit of the same limitation in the size of farms, as is necessary in countries where the inhabitants are more numerous, as in a remarkable degree, is the case in China.

I am confident, that of the numerous farmers who have been placed in the list of the unfortunate, a very large proportion have precipitated themselves into that situation, from the disposition to undertake larger concerns than their capitals have enabled them to conduct. I am willing to allow every thing I ought, both for their industry and their talents; but the greatest industry and the brightest talents are misapplied in their object, and disappointed in their aims, if a fund be not previously raised, which is necessary under such circumstances, to render both labour and ingenuity productive.

I am, Sir, Yours, &c. &c.

A LANDLORD.

CRITICAL CATALOGUE.

General View of the Agriculture of Shropſhire: with Obſervations. Drawn up for the conſideration of the Board of Agriculture and Internal Improvement. By Joſeph Plymley, M. A. *Archdeacon of Salop, in the Dioceſe of Hereford, and Honorary Member of the Board.*

SHROPSHIRE is an inland county, bounded on the N. by Denbighſhire, the detached part of Flintſhire, and by Cheſhire; E. by Staffordſhire; S. by Worceſterſhire and Herefordſhire; and W. by Radnorſhire, Montgomeryſhire, and Denbighſhire. It lies nearly within 52° and 53° north latitude, and 2° and 3° weſt longitude from London. Its principal natural diviſion is made by the river Severn, which runs from N. W. to S. E. and divides it into parts not very unequal. It is farther ſubdivided into fifteen hundreds, or diſtricts anſwering thereto, viz. Oſweſtry, Pimhill, Bradford North, Bradford South, and Brimſtry, on the N. E. ſide of the Severn; the liberty of Shrewſbury, the franchiſes of Wenlock, and the hundred of Stotterden, extending on both banks of that river; the hundreds of Ford, Chirbury, Cundover, Munſlow, Overs, Purſlow, and the Honour of Clun, on the S. W. ſide of the Severn.

The climate of this county varies, on account of the irregularity of its ſoil and ſurface. The harveſt on the eaſtern ſide, where the land is warm and flat, is frequently ripe about a fortnight ſooner than in the middle of the county, where the vales are extenſive, but where the ſurface is leſs light, and the bottom often clayey. Hay and grain are both gathered earlier there than on the weſtern ſide, where the vales are narrow, and the high lands frequent and extenſive, although the ground is not in general ſo ſtiff, and lies for the moſt part on a ſemi-rock full of fiſſures. The eaſterly winds prevail in ſpring, and thoſe from the weſt in autumn.

Shropſhire contains a great variety of ſoils and ſurface; and the former in particular, have that variety ſo much intermingled, that any general account muſt be received with every allowance for exceptions; though no part of this county can be called flat, generally ſpeaking, yet the N. E. parts are comparatively ſo. In the hundred of Oſweſtry, there is a conſiderable quantity of deep loam and of gravelly ſoil. Some marl in that pariſh, and in the pariſh of Weſt Fulton, a large portion of black peaty bog, drained and draining. On the N. W. borders of the hundred, adjoining Denbighſhire, the ſoil lies over a ſtrata of coal and limeſtone. On the S. E. ſide the ſoil becomes ſandy. Pimhill hundred contains a mixture of boggy land, and of ſand. Bradford North has ſome low land of a peaty nature, with ſome good meadow land, a quantity of ſand, and ſome gravelly ſoils. In Bradford South and Brimſtry, it is generally a ſandy loam. In the franchiſe of Wenlock pale coloured clays prevail. In Stotterden, Overs, and Munſlow, there is alſo much clayey and ſtony ſoil. In Cundover hundred there is a good deal of gravelly loam, ſand, and clay. In the liberties of Shrewſbury and hundred of Ford, much pebbly loam. Cherburg is uneven, with ſome plains of a light-coloured loam or clay. Purſlow and Clun are very uneven, with ſome pale coloured clays and lighter

ſoils. In this part of the work ſome uſeful remarks occur, which, for the information of ſome of our readers, we ſhall quote.

" It would tend to ſimplify the communication of knowledge upon this ſubject, if the terms ſiliceous, argillaceous, and calcareous, were brought into general uſe, and ſtrictly applied according to the predominating ſubſtance. Theſe terms, however, though ſufficiently familiar to all who have even inquired after mineralogy, are very unequally adopted into the Engliſh language. Argil, and argillaceous, are explained in Johnſon's Dictionary. The Latin word *calx* is alſo admitted, but not its derivative, calcareous; and *ſilex*, though equally entitled to a place with *calx*, is excluded, as well as ſiliceous. The word ſiliceous, indeed, is found in Johnſon's Dictionary, as derived from cilicium, a particular kind of hair-cloth, and therefore has no reference to *ſilex*; and the ſame word is given by Bailey, partly in the ſenſe ſiliceous is now uſed. In an inquiry of this kind, vernacular words will be preferred, wherever they can be properly made uſe of; but it may not be amiſs to ſhew ſome of the natural compoſitions uſually intended by the deſignations ſpecified above, ſince they are not fully explained but in books of ſcience, as well as the eaſier means of aſcertaining the application of them. Siliceous then, as commonly applied, comprehends flint, rock-chryſtal, or quartz, clear and opaque, and alſo moſt of the precious ſtones. Siliceous ſubſtances are hard and inſoluble in all acids but that of flour ſpar: they ſtrike fire with ſteel. In powder, they will not knead with water. Alkalis (ſal ſodæ, &c.) will unite with them in fire, and form a compound, which is ſoluble in water.

" Argillaceous, comprehends clays, marls, boles, ſlates, or ſchiſtus, and mica. Argillaceous ſubſtances adhere to the tongue, or any wet and ſoft body, when ſolid, and are very kneadable when moiſt. They are ſoluable in acids, but alkalis act leſs upon them than upon ſiliceous earths. Marls effervеſce with acids when crude, but not when burnt. The goodneſs of marl depends upon the quantity of calcareous earth mixed with the clay. Bole is an indeterminate word, ſignifying ſome kind of clay. Slates ſlit into plates, or laminæ. They comprehend, with argillaceous earth, that which is ſiliceous and calcareous. Beſides the roof-ſlate, or ſchiſtus tegularis, which contains more ſelix than argill (and which, therefore, according to the propoſed definition, would belong to the ſiliceous earths), mineralogiſts add to this claſs the flag-ſtone, which, though it contains ſome ſilex, will not eaſily ſtrike fire with ſteel, nor, in general, effervеſce with acids. The ſame is obſerved of argillaceous grit, freeſtone, or ſandſtone, which is included alſo among the argillaceous earths. It may be cut eaſily in all directions, and exhales an earthy ſmell, when freſh broken and breathed upon. Mica has more ſilex than argil, and a metallic appearance. Its pureſt ſtate is colourleſs; but it takes different colours from ſuperfluous ingredients, principally from iron. It contains alſo magneſia.

" Calcareous earth, or lime, predominates in moſt ſtones which are ſoft enough to be ſcratched with a knife; theſe are chalk, limeſtone, marble, ſpars, gypſum, or plaſter of Paris. As lime is uſually

combined with fixed air, a ſmall quantity of nitrous acid dropped upon calcareous earths, will cauſe a frothing, by the eſcape of the fixed air.

" Granite is a compounded rock, conſiſting of felt-ſpar, quartz, and mica, and occaſionally hornblende, ſtreatites, garnet, or baſaltes.

There are mines of lead ore, of a good quality, on the weſtern ſide of this county, which have been very productive. Calamine is alſo met with, and the rock at Pimhill is ſtrongly tinctured with copper. On the eaſtern ſide of the county, coal of an excellent quality is found in great plenty. In the north diſtrict is a fine quarry of white ſand-ſtone; at Orton Bank there is a ſtratum of the Bath and Portland ſtone; in the weſt diſtrict is a ſiliceous grit, good for building, but the general ſtone is argillaceous. Flags, and ſtone ſlates, for roofs, are alſo found. At Pitchford, about ſeven miles S. E. of Shrewſbury, is a red ſand ſtone, approaching the ſurface in many places, and from which exudes a mineral pitch. From the rock is extracted an oil, called Bitton's Britiſh Oil, which has been uſed medicinally, and has been thought to poſſeſs many of the properties of what is called Friar's Balſam. It is alſo from a rock of red ſand-ſtone that the foſſil tar-ſpring, near Coalbrook Dale iſſues. Salt, it is thought, might be obtained in this county; but its proximity to the ſalt-works at Cheſhire might probably prevent any profit from an adventure of this kind. At Admaſton, near Wellington, there is a ſalt medical ſpring, chalybate and hepatic. At Moreton Sag there is a mineral water of an aperient nature; and, not far from the parſonage-houſe, is a ſpring which, according to Dr. Darwin, is valuable as a ſtrong chalybeate. Sutton Spa, celebrated for its medical virtues, is ſituated within two miles ſouth of Shrewſbury. Various other mineral ſprings are alſo met with.

There are a hundred or more rivers and brooks in this county; but the Severn is the only *navigable* river. The veſſels chiefly employed on it are barges, from 20 to 80 tons burthen, which trade very much between Shrewſbury and Glouceſter.

The freeholders and copyholders of Shropſhire are eſtimated at not leſs than 3000.

" The landed income of this county," ſays the Report, " may be about 600,000l. per ann. and of this, one-twentieth part may be paid in tithe by compoſition (for ſcarcely any is gathered) to the parochial clergy. I made my calculation of the value of the county, without looking at the acreage; and I am ſomewhat confirmed in it, by adverting ſince to that datum, and to Mr. Biſhton's aſſertion in the Original Report, that land lets, upon the average, at 15s. per acre titheable. Take the county at 896,000 acres, the rental, at that average, would be 671,600l. a year, leaving a deduction of 71,600l. a year to be made for the waſte lands; ſo that, as a general poſition in round numbers (pretending not in this, or any other aſſumption of political arithmetic, to be more accurate than ſomething near the truth), I perhaps do not greatly err, in reckoning the value of the county, in land and houſes, at 600,000l. per ann. or that, at leaſt, it is not an exceſſive valuation, when intended to include the tithe. Without including the tithe, I ſhould think 15s. per acre rather an high valuation for the county throughout, though not ſo, perhaps, for the ſide of the Severn where Mr. Biſhton reſides."

The tenure of this county are moſtly copyhold, but of eaſier cuſtoms than in the neighbouring counties.

The public buildings lately erected have been conſiderable; ſeveral manſion-houſes have been formed, rebuilt, or improved; and ſeveral have been converted into farm-houſes. There are conſiderably above 100 houſes of good reſpectability, kept up and occupied chiefly by their owners.

The farm-houſes and buildings, in general, are very inconveniently ſituated and ill-conſtructed, many of them being at one extremity of the farm; but the greatest part are ſituated in villages; thoſe that are not ſo are moſtly built in ſome very low ſituation, by which means the farmer entirely loſes the drainings of his fold-yard.—In farming farm-yards, the confinement of pigs ſeems not to have been ſufficiently attended to.

The ſize of the farms are very various, from that of one to 500 acres, on the eaſt ſide of the county, to the little farm of 20 acres on the borders of Wales. The generality of farms riſe from 50 to 200 acres. It is much the practice to enlarge them; and, in the laſt thirty years, the number of farms may have diminished one third. The farms, generally ſpeaking, are arable, grazing, for hay, for the dairy, rearing, and feeding.

The Shropshire farmers are very induſtrious; but they are too much accuſtomed to the use of ſtrong malt liquors.

Land is meaſured by the ſtatute acre, and it varies from 8s. or leſs per acre, to 12s. in bad ſituations; and from 12s. to 15s. in more favourable ſituations. Near towns, land lets from 2l. to 6l. an acre. The average price is about 15s. per acre, titheable. The rack tenants of ſporting landlords are frequently ſubject to the inconvenience of keeping dogs; and, in many places, are expected to draw a load, or or a certain number of loads of coal annually.—The average of the tithe of rent is eſtimated at 2s. in the pound. Poors' rates are from 1s. to 2s. 6d. in the pound.

Some leaſes are for years, generally twenty-one; and others are for lives, moſtly for three.

The price of labour is about 14d. per day; the rate of wages from 6l. to 9l. per annum.

Several thraſning machines have been erected in different parts of the county; ſome ox-teams are uſed with gearing, and ſome with yokes; wheat, in general, is reaped with broad hooks, or ſaw ſickles.

A great deal of land has been encloſed, and is ſtill encloſing in this county; but very large waſtes and commons ſtill remain.

The rotation of crops in this county is wheat, barley, turnips, barley, and clover; or peaſe, wheat, turnips, barley, or oats and clover. Turnips are ſometimes ſtacked for winter uſe.—The culture of potatoes increaſes annually.

Dr. Babington has enumerated nearly 140 different graſſes, and ſcarce and curious plants which are indigenous in this county.

The farmers of Shropſhire have moderate ſized gardens; and ſome of them have ſmall orchards, from which they make a little cyder for home conſumption; and, on the confines of Herefordſhire and Worceſterſhire the orchards are larger, and cyder is made for ſale.

Notwithſtanding large yearly falls of timber, there are ſtill ſome very fine woods of oak growing in Shropſhire. There is a good deal of hedge-row timber alſo, conſiſting principally of oak and aſh, a few wych and other elms, ſtill fewer beech, lime, and ſycamore, Poplars are not uncommon by the ſides of brooks and ſmall rivers. There are a few yew trees, and hollies have been plentiful. Birches are common in the S. W. diſtrict. There are alſo ſome plantations of larch and firs.

There are ſeveral large moſſes in Shropſhire, which might be drained with much advantage.—Draining is one of the greateſt improvements in this county. It is chiefly done with ſtone, and is contracted for by profeſſed drainers at 6d. per rod of eight yards.

Paring and burning are but very little in uſe in this county.—The manure is chiefly farm-yard dung, lime, and marl. Lime is purchased for about 10s. or 12s. per waggon load, of from 40 to 50 buſhels.

The following ſuggeſtion ſeems worthy of our notice:——

"I doubt," ſays the author of the report before us, "whether the cuſtom of burning couch graſs (*Triticum repens*), called in this county Scutch graſs, with fire, is ſo good a method of deſtroying it as by lime. When a field is cleaning from this noxious graſs, the roots may be carried to a heap, without ſtaying to ſhake the ſoil from them ſo completely as is neceſſary for burning; and if, in making the heap, clods of hot lime, of the depth of a few inches, are placed between every layer of about one foot thick, the heat of the lime will reduce them to aſhes. If the ſmoke is ſo great as to make flame apprehended, ſoil ſhould be caſt upon the heap, to prevent this. The quantity of aſhes produced by this method, is much greater than in the ordinary mode, the plant is as completely deſtroyed, and the lime ſo ſlacked and incorporated, appears to do much more good to the land, eſpecially to ground that has been uſed to that manure. It is a good method to cut the weeds from the hedges, &c. and burn them in the ſame way."

The advantages from weeding ground do not ſeem to be ſufficiently attended to in this county. Many farmers do not weed their meadows or paſture grounds at all. There is, however, an inſtrument of good conſtruction uſed here, for pulling up docks. It is made of iron, ending in a blunt fork, and faſtened to a piece of wood, ſomewhat longer than the handle of a ſpade. The fork penetrates within the ground two or three inches, and faſtening on each ſide the dock root, raiſes it out of the ground by means of a bow of iron that projects behind the fork, and act as a lever, when the handle is bent downwards.

There are ſome meadows floated in this county by preſerving levels from ſtreams of water, but little of this improvement is done in a maſterly manner; though floating has been long in practice by a few of the beſt farmers, and the use of the ſpirit level is known.

"The neat cattle of this county," obſerves our author, "cannot be referred to any of the diſtinct breeds that writers upon live ſtock have enumerated, though, probably, they are much the ſame breed as that ſpread over Warwickſhire and Staffordſhire. The old Shropſhire ox was remarkable for a large dewlap. There have been many cattle reared within the laſt 20 years, from the improved breeds of Lancaſhire, Cheſhire, Leiceſterſhire, and, that of Mr. Fowler, of Oxfordſhire. Upon the ſouth confines of the county, the Herefordſhire breed is now gaining ground; and ſome Devonſhire cattle have been

brought to Kinlet-hall. About Biſhop's Caſtle is a good breed of cattle, the colour a dark red; they are more uniform in ſhape and colour than in any other diſtrict in the county; the oxen at four years old ſold upon an average at 15l. a piece, unfed, previous to the late extraordinary prices. At Welcot, many Alderney cattle have been bred for the dairy, and numbers of the Galloway breed have been reared there. A male and two female zebus were ſent by Lord Clive from Madagaſcar: the females have each had a calf; they are themſelves conſiderably leſs than the ſmalleſt cows of the Kyloe breed, in either the Scotch Highlands or Iſlands, but their calves at ſix months old, are nearly as large as their dams, and endure ſhowers of rain, againſt which the old ones run to ſhelter. A year or two ago, a bull at Botvyle, deſcended from Mr. Princeps' ſtock, out of a Shropſhire cow, and bred in this county, ſeemed to vie for ſuperiority with that bull of which Mr. Princeps ſent a lineal repreſentation to the Board of Agriculture ſome years ago. They meaſured reſpectively as follows:——

	Staffordſhire Bull.		Shropſhire Bull.	
	ft.	in.	ft.	in.
From head to tail -	7	8	7	8½
Thickneſs of the horn -	0	4	0	0
Do. at the root, in circumference,	0	0	0	8½
Do. in diameter, not -	0	0	0	3
Girth of the neck, cloſe to the head,	4	3	3	6
Do. of body, cloſe to the fore legs,	7	9	6	11½
Do. of the belly, -	8	9	7	4
Height at the ſhoulder, -	5	1¼	4	8
Do. putting on of the tail, -	5	1¼	4	8
Length from hip to tail, -	2	2	2	5
From hip to hip, -	0	0	2	0¼

"The laſt meaſurement is not given in the print of the Staffordſhire bull, nor the age or condition ſpecified. The Shropſhire bull was ſix years old, and lean. At Purſlow-hall is the bull that was ſhewn at Shifnal, December 29, 1800, and which was then adjudged to have won the wager of 100 guineas upon which he was brought there, viz. that he was a better bull than any of the Leiceſterſhire breed. He appears to me to combine many of the favourite points of Mr. Bakewell's breed, with thoſe in which the old Herefordſhire breed were thought to excell. Being fat, his dimenſions cannot well be compared with thoſe of a lean beaſt; but I add thoſe of a bull now eight years old, the property of Mr. Perkins, of Wilderley, about eight miles ſouth of Shrewſbury, and which was bred in this county, out of a cow purchaſed from Mr. Hilditch, of Cheſhire, viz. from head to tail 8 feet 1½ inch; the horn, cloſe to the head, in circumference 9½ inches; girth of the neck, cloſe to the head, 3 feet 10 inches; girth of the body, cloſe to the fore-legs, 8 feet; ditto of the belly, 8 feet 10 inches; height at the ſhoulder and putting on of the tail, 5 feet 4 inches; length from hip to tail. 2 feet 2½ inches; acroſs the hips, 2 feet 3 inches."

The breed of horſes in this county is not ſufficiently attended to, the farmers being apt to ſend their mares to the cheapeſt ſtallions, without any other conſideration whatever, and conſequently very few

good ſtallions are brought into the county. In the ſtrong lands, four or five horſes are uſed to a plough, or ſix or eight oxen. The ox-teams uſed to conſiſt of ten oxen yoked: now thoſe who uſe them frequently plough with five oxen ſingle in gearing, or with four oxen and a horse to lead them.

A great number of hogs are grown in Shropſhire. The original hog of this county was a high-backed, long-eared animul; but it has been croſſed by various breeds, and is now rarely to be met with unmixed. Pork and bacon are much uſed among the poorer people.

The roads in Shropſhire, both turnpike and private, are generally bad, notwithſtanding the divers Acts of Parliament which have been made for their improvement.

Although Shropſhire was behind moſt of the other counties in adopting the plan of forming artificial canals, which may perhaps be attributed to the fine river which it poſſeſſes, it has of late made a rapid progreſs in the execution of this valuable improvement. There has probably been more ingenuity diſplayed in the means taken for overcoming the various obſtacles which lay in the way of the canals of this county, than has hitherto been ſhewn in thoſe of any other county in England.

The population of Shropſhire is conſidered as being greatly on the increaſe. Speaking of the return made under the Act of the 41ſt Geo. III. our author ſays:

"That return ſtates this county to contain 31,182 inhabited and 929 void houſes, 34,501 families, 82,563 males, 85,076 females, 45,046 perſons employed in agriculture, 35,535 mechanics, and 70,504 perſons not compriſed in either of thoſe two claſſes. The total number of perſons 167,639. It is poſſible that a very few diſtricts may be omitted in this return, and that ſome may have been counted twice over, from the circumſtance of townſhips and pariſhes not being always co-extenſive. The inaccuracy of the return, with reſpect to the number of perſons employed in agriculture, is very obvious. The Act does not ſay whether it was the intention of the Legiſlature to confine this liſt to males, and there are three ways in which it has been made. In ſome returns, the males only employed in agriculture are given; in others, the liſt contains alſo women keeping farms, and dairy-maids: and again in others, all the men, women and children of a farmer's family, or of a labourer's in farming buſineſs, are added to that claſs. The ſame is the caſe in the return of the mechanics, and this return is further doubtful, as miners are in ſome inſtances added to it, and in others ſtated as belonging to thoſe not compriſed in either of the ſpecified employments; whilſt the perſons making the return in ſome pariſhes, have ſeemed to conſider it neceſſary to claſs all the inhabitants under the head of agriculture or of trade; as I obſerve them ſo ſtated where I know there are reſident clergymen, at leaſt, of reſpectability, and who have families."

There are no agricultural ſocieties of any ſtanding in Shropſhire: one has been lately eſtabliſhed at Drayton, upon the North-eaſt borders, and another at Shifnal, upon the Eaſt borders; both theſe diſtricts adjoin, and are connected with Staffordſhire.

We cannot cloſe this abſtract, without paying a tribute of praiſe to the volume from which it is formed. The moral and religious feelings of the Editor reflect on him the higheſt honour.

HISTORY.

National Transactions.

GREAT BRITAIN.

THE change of Adminiſtration, hinted at in our laſt, has at length been effected. The perſevering efforts of a ſort of junction between the old and the new oppoſition parties, have compelled Mr. Addington and his friends to retire. The Grenville party have uniformly been the opponents of the late miniſtry. Mr. Fox had been for ſome time wavering; but finding, at length, that there was no probability of his being admitted as a coadjutor with Mr. Addington, he became more decided in his oppoſition to the meaſures of that gentleman. Mr. Pitt had, in ſome degree, kept aloof from the conteſts in Parliament; overtures had been made to him to come into power, provided he did not inſiſt upon bringing his friends along with him; and, although he refuſed theſe, he ſeems long to have expected that Mr. Addington would readily comply with the meaſures he propoſed, and yield him the honour of them in the eyes of the country. Finding, however, that his views were not at all times complied with, and probably growing impatient at his long excluſion from power, he began to give decided ſymptoms of a wiſh to overturn the adminiſtration. Such was the ſtate of the reſpective leaders of oppoſition, when a coalition began to be talked of, for the purpoſe of compelling miniſters to quit their ſtations. So different, however, and even oppoſite were the principles and views of the ſeveral parties, that ſuch a coalition ſeemed next to impoſſible, and the idea was by many treated with the utmoſt ridicule. At length the expedient was ſuggeſted of forming a miniſtry on a broad baſis, which ſhould comprehend all the great talents of the country, without any regard to the diſtinctions of party. This idea was ſo congenial to the mind of Mr. Fox, that he entered into it with eagerneſs, and began to bend the whole force of his talents to accompliſh this object. The effects of his eloquence were ſoon viſible in the Houſe of Commons, and the miniſtry began to droop, while ſtill backed by a large majority. Mr. Pitt ſeemed to ſtand more on his own baſis. He indeed attacked miniſters, but he attacked them on ſuch grounds as the old oppoſition could not coincide with. Yet he ſeems at length to have been concerned, that his efforts were likely to prove ineffectual; and that the talents of Fox and the Grenvilles were neceſſary to enable him to carry his point. Accordingly, he alſo began to declaim on the neceſſity of a union of the great talents of the nation; and, in the two great minorities which appeared againſt miniſters, Mr. Pitt loudly ſeconded the motion of Mr. Fox, and Mr. Fox as ardently ſupported the ideas of Mr. Pitt. The miniſtry now found themſelves unequal to contend againſt ſuch a hoſt of aſſailants; new motions were announced by the oppoſition, and miniſters procured their delay, on the ground that they would embarraſs certain arrangements which were going forward. Theſe arrangements evidently referred to a new adminiſtration. In a few days it was known, that Mr. Pitt had been applied to by his Majeſty to form a miniſtry, and that he had included in his liſt both Mr. Fox and Lord Grenville, as well as the friends of theſe leaders. In two days, however, it was reported, that Mr. Fox's excluſion from Adminiſtration had been determined on by the higheſt authority; and that Mr. Pitt was required to form a miniſtry as he pleaſed, with the excluſion of this ſingle individul. Mr. Pitt did not long leave the public mind to loſe itſelf in conjectures about the courſe which he ſhould purſue; for, after ſome ineffectual repreſentations, he conſented to the excluſion of Mr. Fox. On learning that

his Majeſty's opinion was ſo decidedly againſt him, Mr. Fox earneſtly requested, both of the old and new oppoſition, that they would accept of any ſituation in which they might render ſervice to their country, and conſider his excluſion as a matter which ought in no degree to influence their conduct. The anſwer to this requeſt was the ſame from all parties. The friends of Mr. Fox unanimouſly determined to accept of no place while he was excluded; Lord Grenville, Mr. Windham, and their friends, adopted a ſimilar reſolution. The new adminiſtration, therefore, conſiſts of ſuch men, as, under exiſting circumſtances, it was poſſible to procure. Mr. Pitt reſumes his office: Lord Melville has been appointed to the Admiralty; Lord Hawkeſbury is transferred from the Foreign to the Home Department; Lord Harrowby (formerly Dudley Ryder) has the Foreign Affairs; Lord Camden is Secretary for the Colonial and War Departments; Lord Dartmouth to be Lord Chamberlain; and Lord G. Thynne, Comptroller of the Houſehold. The other arrangements have not yet been finally determined on.

On the 3d of May, previouſly to the diſſolution of the late adminiſtration, the thanks of both Houſes of Parliament were voted to the Marquis Welleſley, and to the officers and Privates of the Britiſh army in India, for the late brilliant ſucceſſes which they have achieved.

A moſt ſevere loſs has been ſuſtained by our Weſt India trade. A large fleet of Weſt India merchantmen, under convoy of the Apollo and Carysfort frigates, were overtaken by violent gales off the coaſt of Portugal; and a ſtrong current ſetting in to the eaſtward, were carried imperceptibly a hundred miles at leaſt out of their courſe. The Apollo, which led the fleet, having therefore ſhaped her courſe to clear Cape Verd on a falſe reckoning, went on ſhore on the morning of the 2d of April, and was followed by ſeven and thirty veſſels of the convoy. The Carysfort, and the remainder fortunately ſtood off in time to ſave themſelves. Accounts have not yet been received what number of the crews have been loſt; but it is concluded, that all the veſſels which went on ſhore were beaten to pieces by the high ſurf. The ſhips loſt belonged almoſt excluſively to Glasgow and Liverpool.

FRANCE.—The whole attention of the continent has, for ſome time paſt been occupied by the intended aſſumption of an imperial diadem by Bonaparte. This act, with only one diſſentient voice, (that of Cornot) has been decided on by the reſpective public bodies of France. The coronation robes have been embroidered at Lyons, and, with their diamonds, are eſtimated at 2,000,000 of livres; gold and ſilver medals, to the amount of 10,000,000 of livres, report ſays, are already ſtruck at the mint, and are to be diſtributed on the coronation day, in all the armies, as well as among the people in all the cities and towns. The coronation carriage has long been made at Bruſſels, under a pretence that it was intended as a preſent to the Emperor of Ruſſia. The coronation is to be performed by the Cardinal Archbiſhop of Paris and the Pope's Nuncio, Cardinal Caprara, aſſiſted by three other revolutionary cardinals, and twelve revolutionary archbiſhops and biſhops; the Pope, on account of his age and infirmities, having been excuſed a journey to France, where his Nuncio has full power to aſſiſt on his part, and *give his bleſſing*. Several circumſtances have occurred, which render it extremely probable that the intended invaſion of England is *poſtponed ſine die*.

RUSSIA.—The Cabinet of Ruſſia ſeems at length diſpoſed to take ſome active part in the preſent ſtate of affairs. As ſoon as the account of the Duc d'Enghien's murder was known at St. Peterſburgh, diſpatches were ſent to M. d'Oubril, the Ruſſian Chargé d'Affaires at Paris, commanding him to preſent a ſtrong remonſtrance to the French government. He preſented it in deep mourning; and, that nothing might be wanting to mark the feelings entertained by his Court, he informed M. Talleyrand, at the ſame time that he delivered the remonſtrance, that the mourning which he wore was for the Duc d'Enghien. A more deciſive expreſſion, however, of the ſentiments of the Court of St. Peterſburgh has been diſplayed in an officical note, preſented

by the Ruſſian miniſter to the Diet of Ratiſbon. In that note, couched in terms of equal feeling and firmneſs, the Emperor enters his ſolemn proteſt againſt the violation committed upon the territories of the Elector of Baden; evinces his aſtoniſhment at the infringement of the law of nations by a Power which had, in concert with him, undertaken the mediation of the peace of Germany, and calls upon the Diet and the Emperor of Germany, to unite their efforts and remonſtrances with his, in order to make the French Government conſent to all ſuch meaſures of redreſs as are due to their compromiſed dignity. From theſe circumſtances, it does not ſeem too much to preſume, that the Emperor of Ruſſia will no longer remain an idle ſpectator of the dreadful ſcenes of blood and ambition now acting on the continent.

SWEDEN.—The conduct of Sweden has not been leſs honourable and dignified than that of Ruſſia. The reply of the Swediſh ambaſſador to the circular note of Talleyrand, reſpecting the ſham conſpiracy in which Mr. Drake, the Britiſh Envoy at Munich, was implicated, was the only one which did not appear in the *Moniteur*. It was too ſpirited, honourable, and independent, to be admitted into that foul vehicle of calumny. The Swedish Court, as well as that of Ruſſia, has gone into mourning for the late unfortunate Duc d'Enghien; and there is every reaſon to ſuppoſe, that this Power would willingly place itſelf in oppoſition to the infamous proceedings of the French Government.

EGYPT.—The Beys, it appears, have been quarrelling among themſelves and with the Albanians, their former allies. Elphi Bey has been compelled to fly into Upper Egypt, and moſt of the other Beys have, in a battle with the Albanians, been cut to pieces, and their power nearly annihilated. The Albanians have returned to their allegiance to the Porte. The report which has been in circulation of our having landed a number of troops in Egypt, does not appear to be true.

Agriculture.

Jerusalem Wheat.

AT the laſt meeting of the Farming Society in Ireland, his Excelleney the Lord Lieutenant, on hearing the preſent ſtate and proſpects of the vegetation of this ſuperior ſpecies of wheat, pronounced the diſcovery an object of high national utility. The experienced properties of the grain are an extraordinary vegetation from 30 to 45 ſtems, from each ſeed ſown in dibbles of ten inches ſquare, each ſtem containing from 140 to 160 large round grains, with a pellucid ſkin of the brighteſt nature, and a promiſe of the fineſt flower. Each ſtem, 7 feet in lenght, with a mealy pulp, ſufficient to render the whole maſs of ſtraw, when cut, an excellent food for cattle of all denominations, but particularly a moſt provident ſubſtitute for oats with road and draft horſes.

Fecundity.

An ewe belonging to William Roſs, Netherhouſe, Dunlop, Ayrſhire, has yeaned 25 lambs in ſeven years, viz. one the firſt year, two the ſecond year, four each year, for three ſucceeding years, and five each for the laſt two years.

PREMIUMS to be given,

By the Highland Society of Scotland,

For encouraging Improvements in Agriculture, and meliorating the breed of Black Cattle, &c. in the year 1804.

CLASS I.—*Improvement of barren Land in the County of Argyle, and the Island of Aaran.*

To eight tenants, viz. one in each of the eight following diſtricts, of Iſlay, Argyle, Lorn, Mull, Ardnamurchan, Kintyre, Cowal, and the Iſland of

Spade, by an approved potatoe, or other green crops, the greateſt portion of land not hitherto in culture, and not leſs than two Scots acres, in the year 1804.—*Eight pounds ſterling.*

To the tenant in each of the ſaid eight diſtricts of Argyleſhire, and the iſland of Aaran, who ſhall, in the year 1804, improve, by the plough or ſpade, as aforeſaid, the next greateſt proportion of land not hitherto in culture.—*Four Pounds ſterling.*

Lenks on the ſea ſhore to be excepted.

N. B. The certificates as to the above premiums offered for bringing land into tillage by means of potatoes or other green crops, muſt be ſubſcribed by two members of the Society, or by one member, along with a juſtice of the peace, or the miniſter of the pariſh, and muſt ſpecify the condition of the ground previous to the improvement, the mode of cultivation, extent of the ground improved, with the quality of the crop, and tranſmitted to the deputy ſecretary of this Society, on or before the 1ſt December next.

Class II,—*Premiums for improving the Breed of Black Cattle in the Highlands or Upper Districts of the Counties of Aberdeen, Banff, and Mearns.*

The ſtations, times, and judges of the competition to be as follows:

For the highland or upper diſtricts of Bampfshire and contiguous parts of Aberdeenſhire, at Charles Fair of Huntley.

The following members of the Society are hereby appointed judges for the Huntley Competition, viz.

Moſt Noble the Marquis of Huntley	Major Turner, of Turner Hall
Right Hon. the Earl of Errol	Mr. Gordon, of Letterfourie
——— the Earl of Fife	— Leſlie, of Basquhain
Hon. Gen. William Gordon, of Fivie	— Moriſon, of Bognie
Sir George Abercrombie, of Birkenbog, Bart.	— Stewart, of Auchluncart
	— Fraſer, of Williamſton
Sir John Gordon of Park, Bart.	— Brown, of Linkwood
Colonel M'Dowall Grant of Arndilly	— Grant Toinbreckachie
Major Gordon, of Hallhead	Captain Gordon Minmore.

And three to be a quorum.

The Marquis of Huntley, or in his abſence, Arndilly, to be convener.

For the beſt Bull, from two to ſeven years old, the property or in poſſeſſion of any perſon in ſaid highland parts of Bamffshire, and contiguous parts of Aberdeenſhire, kept on his farm or town, from the 1ſt day of April to the day of competition, at Huntley, where the Bull is to be exhibited. *Twelve guineas*, or a piece of plate of that value, with a ſuitable inſcription.

For the ſecond beſt Bull belonging to, or in the poſſeſſion of any perſon within ſaid lands kept, and to be exhibited at Huntley competition as aforeſaid EIGHT GUINEAS.

For the 3d beſt Bull kept, and to be exhibited as aforeſaid, four guineas.

The ſtation and time of competition for the Highland diſtricts of Aberdeenſhire and Mearns, to be at Battle-Fair, Keircardine O'Neil, competition viz.

Right Hon. the Earl of Aboyne	Mr. Forbes Leith, of Whitehaugh
Sir Wm. Forbes, of Craigievar, Bart.	Mr. Forbes, of New
Sir John Steward, of Fettercairn	Mr. G. Forbes, reſiding at New
Mr. Burnet, Sheriff of Mearns	Mr. Gordon of Abergeldie
Mr. Ruſſel, of Blackhall	Mr. Manſfield, of Niedman
Mr. Douglas, of Tillwhillie	Captain Mc'Donald, of Gardenſdale
Mr. Farquharſon, of Houghton	Mr. Forbes, of Invernan
Mr. Farquaharſon of Monaltry	Mr. William Burnet, of Memboddo
Mr. Farquaharſon, of Breda	John Douglas, Eſq. of Tilwhillie

For the beſt bull from two to ſeven years old, the property of, or in poſſeſſion of any perſons in the highland parts of Aberdeen, Mearns, &c. kept on his farm or town from the 2d day of April, to the day of competition at Kencardine O'Neil, where the bull is to be exhibited.—*Twelve guineas*, or a piece of place of that value, with a ſuitable inſcription.

For the 2d beſt bull belonging to us in the poſſeſſion of any perſon within the bounds laſt mentioned, kept and to be exhibited at Kencardine O'Neil, as aforeſaid.—*Eight guineas.*

For the 3d beſt bull kept, and to be ſhown at Kencardine O'Neil competition.—*Six guinnas.*

RULES OF COMPETITION.

Applying to both the Huntley and Kencardine O'Neil competitors.

The conveners and other members of the committee, as well as the competitors for the ſhew, are requeſted to attend to the following orders and rules of competition.

1ſt. It is left to the convener to fix on the boundaries of their reſpective diſtricts, and alſo which is to be conſidered the upper or highland diſtricts of theſe counties.

2d. The convener of each committee to give timely notice in writing to the other judges of the diſtrict, of the day of competition, and to give proper directions that the ſame be intimated to the breeders of their reſpective pariſhes, by a written paper on the church doors, at leaſt two ſucceſſive Sundays prior to the day of competion.

A bull which may have gained the *firſt prize*, ſhall not be allowed to complete the year in the ſame diſtrict, but a bull which may have gained a ſecond or third premium, may be offered this year, either in his own or a neighbouring diſtrict.

In order to entitle the competitors to their reſpective premiums, regular certificates of the bull approved, ſubſcribed by all the judges who attend the competition, to be tranſmitted to the deputed ſecretary of this Society, on or before the 1ſt day of December next, at fartheſt, and which certificate muſt bear the age of the bulls, length of time they have been in the poſſeſſion of the competitors, the day of competition, the number of bulls produced thereat, and, in general that all the rules of competition fixed by the Society, as above mentioned have been obſerved.

N. B. This is the laſt year of theſe premiums in the above diſtricts.

Class III.—*To Ploughmen for Improvement in Ploughing.*

The under mentioned ſums will be diſtributed this ſeaſon in premiums to ploughmen, in the following diſtricts, viz.

1ſt. *Ten guineas* in the county of Wigton.
2d. *Ten guineas* in the Stewartry of Kirkcudbright.
3d. *Ten guineas* in Dumfrieſhire.
4th. *Ten guineas* in Hyle, Ayrſhire.
5th. *Ten guineas* in the upper ward of Lanarkſhire.
6th. *Ten guineas* in Hyntyre, Argyleſhire.

The whole of the above premiums in the claſs, to be competed for at ſuch places and times, and in ſuch a manner, as the members of the Society reſiding in their reſpective diſtricts ſhall find moſt proper. Theſe members are appointed competitors for that purpoſe—John Hawthorn, eſq. of Caſtlewigg, and John Maitland, eſq. of Freugh, for Wigtonſhire.—James Gordon, eſq. of Culvennan, for Kirkcudbright.—Colonel Dirom of Mountamaw, or in his abſence, William Stewart, Monteith, eſq. of Cloſeburn, and John Jeffray, eſq. of Allerbeck, for Dumfrieſhire.—William Fullarton, eſq. of Roſſmount, for Ayrſhire.—Colonel Bertram of Kerſwell for the upper ward of Lanarkſhire —and Duncan Steward, eſq. chamberlain to the Duke of Argyle, in Kyntire, for that diſtrict conveners; with inſtructions to report to the

Society; it being underſtood that any ploughman who may have formerly got the higheſt premium, ſhall not be allowed to compete.

N. B. The medals given by the Society to ploughmen to be had of Mr. Cunningham, the Society's Medalliſt.

By order of the Directors,

LEVIS GORDON, Dep. Sec.

Farming Society of Ireland.

The Spring ſhew of fat cattle, ſheep, and ſwine, was held at the repoſitory Stephen's Green, on Tueſday the 17th April. A great concourſe of ſpectators attended: near 2000 tickets were iſſued, the animals exhibited were far ſuperior to thoſe produced on any former occaſion. The mode of claſſification by age, without reference to weight, had a very happy effect, as the animals in which the greateſt number of valuable qualities were combined univerſally, obtained the prizes, though in general much inferior in ſize to the competitors. Moſt of the candidates conformed to the principles laid down by the Society, and we do not remember even to have ſeen ſo good ſpecimens of oxen or cows, as the two to which the medals were adjudged. Symmetry, neatneſs, excellent fleſh on the beſt parts, and lightneſs of offal, were the diſtinguiſhing properties.

The Ox which obtained the medal, was of the Iriſh long horned breed, ſelected by Mr. Gaing when young, from a lot of 100, and the ſmalleſt, but neateſt among them.—His weight was as follows.

	lb.
Head and tongue	41
Liver	16½
Kidnies	2½
Hide	133
Heart and lights	17
Feet	23
Blood	40
Entrails	144
Fat	109

	cwt.	qrs.	lb.
	52 6—4	2	22
Carcaſs	1232 0	11	0 0
Entire weight	1758	15	2 22

Mr. Filgate's was bred from Sir John Parnell's ſtock.—Sir Edward Crofton's was of the Galloway polled breed, and much admired. We underſtand he has brought over a bull and ſome cows from Lord Galloway.—Mr. Doyne's cow was of Sir John Parnell's breed; ſhe ſuffered much in the journey, but proved excellent beef. Mr. Grierſon's heifer was imported from Mr. Aſtley, but had never bred.—Her weight viz.

	lb.
Head and tongue	31½
Liver	14
Kidnies and Cockwhite	6
Hide	121
Heart and lights	15
Feet	19
Blood and entrails	168
Fat	110

	cwt.	qrs.	lb.
	484½—4	1	8½
Carcaſs	952	8	2 0
	1436½	12	3 8½

Mr. Tandy's cow was bred by Lord Oxmantown, between a long horned bull, and an Holderneſs cow. We do not adviſe the *croſs* to be purſued any further than the firſt generation.—Mr. Reynell, of Killinan, produced a heifer of the Iriſh long horned breed, which was an extraordinary inſtance of early maturity.

The following is the ſtatement of the weight of Mr. Reynell's of Reynella, Hereford cow, the firſt of the breed ſlaughtered here.

	lb.	cwt.	qrs.	lb.
Head and tongue	33			
Liver	11			
Kidnies	2½			
Hide	98			
Heart and lights	15			
Feet	16			
Blood	38			
Entrails	101			
Fat	174			
	488½	4	1	12½
Carcaſs	875	7	3	7
	1363½	12	0	19½

We are ſorry to obſerve that the competition for ſheep rather declined. Mr. Barbazon Morris has for ſeveral years paid great attention to his wool, his ſheep are deeply croſſed with their Leiceſter, but not thorough bred, they, however, proved excellent mutton.

The public are not reconciled to over fattening, and anxiouſly look up to the graziers for a greater proportion of fleſh. We have often expreſſed our opinion on this ſubject. Lord Sligo's South Down ſheep were out of condition, and appeared to great diſadvantage, though the ſhort wooled ſheep have undoubted merit, they have not yet become the faſhion in Ireland.

The Swine had uncommon merit —Mr. Reynell's of Killinan, which obtained the medal, is of the ſmall Chineſe breed, white with black ſpots. Mr. Reynell's, of Reynella, is bred between Mr. Wynne's Leiceſter, and Lord Lanſdown's black —Mr. Wynne's, and Mr. Beresford's, are thorough bred Leiceſter, black and brown mixed with red, with pricked ears. Mr. Wynne's weighed as follows.

	lb.	cwt.	qrs.	lb.
Carcaſs	626			
Offal	56			
Blood	8			
Total weight	690	6	0	18

The only improvement we venture to ſuggeſt in the ſhews is, that each animal ſhould be weighed alive, and his live weight marked on the label over him. That *a few of the beſt* ſhould be ſlaughtered, their weights detailed and the parts valued and compared, and that the cattle ſhould be arranged, ſo that they may be viewed in front, as well as behind.

Ploughing Match.

Seventeen ploughs ſtarted for the prizes, in a level field with which Mr. Garnett obligingly accommodated the Society in his demeine at Huntſtown.

There were 13 Scots ſewing plows, and four Leiceſter wheel ploughs. Of the former Lord Meaths's and Mr. Symes's, which were chain ploughs, imported from Small, of Edinburg, appeared to be drawn with moſt eaſe. It is to be regretted that time was at all taken into conſideration, as the

ploughmen on that account were induced to hurry, and to cut the furrow ſtill too broad.

Lord Meath's horſes were light and active, but his arrows were not ſufficiently cloſed.

Lord Sligo's horſes were much admired, poſſeſſing ſtrength, action, and fine form, and were excellently trained.

Mr. Symes's ſplayed heifers, though of a ſmall ſize, proved truly valuable in the plough, being quick movers, and very powerful.

Mr. Patterſon exhibited a plough calculated for the culture of drilled potatoes, which appeared to be a uſeful implement, and made at a reaſonable price.

Mr. Doran produced ſamples of Jeruſalem wheat, which he has ſold at the rate of 100 guineas a barrel.

Norfolk Agricultural Society.

The next general meeting of this Society will be held at Swaffham, on Friday the 13th of July, and the previous meeting of the committee will be at the Crown Inn in Fakenham, on Wedneſday the 6th of June.

T. W. Cooke, Eſq. Preſident.

Members of the Committee.

Mr. J. Repton, Oxmead
Mr. Salter, Whinberg
Mr. G. Smith, Creak
Mr. Purd, Egmere
Mr. T. Bragge, jun. Lynn
Mr. J. Loyd, Pentney
Mr. T. Dawing, Caſtle Acre
Mr. H. Blyth, Burnham
Mr. W. M. Hill, Waterden
Mr. Godfrey, Maſſingham
Mr. Holland, W. Bilney
Mr. A. Beck, Maſſingham
Mr. W. Seppings, S. Acre

Searning, May 3d, 1804.

Sir JOHN PRIEST, Secretary.

South Down Agricultural Meeting.

At a meeting of the ſelect committee of this Society, held at the London Inn, Ivy Bridge, on Friday the 4th of May, 1804.

Richard King, Eſq. in the Chair.

Reſolved, that the annual meeting of this Society ſhall be held at the London Inn, Ivy Bridge, on Wedneſday the 6th day of June next, preciſely at 11 o'clock.

Reſolved, that no claimant ſhall be allowed either of the following premiums, whoſe ſtock is not produced on or before 11 o'clock; notice of the arrival of ſuch ſtock to be given to the preſident of the Society, on or before the time mentioned.

Reſolved, that the following premiums (only) ſhall be offered to the public for the year 1804, which will be diſtributed under the uſual reſtrictions.

Reſolved, that the thanks of this meeting be given to the Preſident for his attention to the buſineſs of the day.

	£.	s.	d.
STALLIONS.			
1. For the beſt ſtallion, for getting ſtock fit for the road or path —— —— ——	3	3	0
2. For the ſecond beſt ditto, for getting ſtock for draft	3	3	0
BULLS.			
3. For the beſt bull, not more than 3 years old ——	5	5	0
4. For the ſecond beſt ditto ditto ——	2	2	0
5. For the beſt young ditto, under 3 years old ——	3	3	0
COWS.			
6. For the beſt breeding cow —— ——	5	5	0
7. For the beſt heifer, between 2 and 3 years old, calculated for breeding —— —— —— ——	3	3	0

RAMS.

	£.	s.	d.
8. For the beſt ram — — —	5	5	0
9. For the ſecond beſt ditto — —	3	3	0
10. For the beſt hog, or two toothed ditto, bred in this diſtrict	5	5	0
11. For the ſecond beſt ditto — —	3	3	0

The ſame ſheep, to obtain only one of the above premiums.

EWES.

12. For the beſt lot of breeding ewes, not leſs than 6, having reared up lambs this ſeaſon, the property of one perſon	5	5	0
13. For the beſt lot of two toothed or hog ewes, not leſs than ſix, having been kept ſince Michaelmas laſt with the ewe ſtock of the ſame age, the property of one perſon —	5	5	0

FATTED SHEEP.

14. For the beſt fat wether ſheep, not more than two years old laſt yearing ſeaſon, to be killed at Mr. Rivers's, at Ivy Bridge, on Tueſday the 5th of June, (the day before the meeting) between the hours of 2 and 7 in the afternoon, regard being had to the live and dead weight, and fed in this diſtrict on graſs, hay, turnips, potatoes, or any other green vegetable food only — — —	3	3	0
15. For the ſecond beſt, ditto ditto —	2	2	0
16. For the beſt fat young wether ſheep, not more than one year old, paſt yearing ſeaſon, under the ſame reſtrictions	2	2	0

WOOL.

17. For the beſt rams fleece, to be ſhorn on the ſpot	2	2	0
18. For the ſecond beſt, ditto ditto — —	1	1	0

SHEEP SHEARING.

19. To the beſt ſheep ſhearer — —	2	2	0
20. To the ſecond beſt ditto — —	1	11	6
21. To the third beſt ditto — —	1	1	6
22. To the fourth beſt ditto — —	0	10	0

Satisfactory certificates of the ages of all the cattle, and of the food of the fatted ſheep, to be given to the Preſident or the Secretary, prior to the exhibition; and all the ſheep claiming premiums, are to be produced in their wool, and ſhorn on the ſpot.

GENERAL RESOLUTIONS.

The Society reſerves to themſelves the power of giving, in all caſes, ſuch part only of any premium as the ſtock or performance ſhall be judged to deſerve, or of withholding the whole, if there be no merit.

RICHARD HAWKINS, Secretary and Treaſurer.

Dated, May 7, 1804.

Dublin Spring Show.

TUESDAY, APRIL 17, 1804.

Neat Cattle.

CLASS I.

For the beſt fat ox, ſix years old and upwards in Spring, 1803. 10l.

Morley Saunders, Eſq. County of Wicklow, long horned, deficient in merit.

Lord Viſcount Clements, County of Kildare, ditto, ditto.

John Fetherſton, Eſq. County of Weſtmeath, polled, ditto.

Mr. Thomas Willens, County of Meath, long horned, ditto.

Premium withheld for want of ſufficient merit.

2. For the beſt fat ox, five years old, ditto. 10l.

Thomas Going, Eſq. county of Tipperary, long horned.

Right Hon. David Latouche, county of Dublin, ſhort horned, Holderneſs.

Wm. Morris, Eſq. county of Meath, long horned.

John Fetherſton, Eſq. deficient in merit.

George Plunket, Esq. county of Roscommon, ditto, ditto
Premium adjudged to Thomas Going, Esq.
3. For the best fat ox, four years old, ditto.—10l.
Wm. Filgate, Esq. county of Louth, long horned.
Right Hon. David Latouche, short horned, Holderness.
Thomas Rothwell, Esq. long horned, deficient in merit.
Premium adjudged to Wm. Filgate, Esq.
4. For the best fat ox, three years old, ditto.—10l.
Hon. Sir Edward Crofton, Bart. county of Roscommon, polled.
Brab. Morris, Esq. county of Meath, long horned.
—— Walsh, Esq. county of Dublin, long horned, deficient in merit.
Premium adjudged to the Hon. Sir Edward Crofton, to qualify.
5. For the best fat cow or heifer, six years old.—10l.
Charles P. Doyne, Esq. Queen's County, long horned.
Richard Reywell, Esq. Reynella, County of Westmeath, middle horned Hereford.
Sir F. Hopkins, Bart. county of Meath, long horned.
Richard Reynell, Esq. Killiwan, county of Westmeath, ditto.
William Filgate, Esq. ditto.
James Doolan, Esq. King's county, ditto, deficient in merit.
Henry Garnett, Esq. county of Meath, ditto.
Premium adjudged to C. P. Doyne, Esq.
6 For the best fat cow or heifer, five years old, ditto.—10l.
G. Grierson, Esq. county of Dublin, long horned.
John Fetherston, Esq. ditto.
Guth. Lambert, Esq. county of Meath, middle horned, Hereford.
James Doolan, Esq. long horned, deficient in merit.
Premium adjudged to G. Grierson, Esq.
7. For the best fat cow or heifer, four years old, ditto.—10l.
John Tandy, Esq. county of Meath, long horned, cross.
John Fetherston, Esq. county of Meath, long horned.
Morley Saunders, Esq. ditto.
Thomas Rothwell, Esq. ditto, deficient in merit.
Richard Reynell, Esq. Killiman, ditto, ditto.
Premium adjudged to I. Tandy, Esq. to qualify.
8. For the best fat cow or heifer, three years old, ditto.—10l.
Richard Reynell, Esq. Killiman, long horned.
John Fetherston, Esq. ditto.
Premium adjudged to Richard Reynell, Esq. Killiman.
9 For the best of the prize oxen.—*The silver medal.*
The medal adjudged to Thomas Going, Esq.
10. For the best of the prize cows or heifers.—*The silver medal.*
The medal adjudged to G. Grierson, Esq.

Sheep, long or combing woolled.

11. For the pen of five fat weathers, one year old, ditto.—15l.
Thomas Going, Esq. New Leicester.
Barry Lawless, Esq. county of Dublin, ditto, to quality.
Brab. Morris, Esq. ditto.
Premium adjusted to Thomas Young, Esq.
12. For the best pen of five fat weathers, one year old, ditto.—15l.
No claimant.

Short or Clothing Woolled.

13. For the best pen of five fat weathers, one year old, ditto.—15l.
Marquis of Sligo, county of Mayo, Southdown.
Premium withheld for want of sufficient merit.
14. For the best pen of five fat weathers, two years old, ditto.—15l.
Marquis of Sligo, Southdown.

Premium withheld for want of ſufficient merit.

15. For the beſt pen of five native Iriſh ſhort wooled ewes.
No claimant.

16. For the beſt wether exhibited.—*The ſilver medal.*
The medal withheld for want of ſufficient merit.

Swine.

17. For the beſt fat pig, three years old or upwards.—10l.
No claimant.

18. For the beſt fat pig, two years old.—10l.
Richard Reynell, Eſq. Reynella.
Owen Wynne, Eſq. county of Sligo.
Premium adjudged to Richard Reynell, Eſq. Reynella.

19. For the beſt fat pig, two years old.—10l.
Richard Reynell, Eſq. Killiman.
Rev. Charles Cobbe, Beresford, county of Dublin.
Premium adjudged to Richard Reynell, Eſq. Killiman.

20. For the beſt fat pig, ſix months old, but not exceeding one year.—10l.
No claimant.

21. For the beſt of the prize ſwine.—*Silver medal.*
The prize was adjudged to Rich. Reynell, Eſq. Killiman.

JUDGES.

For Cattle.	For Sheep and Swine.
John Fitzpatrick, jun. Eſq. county of Tipperary.	Jas. Lewis, Eſq. King's county.
John Browne, Eſq. county of Roſcommon.	William Matter, Eſq. Queen's county.
Walter Bowdall, Eſq. county of Meath	John Armſt Drought, King's county.

Ploughing Match.—Sowing Ploughs.

22. To the perſon who ſhall plough half a rood of land beſt, and with leaſt force, five inches deep, with one man and two horſes, within one hour and an half.—10l.
To ditto, the next beſt.—5l.
Rev. C. C. Beresford, county of Dublin.
Mr. John Oſwald, county of Dublin.
John Paterſon, Eſq. Queen's county.
Marquis of Sligo, county of Mayo.
Earl of Meath, county of Wicklow.
Chicheſter Fortescue, Eſq. county of Louth.
John Garnett, Eſq. county of Dublin.
George Grierſon, Eſq. county of Dublin.
Robert Shaw, Eſq. county of Dublin.
John Latouche, Eſq. county of Kildare.
First premium adjudged to C. C. Beresford.
Second premium adjudged to Mr. J. Oſwald.

23. To ditto, with one man and two oxen or heifers. 10l.
To ditto, the next beſt.—5l.
Rev. James Symes, county of Wicklow.
John Garmett, Eſq.
First premium adjudged to the Rev. James Symes.
Second premium adjudged to John Garmett, Eſq.

WHEEL PLOUGHS.

24. To the perſon who ſhall plough half a rood of land beſt, and with leaſt force, five inches deep, with one man and two horſes, within one hour and an half.—10l.
To ditto, the next beſt.—5l.
Hon. Sir Edward Croſton, Bart. county of Roſcommon.

Richard Reynell, Eſq. Reynella, county of Weſtmeath.
William Saurm, Eſq. county of Dublin.
James Nugent, Eſq. county of Weſtmeath.
Robert Shaw, Eſq.

First premium adjudged to the Hon. Sir E. Crofton.
Second premium adjudged to Richard Reynell, Eſq. Reynella.

25. To ditto, with one man and two oxen or heifers.—10l.
To ditto, the next beſt.—5l.
No claimant.

26. To the perſon, having obtained a premium the day before, for the beſt performance.—*The cup.*
To ditto, the next beſt.—*The ſilver medal.*
Rev. C. Cobbe Beresford.
Hon. Sir E. Crofton, Bart.
Mr. John Oſwald.
Rev. James Symes.
Richard Reynell, Eſq. Reynella.
John Garnett, Eſq.

The cup adjudged to the Rev. Charles Cobbe Beresford.
The medal adjudged to the Hon. Sir E. Crofton.

27. To the owner of the beſt pair of ploughs.—10l.
Premium adjudged to the Marquis of Sligo.

28. To the owner of the beſt and moſt active pair of long-horned plough oxen or heifers.—5l.
Premium adjudged to the Rev. James Symes.

29. To ditto, middle-hornod ditto.—5l.
No claimant.

30. To ditto, ſhort-horned ditto.—5l.
No claimant.

31. To ditto, the beſt of the prize oxen or heifers.—5l.
The medal adjudged to the Rev. J. Symes.

The beam of Mr. Forteſcue's plough gave way at the commencement of the work.

Mr. Grierſon's man worked with a plough which was borrowed in the field, his own having been broken in conveying it to the ground.

Mr. Nugent's and Mr. Shaw's wheel-ploughs each exceeded the time in which the work was required to be executed.

JUDGES FOR PLOUGHING.

FIRST DAY.

Owen Wynne, Eſq.	County of Sligo.
Thomas Burgh, Eſq.	——— Dublin.
Mr. Radcliffe,	——— Roſcommon.
Richard Smith, Eſq.	——— Kildare.
Barnet Schew, Eſq.	——— Dublin.

SECOND DAY.

John Green, Eſq.	County of Dublin.
James Braſſington, Eſq.	Ditto.
Richard Schew, Eſq.	Ditto.

East Riding of Yorkshire Show of Cattle, Great Driffield.

The Committee for conducting the concerns of the ſhow, conſiſting of t following gentlemen.

W. H. Quintin, Eſq.
Tatton Sykes, Eſq.
Rev. Mr. Hildyard
John Grimſton, Eſq. and
Robert Bowen, Eſq.

have adjudged the following premiums to be diſtributed on Thurſday, the 2d day of Auguſt next.

	L.	s.	d.
For the beſt ſheep of any age, and bred in any part of England	10	10	0
For the beſt ſhearling ſheep, bred in the Eaſt Riding of Yorkſhire	10	10	0
For the ſecond-beſt bred ditto, bred as above	6	6	0
For the beſt aged bull, bred any where, but reſtricted to reſide in the Eaſt Riding afterwards	8	8	0
For the beſt two years old bull, bred in the Eaſt Riding, and reſtricted to remain ſix month there	6	6	0
For the ſecond beſt ditto, ditto	4	4	0
For the beſt two years old heifer, bred in the Eaſt Riding	5	5	0
For the beſt yearly heifer, bred as above	5	5	0
For the beſt boar, to remain ſix months in the Eaſt Riding	5	5	0
For the ſecond beſt ditto, to remain as above	3	3	0
For ten of the beſt ſhearling weathers, bred in the Eaſt Riding	10	10	0

MEMORANDUM.

In any caſe, where there may not be a competitor, or where the Committee may not think the cattle or ſheep ſhown ſufficiently excellent to deſerve a preminm, they reſerve to themſelves a right of withholding the whole, or what part of it they may think proper. No ſheep will be entitled to a premium that has been fed on any thing but green food. Gentlemen and others who wiſh to patronize this very uſeful branch of Agriculture, are requeſted to forward their ſubſcriptions to Mr. W. Drinkrow, of Great Driffield.

On the ſhow day, (Thurſday the 2d) a dinner will be provided in the Hunt Room after the ſhow.

By order.

Agricultural Society of the Hundred of West Derby, Concluded from our last.

Pr. 5. To the perſon who ſhall diſcover the cheapeſt and moſt productive ſort of compoſt for graſs land, a ſilver cup, value five guineas.

Pr. 6. To the perſon who ſhall make the beſt experiment on different native graſſes, a ſilver cup, value five guineas.

Pr. 7. To the perſon who ſhall make and report to the Society at the July meeting, the moſt ſatisfactory experiment to aſcertain the advantages of ſummer foiling horſes, cattle, or hogs, with green food, in ſtable, houſes, ſheds, or littered yards, compared with feeding the ſame in the common manner, a ſilver cup, value ſeven guineas.

N. B. The account muſt ſpecify the number of each foiled, the effect on ſuch ſtock, the quantity of food eaten, and the land fed, with the quantity of litter uſed, and the dung, and the value of the dung made.

CLASS VII. *For the beſt crop of Turnips, beans, cabbage, Potatoes, Lucerne and Winter Tares, for a Green Crop, for laying down Land for Paſture, and for having Land in good Condition.*

Pr. 1. To the perſon who ſhall raiſe and continue on the farm, the beſt crop of drilled turnips in every reſpect, to be thoroughly cleaned from weeds, equally thinned and well hoed, at leaſt twice; the quantity not being leſs than four acres, a ſilver cup value five guineas.

Pr. 2. To the perſon who ſhall raiſe the beſt crop of cabbages in every reſpect, planted in rows or ridges, and the quantity not being leſs than two acres, a ſilver cup, value 5 guineas.

Pr. 3. To the perſon who ſhall raiſe the greateſt quantity of potatoes of the beſt quality, from the ſame land in the ſame year, not being leſs than two acres, a ſilver cup, value five guineas.

Pr. 4. To the perſon who ſhall raiſe the beſt crop of drilled beans, weeded with the hand, and hoed twice, not being leſs than four acres, a ſilver cup, value five guineas.

Pr. 5. To the perſon who ſhall produce the beſt crop of lucerne, not being leſs than 1 acre, a ſilver cup, value five guineas.

Pr. 6. To the perſon who ſhall produce and conſume the beſt green crop in quantity proportioned to the ſize of his farm, a ſilver cup, value five guineas.

Pr. 7. To the perſon who ſhall raiſe the beſt crop of winter tares, which ſhall ſerve preparatory to a ſummer crop, and not being leſs than three acres, a ſilver cup, value five guineas.

Pr. 8 To the perſon who ſhall lay down the greateſt quantity of land, not being leſs than twelve acres for paſture in the beſt manner, and cleaned from weeds, and ſowed with white clover or graſs ſeeds, a ſilver cup, value five guineas.

Pr. 9. To the perſon occupying a farm, not leſs than eighty acres, who ſhall have the ſame in the beſt cultivation and order, a ſilver cup, value ſeven guineas.

Pr. 10. To the perſon occupying a farm, not leſs than forty acres, in the foregoing order, a ſilver cup, value five guineas.

CLASS VIII. Omitted.

CLASS IX. *For a Shew of Bulls, Heifers, Stallions, and Boars.*

Pr. 1. To the perſon reſiding within the hundred, who ſhall ſhew, at the July meeting, the beſt long horned bull, not leſs than three years old, a ſilver cup, or ſeven guineas.

Pr. 2. To the perſon who ſhall ſhew the beſt long horned heifer, as in the foregoing, a ſilver cup, or five guineas.

Pr. 3. To the perſon who ſhall produce the beſt ſtallion, for the purpoſe of huſbandry, ſeven guineas.

Pr. 4. To the perſon who ſhall ſhew as aforeſaid, the beſt boar, two guineas.

CLASS X. *For erecting Cottages, for bringing up Families without Parochial Relief, and for Length of Service in Husbandry.*

Pr. 1. To the perſon who ſhall erect the greateſt number of labourers cottages, not having leſs than two bed chambers upon the beſt conſtruction, a ſilver cup, value ſeven guineas.

Pr. 2. To the labourer in huſbandry, renting under 10l. per annum, by whom the greateſt number of ligitimate children ſhall have been brought up without parochial relief, ten guineas.

Pr. 3. To the labourer in huſbandry, as in the preceding premium, who ſhall have brought up the ſecond greateſt number of legitimate children ſo brought up, ſix guineas.

Pr. 3. To the labourer, as in the preceding premium, who ſhall have brought up the third greateſt number, four guineas.

Pr. 5. To the male ſervant in huſbandry, who has the moſt meritoriouſly, ſerved the longeſt time in one place, five guineas.

Pr. 6. To the male ſervant, as in the preceding premium, who has ſerved the ſecond largeſt time, three guineas.

Pr. 7. To the female ſervant in huſbandry, who has the moſt meritoriouſly, ſerved the longeſt time in one place, five guineas.

Pr. 8. To the female ſervant, as in the preceding premium, who has ſerved the ſecond longeſt time, three guineas.

N. B. All the foregoing quantities are to be meaſured according to the ſtatute meaſure; and not including hedges, pits, &c. but are to be land actually improved, or bearing crop.

Whenever the claim of owners and tenants appear to have equal merit, the tenants will have the preference.

Claims for premiums, must be sent in writing to the Secretary as early as possible, and before the 1st of June next.

The premiums will be adjudged in July.

6th *April*, 1804. WILLIAM STANISTREET, Secretary.

Howden Agricultnral Society, Concluded from our last.

Ploughing Match.

Friday April, 20.

SWING PLOUGHS.

22. To the person who shall plough half a rood of land best, and with least force, five inches deep, with one man and two horses within one hour and one half — £10

To ditto, the next best — 5

23. To ditto, with one man and two oxen, or heifers — 10

To ditto, the next best — 5

WHEEL PLOUGHS.

24. To the person who shall plough half a rood of land best, and with least force, five inches deep, with one man and two horses, within one hour and an half — 10

To ditto, the next best — 5

25. To ditto, with one man and two oxen, or heifers — 10

To ditto, the next best — 5

Saturday, April 21st.

26. To the person having obtained a premium the day before, for the best performance. The Cup.

To ditto, the next best. The Silver medal.

27. To the owner of the best pair of plough horses — 10

28. To the owner of the best and most active pair of long horned plough oxen, or heifers — 5

29. To middle horned, ditto — 5

30. To ditto, short horned, or polled, ditto — 5

31. To ditto, the best prize oxen. The silver medal.

The ploughmen will be rewarded in proportion to their merit.

CONDITIONS.

1. The ploughs must be in the field at nine o'clock in the morning, on Friday, the 20th of April, in order that the ground may be assigned for the several candidates by lot, and they shall start each day by ring of bell, precisely at twelve o'clock.

2. Due notice will be given of the place where the ploughing match will be held.

3. Claimants will be allowed one British shilling per mile, between their respective farms and Dublin, coming and returning, to defray the travelling expences of their men and cattle.

MACHINES.

32. For best machine to ascertain accurately the resistance of wheel carriages, on different kinds of roads — £10

33. For best machine to ascertain accurately the resistance of ploughs — 10

34. For best mode to prevent draft horses from being stripped by the collar — 5

35. For best method of curing horses, when stripped by the collar — 5

The committee will appoint days of trial, of which notice will be given to the claimants.

Use of Garlic against Moles.

Moles are ſuch enemies to the ſmell of garlic, that in order to get rid of these troubleſome gueſts, it is ſufficient to introduce a few heads of garlic into their ſubterraneous walks. It is likewiſe employed with ſucceſs againſt grubs and ſnails.

Mr. G. LINDLEY, of Cattons, Norfolk, has ſucceeded in ſaving a crop of Swediſh turnips from the fly, by ſowing radiſhes with the ſeed. Upon the firſt appearance of the plants, they were attacked by the fly, ſo that the top of the crop ſeemed inevitable. A drag-rake was drawn over the ground every other day, four or five times; the ſtirring of the ground contributed to the growth of the turnip, and to diſturb the flies, ſo that it was ſome hours before they could ſettle to reſume their depredations. The radiſh was found to be the particular object of their prey, and in many places of ſeveral ſquare feet there was not a plant left; while in others, they were much too numerous for the quantity of ſeed allowed. In thoſe places where the radiſhes were miſſed, the ſeed was ſwept clean off; where they were numerous, the turnips were all ſafe and vigorous.

Prices of Raw Hides, Hay and Straw, &c. for May, 1804.

	First Week	2d Week	3d Week.	4th Week.	5th Week.
Raw Hides.	*s.d. s.d.*	*s.d. s.d.*	*s.d. s.d.*	*s.d. s.d.*	*s.d. s.d.*
Beſt Heifers & Steers, pr ſt.	0 0 to 0 0	0 0 to 0 0	0 0 to 0 0	3 6 to 3 10	3 4 to 3 8
Middling — —	0 0 to 0 0	0 0 to 0 0	0 0 to 0 0	3 2 to 3 4	3 0 to 3 2
Ordinary — —	0 0 to 0 0	0 0 to 0 0	0 0 to 0 0	0 0 to 3 0	0 0 to 2 10
Market Calf — —	— 0	—	—	10 6	10 6
Eng. Horſe — —	—s to —s	—s to —s	—s to —s	14s to 17s	14s to 17s
Sheep Skins — —	0 0 to 0 0	0 0 to 0 0	0 0 to 0 0	0 0 to 0 0	0 0 to 0 0
Lamb Skins — —	0 0 to 0 0	0 0 to 0 0	0 0 to 0 0	2 6 to 3 6	2 6 to 4 0
Prices of Hay and Straw.	*l. s. d.*	*l. s. d.*	*l. s. d.*	*l. s. d.*	*l. s. d.*
St. James's—Hay —	4 16 0	4 17 0	4 17 0	4 16 0	4 5 0
Straw —	1 15 6	1 13 6	1 13 0	1 14 6	1 7 0
Whitech.—Hay —	4 17 0	4 17 0	4 7 6	4 9 0	4 8 0
Clover —	5 10 0	5 17 6	5 9 0	5 9 0	5 3 6
Straw —	1 11 0	1 12 0	1 11 0	1 7 0	1 7 0
Newbury.					
Wheat — — —	44s to 60s 0d	43s to 57s	40s to 56s 6d	36s to 57s 6d	31s to 57s 6d
Barley — — —	24s 6d to 26s	21s to 26s 0d	22s to 26 6d	23s to 26s 6d	23s to 27s
Oats — — —	20s to 25s	21s to 26s	24s to 25s	24s to 28s	25s to 57s
Beans — — —	—s to —s	—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	—s to —s
Peas — — — —	—s to —s	—s to —s	—s to —s	—s to —s	—s to —s
Saliſbury.					
Wheat — — —	52s to 56s	50s to 54s	48s to 54s	48s to 53s	48s to 52s
New ditto — — —	—s to —s	—s to —s	—s to —s	—s to —s	—s to —s
Barley — — —	24s to 28s 0d	24s to 28s	24s to 28s	24s to 28s	24s to 28s
Beans — — —	—s to —s	—s to —s	—s to —s	—s to —s	—s to —s
Oats — — — —	22s to 26s	24s to 28s	24s to 29s	24s to 28s	24s to 28s
Peas — — — —	—s to —s	—s to —s	—s to —s	—s to —s	—s to —s

Prices of Hops, Meat, Seeds, Leather, Tallow, &c. for May 1804.

Price of Hops.	First Week	2d Week	3d Week	4th Week	5th Week
Bags.	*s.* *s.*	*s.* *s.*	*s.* *s.*	*s.* *s.*	*s.* *s.*
Kent — —	106 to 116	90 to 112	100 to 114	98 to 112	100 to 120
Suſſex — —	98 to 108	84 to 106	100 to 110	98 to 105	100 to 112
Eſſex — —	100 to 116	84 to 105	100 to 105	96 to 105	100 to 112
Pockets.					
Kent — —	113 to 126	115 to 128	110 to 114	100 to 120	110 to 130
Suſſex — —	108 to 118	110 to 120	105 to 108	100 to 110	110 to 120
Farnham — —	120 to 180	120 to 160	120 to 168	160 to 180	160 to 200
Seeds.					
Red Clover per cwt. —	40 to 84	40 to 84	40 to 84	40 to 84	40 to 84
White Clover, ditto —	50 to 112	50 to 112	50 to 112	50 to 112	50 to 112
Trefoil, ditto —	25 to 50	24 to 44	24 to 44	24 to 44	24 to 44
Carraway ditto —	— to 75	— to 75	— to 75	— to 75	— to 75
Coriander ditto —	16 to 20	16 to 20	16 to 20	16 to 20	16 to 20
Turnip, (per buſhel) —	22 to 24	22 to 24	22 to 24	22 to 24	22 to 24
White Muſtard Seed —	8 to 9	8 to 9	8 to 9	8 to 10	8 to 10
Brown ditto — —	14 to 16	14 to 16	14 to 16	12 to 16	12 to 16
Canary Seed	6 to 7	6 to 7	6 to 7	7 to 8	7 to 8
Rape Seed, (per laſt) —					
Meat at Smithfield,					
To ſink the offal, p. ſt. 8lb.	*s. d.* *s. d.*	*s. d.* *s. d.*	*s. d* *s. d.*	*s. d.* *s. d.*	*s. d.* *s. d.*
Beef — —	4 4 to 5 8	4 4 to 6 0	5 0 to 6 4	4 6 to 6 0	5 0 to 6 0
Mutton — —	5 0 to 5 8	5 0 to 6 0	5 4 to 6 4	5 0 to 6 0	5 0 to 5 6
Veal — —	4 8 to 6 0	4 8 to 6 4	5 0 to 6 6	5 0 to 6 0	4 8 to 6 0
Pork — —	3 4 to 4 4	3 0 to 4 0	3 8 to 4 8	3 8 to 4 4	3 8 to 4 8
Lamb — —	6 0 to 8 0	6 0 to 8 4	7 0 to 8 8	6 6 to 8 0	6 0 to 8 0
Head of Cattle—Beaſts about	1,500	1,800	1,600	1,700	1,600
——— Sheep	7,000	8,500	7,000	6,000	12,000
Price of Leather.	*d.* *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*
Butts, 50lb. to 56lb. each	20½ to 21½	20½ to 22	20½ to 22	21 to 22	21 to 22
Ditto, 60lb. to 65lb each	23 to 24	23 to 23½	23 to 24	23 to 24	23 to 24
Merchants Backs —	21 to 21½	21 to 22	21 to 22	21 to 21½	21 to 21½
Dreſſing Hides —	21 to 23	21 to 22½	20½ to 22	20½ to 21½	20½ to 21½
Fine Coach Hides —	23 to 25	22½ to 24½	22 to 23½	21½ to 23½	21½ to 23½
Crop Hides for cutting	21½ to 23	22 to 23	21½ to 22½	21 to 22	21 to 22
Flat Ordinary —	20½ to 21	20 to 21½	20 to 21	20 to 21	20 to 21
Calf Skins, 30 to 40lb. *p.* doz.	30 to 34	30 to 35	32 to 36	32 to 36	32 to 36
Ditto, 50lb. to 70lb. do.	30 to 33	30 to 34	32 to 34	32 to 35	32 to 35
Ditto, 70lb. to 80lb. do.	28 to 30	28 to 30	28 to 30	28 to 31	28 to 31
Sm. Seals (Greenland)	48 to 51	48 to 51	48 to 52	48 to 51	48 to 51
Large do.	51 to 81	51 to 71 10s	51 to 71 10s.	51 to 71 10s	51 to 71 10s
Tanned Horſe Hides	20s to 35s	20s to 35s	25s to 35s	25s to 35s.	25s to 35s
Goat Skins *per* doz.		—s to —s	—s to —s	—s to —s	—s to 3s
Price of Tallow.	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
St. James's Market —	4 2	4 1	4 2½	4 2½	4 2½
Clare Market — —	4 3	4 1½	4 2	4 3	4 3
Whitechapel Market —	4 1	4 1	4 1½	4 1½	4 1½
Per ſtone of 8lb. Average	4 2	4 1	4 2	4 2½	4 2½
Town Tallow — —	71 0	70 6	71 0	71 6	71 6
Ruſſia ditto (Candles) —	71 0	70 0	70 0	70 6	70 6
Ruſſia ditto (Soap) —	69 0	69 0	68 6	68 2	68 6
Melting Stuff — —	57 0	58 0	57 0	57 0	57 0
Ditto rough — —	40 0	40 0	39 0	39 0	39 0
Graves — — —	14 0	14 0	14 0	14 0	14 0
Good Dregs — —	11 0	11 0	11 0	11 0	11 0
Yellow Soap — —	80 0	80 0	80 0	80 0	80 0
Mottled ditto — —	88 0	88 0	88 0	88 0	88 0
Curd ditto — —	92 0	92 0	92 0	92 0	92 0
Candles, per dozen, —	11 6	11 6	11 6	11 6	11 0
Moulds — — —	12 6	12 6	12 6	12 6	12 0

LONDON PRICES OF GRAIN for *May*, 1804.

MARK-LANE, *Monday, April* 30.

OUR ſupply of Wheat from the neighbouring Counties on the coaſt for this day's Market was not great, yet equal to the demand. Fine ſamples, as uſual, obtained ready ſale at laſt week's prices, but the ordinary were dull, though not cheaper. Barley and Malt were rather ſlack, and ſold heavily at laſt currency.—White Peaſe are rather dearer, as are the two ſorts of Beans.—Rye is lower.—The ſupply being good, we are in no want of Oats, which ſell upon nearly the ſame terms as laſt Monday.

Price of Grain, on board Ship, as under.

Wheat	30s to 53s	Malt	50s to 56s 6d	Grey Peas	29s to 32s od
Fine	54s to 56s od	Oats	17s to 22s	Beans, new	30s to 35s
Rye	25s to 28s	Polands ditto	23s to 25s od	Old ditto	—s 38s
Barley	20s to 25s 6d	White Peas	30s to 36s od	Ticks	26s to 34s

Monday, May 7.

Our ſupply of Wheat for this day's Market has been chiefly from Kent and Eſſex, and the quantity not large; ſince this day ſe'nnight, prices have declin d about 1s. per quarter on the fine ſorts, and rather more on the ordinary. Barley and Mal are dull, and ſomething lower. White and Grey Peaſe keep up their price, but Tick Beans are rather cheaper. Oats, and other articles, are without any material alteration. Flour ſtill finds its way into the Mealweighers' returns at 45s. per ſack; but we hear of no ſales at more than 43s.

Wheat	30s to 52s	Malt	50s to 56s 6d	Grey Peas	28s to 32s od
Fine	53s to 55s od	Oats	18s to 23s	Beans, new	30s to 35s od
Rye	24s to 28s od	Polands ditto	24s to 25s od	Old ditto	37s od
Barley	19s to 24s 6d	White Peas	30s to 36s od	Ticks,	26s to 30s od

Monday, May 14.

Our arrivals of Wheat for this day's market have been very conſiderable; beſt ſamples are one ſhilling below laſt week's currency; and the i nferior coarſe ſorts are likewiſe cheaper, by full two ſhillings per quarter.—Barley has had rather a briſk ſale to-day.—In Peaſe and Beans, of the various ſorts, there has been no eſſential fluctuation to require notice.—Oats have come up in plenty, and, in conſequence of the full ſupply, may be quoted at one ſhilling per quarter under laſt Monday's price.

Wheat	26s to 52s	Malt	51s to 57s od	Grey Peas	28s to 32s od
Fine	52s to 54s od	Oats	17s to 22s	Beans, new	30s to 35s od
Rye	24s to 27s 6d	Polands ditto	23s to 24s od	Old ditto	38s od
Barley	20s to 25s od	White Peas	30s to 37s od	Ticks	24s to 34s od

Monday, May 21.

We have had an abnndance of Wheat in from the neighbouring counties of Eſſex, Kent, and Suffolk, but from its being a day of feſtival, our buyers were not numerous, and the ſales remarkably dull, at 1s. and 2s. per quarter lower. Barley and Malt are briſk in ſale, and dearer. The various ſorts of Peaſe, of which we have a ſhort ſupply, maintain their prices.—Horſe and Tick Beans remain nearly as laſt, and without any material alteration. Our ſupply of Oats has been conſiderable, good ſamples of which fetch nearly as much as on laſt Monday; but the indifferent ſorts are cheaper.

Wheat	26s to 50s	Malt	53s to 60s od	Grey Peas	27s to 31s od
Fine	50s to 53s od	Oats	17s to 23s	Beans, new	30s to 34s od
Rye	24s to 27s	Polands	24s to 24s 6d	Old ditto	38s od
Barley	21s to 26s od	White Peas	30s to 36s od	Ticks	24s to 33s od

Monday, May 29.

Our arrivals of Wheat for this day's ſupply were not great, hence higher prices were asked in the morning, but the mealing trade cloſed heavily at laſt week's average. Barley and Malt are both getting up, and fine ſamples of the latter are from 1s. to 2s. per quarter dearer. Grey Peaſe are ſcarce, and of courſe, being wanted, are dearer. Beans are likewiſe on the riſe; but in Peaſe we have little to note. Oats of good quality are dearer, ſay 1s. per quarter; the ſupply rather ſcanty.

Wheat	26s to 52s	Malt	54s to 61s od	Grey Peas	29s to 33s od
Fine	52s to 54s od	Oats	18s to 23s	Beans, new	30s to 35s od
Rye	24s to 27s	Polands	24s to 25s 6d	Old	34s od
Barley	21s to 26s 6d	White Peas	30s to 35s	Ticks,	24s to 34s od

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 MAY 14, 1804.

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	50	11	30	3	24	8	25	4	35	1	34	7		
Surrey	55	10	28	0	25	5	20	8	32	0	34	0		
Hertford	48	5	35	6	23	2	20	8	31	6	32	3		
Bedford	47	5	31	2	21	9	22	3	28	5	35	7		
Huntingdon	45	5			21	2	20	6	27	2	31	11		
Northampton	50	8	30	0	22	6	20	6	30	6				
Rutland	52	0			22	0	22	0	34	0			57	3
Leicester	53	1			25	1	19	2	28	3	30	1	35	4
Nottingham	56	2	30	0	26	10	21	10	36	6				
Derby	59	1			26	3	21	7	38	6			27	10
Stafford	55	4			28	10	23	7	42	7			34	2
Salop	50	0	37	6	27	10	26	7			45	4	63	7
Hereford	46	0	30	4	28	4	27	0	42	5	41	8	60	2
Worcester	46	7			27	6	27	10	36	6	37	8		
Warwick	54	8			29	4	25	1	38	11			42	8
Wilts	49	10			27	0	24	10	39	4	38	0		
Berks	51	7			24	10	25	10	35	2	33	0		
Oxford	50	5			23	9	23	3	33	4	32	0		
Bucks	50	8			23	4	23	2	31	10	34	9		
Brecon	52	3	35	2	29	2	24	0			36	8	38	5
Montgomery	49	1			25	7	23	5					41	6
Radnor	45	5			24	7	24	1					67	10

Maritime Counties.

Essex	49	8	25	6	21	11	24	9	30	7	30	0		
Kent	51	10			24	7	25	2	31	10	34	0		
Sussex	53	10			23	6	25	4						
Suffolk	50	4	26	0	21	5	23	6	28	8	26	4		
Cambridge	39	3			20	10	16	7	28	11				
Norfolk	46	10	25	5	20	7	19	8	28	6	31	11		
Lincoln	45	7	24	7	24	3	19	4	31	7				
York	49	11	34	7	25	5	19	10	33	10	64	0	37	10
Durham	50	2			24	0	21	4						
Northumberland	47	1	34	0	22	4	20	6	32	0	32	0	16	0
Cumberland	55	3	39	0	26	2	22	8						
Westmorland	59	3	41	0	26	8	24	0					19	1
Lancaster	56	7					24	1	39	4			19	0
Chester	50	2					23	6					19	4
Flint					30	11	22	8						
Denbigh	57	11			28	2	25	8					40	8
Anglesea					22	0	16	0						
Carnarvon	59	4	42	0	24	8	19	1			72	0	38	2
Merioneth	54	10	48	0	31	4	21	4					34	5
Cardigan	55	3			19	0	15	0						
Pembroke	47	11			28	4	16	10						
Carmarthen	38	6			30	8	16	4						
Glamorgan	53	4			30	0	24	9						
Gloucester	50	0			26	6	28	1	36	4				
Somerset	52	2			29	4	23	0	38	0				
Monmouth	51	1			29	10								
Devon	55	5			28	0	24	5						
Cornwall	57	2			33	11	23	8						
Dorset	51	10			27	6	27	9						
Hants	50	8			26	1	25	0	35	11				

PRICES OF COALS AT THE COAL EXCHANGE, LONDON,
For MAY, 1804.

Names of Coals.	Wed. 2d	Frid. 4	Mon. 7th	Wed. 9th	Frid. 11th	Mon. 14th	Ved. 16th	Frid. 18td.	Mond. 21ts	Wed.. 23d.	Mon. 28th.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. h.	s. d.	s. d.	sd.d.
Adair's Main	45										
Baker's Main											
Bedford Main											
Benton	45 6				46		43			42 6	
Biddick Main											
Bigg's Main			47	47						46 6	
Bladon Main							46 6				
Blyth											
Boundry	46						45				
Bourn Moor	46			47 6							
Brandling			42 6				39 6				
Bowes Main										42 3	
Byker											
Bedford											
Chous											
Cowpen	42		47 3								
Eden Main		47 3									
Eighton Main											
Flatworth											
Greenwich Moor											45 6
Harraton	47 6				46 6		47				45 6
Hartley	50 0	46 9	47	46 6						46	
Heaton Main	50 6			47			46 6				
Hebburn Main					50						
Holywell			46 9	46 9	50						
Kenton Main											
Montague Main	49										
Murton											
Murton Moor											
Newbottle											
New Tansfield	46 6										
Old Ducks											
Primrose										44	43 9
Pitt's Tansfield M.	46 6		45		47	45 6					45 3
Percy	50		47	47			46				
Rectory	40										
Ruffel's Main						44 3				43 9	
Simpsons Pontop	46 6				40						
Sheriff Hill			44 6								
South Moor	50										
Stanley Main											
St. David											45
Team							46				
Temple	50										
Percey											
Tyne Main	44									46	
Ulworth Main	49										46 6
Walbottle Moor	51		42				48			46 3	44 9
Walker	49			48			46 9				
Wall's End			48	46 9							
Willington			46 9								
Windsors Pontop						40	49				
Wylam Moor											
Wentworth											
Whitefield											
Main Wooler											
Warwick Main											
Warwick											

Nothing done

Nothing done

ALPHABETICAL LIST *of* BANKRUPTCIES *and* DIVIDENDS *announced between the 20th of April and the 20th of May, extracted from the London Gazette.*

BANKRUPTCIES.

The Solicitors' Names are between Parentheſes.

ACKLAM, William, Beverley, tanner (Lowndes and Lambert, Red Lion ſquare
Arrowſmith, James, Stockport, baker (Bullivant, Bernard ſtreet, Brunſwick ſquare
Bell, William, Southampton ſtreet, Covent garden, hoſier (Palmer and Tomlinſon, Warnford court, Throgmorton ſtreet
Balfour, James, Ruſſell court, ſhoemaker (Carpenter and Gay, New inn
Beattie, William, St. Paul's Church yard, pocket-book maker (Richardſon, Monument yard
Brooks, William, Bideford, ſhopkeeper (Pearſon, Pump court, Temple
Bradley, Samuel, Holborn, victualler (Hebden, Inner Temple
Bland, Francis, Iſleham, ſhopkeeper (Browns and Gotobed, Norfolk ſtreet
Brown, Henry Wilſon, Cannon ſtreet, Shoe manufacturer (Warrand, Arundel ſtreet
Bluck, John Henley, Lamb's ſtreet, Spitalfields, oil and colourman (Store, Garlick hill
Brain, Stephen, Pile marſh, Gloceſter, coal-miner (Blandford and Sweet, Inner Temple
Buſhell, William, Cannon-ſtreet, grocer (Lee, Southwark
Bunting, John, Wapping, victualler (Robinſon, Bermondſey
Cook, William, Cannon ſtreet road, mariner (Nind, Great Preſcot ſtreet
Cooper, Thomas, Leatherhead, cornchandler (Burt, Gould ſquare, Crutched friars
Coombe, William, Queen ſtreet, warehouſeman (Pullen, Fore ſtreet
Corlett, Thos. Friday ſtreet, warehouſeman (Walker, Coleman ſtreet
Cannan, Michael, Little Cheapſide, Sun ſtreet, cheeſemonger (Edmund, Hatton garden
Carritt, Edward, Louth, Sadler (Dyneley and Sons, Gray's inn
Corbyn, Thomas, Cheapſide, draper (Scott, St. Mildred's court
Coulſring, Thomas, Briſtol, cydermerchant (Blandford and Sweet, Inner Temple
Dickinſon, Thomas, Mancheſter, builder (Foulkes, Bury place, Bloomſbury
Dalton, Richard, Church ſtreet, Kenſington, Carpenter (Edwards, Red lion ſquare
Dobſon, John, Leeds, merchant (Battye, Chancery lane
Dalrymple, John, Ruſſel ſtreet, Bermondſey, corndealer (Broad, Union ſtreet
Dymoke, Robert, Temple mills, Stratford, Callico printer (Humphreys, Token houſe yard
Drimmy, Robert, Great George ſtreet, Minories, taylor, (Burt, Gould ſquare, Crutched friars
Dodgſon, Joſeph, Milthorpe, horſedealer (Clarkſon, Eſſex ſtreet, Strand
Dutton, John, Catherine court, Tower hill, ſhipbroker (Wards, Dennetts, and Greaves, Henrietta ſtreet
Debrett, John, Piccadilly, bookſeller (Dawſon, Warwick ſtreet, Golden ſquare
Elliott, William, Beverley, tanner (Lowndes and Lambert, Red lion ſquare
Edwards, John and George Manvell, Cace Coch, Flint, manufacturer of earthen ware (Howard, Henrietta ſtreet
Eaſt, Edward, St. George's Creſcent, St. George's fields, coachmaker (Cockayne and Taylor, Lyon's inn.
Finningley, Edward, Thorne, miller (Roſſer, Kirby ſtreet, Hatton garden
Figgins, Francis, Stockport, upholſterer (Swale, New Boſwell court
Field, John, Watford, miller (Edge, King's Bench walk, Temple
Green, William, Romford, linendraper (Atkinſon, Caſtle ſtreet, Falcon ſquare
Green, Charles, and Samuel Marſland, Heaton, Norris, Lancaſter, cotton ſpinners (Ellis, Curſitor ſtreet
Gwynn, John, Aiborne, fuſtianmaker (Berry and King, Meard's ſtreet, Soho
Greetham, Simon, Bedale, ſhopkeeper (Dyneley and Sons, Gray's inn
Gover, John, and James Hardum, Rotherhithe, patent gun carriage makers (Wood, St. Bartholomew's hoſpital
Glollop, Benjamin, Repham, beaſt-jobber (Foulkes, Bury place, Bloomſbury
Hart, Thomas, Briſtol, merchant (Hill, Meredith, and Robbins, Gray's inn
Hill, John, Cateaton ſtreet, warehouſeman, trading in the firm of J. Hill and Co. (Macdougall and Hunter, Lincoln's inn New ſquare
Harris, Robert, Maidſtone, woollendraper (Eſſex ſtreet, Strand
Heawood, Elitha, Heaton-norris, Mancheſter, and James Roberts, Stockport, cotton ſpinners (Bullivant, Bernard ſtreet, Brunſwick ſquare
Hutchinſon, William, Wakefield, hardwareman (Sykes and Knowles, Boſwell court, Lincoln's inn
Hill, Samuel, Addle ſtreet, merchant (Sellers, Crown Office row, Temple
Hewlett, William, Vile, Southwark, druggiſt (Vandercom, Buſh lane
Holmden, Sarah, Seven Oaks, miller (Poole, Sergean's inn
Hayes, John, Maidſtone, paper maker (Debary and Cope, Paper buildings, Temple
Hartley, George, Colne, callico manufacturer, Langhorn, Gray's inn
Hatfull, James, Deptford, Smith (Evitt and Rixon, Haydon ſquare
Hutchiſon, William, Little Eaſt Cheap, merchant (Ward Dennetts, and Greaves, Henrietta ſtreet Covent garden
Hardeaſtle, John, Knottingley, mercer (Evans, Thavies inn
Hargrave, William, Kirton, ſtone maſon (Harvey and Robinſon, Lincoln's inn
Jones, Iſaac, Weſtbury upon Trym, victualler (Kinderley, Long, and Ince, Symond's inn
King, Jeremiah Marſhall, Briſtol, dealer (Tarrant and Moole, Chancery lane
Keeble, Henry Aſhley, Peckham, builder (Smith, York buildings, Bermondſey New Road
Knipe, Bateman, New Bond ſtreet, wigmaker (Dixon, Naſſau ſtreet, Soho
Levi, Henry, Ramſgate, dealer (Cockayne and Taylor, Lyon's inn
Louis, Louis, Oxford ſtreet, grocer (Lane, Red Lion ſquare
Leeſe, Clough, Leopard's court, Baldwin's gardens, druggiſt (Gregſon, Angel court, Throgmorton ſtreet
Lee, Paul, South Shields, druggiſt (Neiſon, Madox ſtreet
Ludlow, William, jun. Andover, wine merchant (Johnſon and Gaſnell, Gray's inn
Ludlow, William Arnold, Andover, grocer (Bremridge, Inner Temple
Mort, Thomas, and John Broadhurſt, Mancheſter, cotton ſpinners (Ellis, Curſitor ſtreet
Milner, John, Morley, woolſtapler (Lambert, Hatton garden
Mills, Mary, Newington cauſeway, cooper (Biſhop, Wood ſtreet
Metcalfe, Cuthbert, Kighley, money ſcrivener and cotton manufacturer, partner with John Horſfall, of Cullingworth, cotton manufacturer, in the firm of Horſfall and Co. (Blunt, old Pay office, Broad ſtreet
Nattraſs, John, St. John's chapel, Durham, innkeeper, Atkinſon, Chancery lane
Noble, James, Kenſington gravel pitts, brewer (Pratt, Gray's inn ſquare
Naern, Thomas, Wapping ſtreet, baker (Burt, Gould ſquare, Crutched friars
Pendleton, Robert, Lancaſter, merchant, late of the Iſland of Trinidad, and partner with John Benſon and Niven Moore, of Lancaſter and Joſeph Wilkinſon of the Iſland of Trinidad (Maſon and Wilſon, Lancaſter
Privatt, Richard, Leiceſter place, auctioneer (Salkeld, Hatton garden
Parkinſon, Robert, Deal, druggiſt (Holmes, mark lane
Picts, William, Boſton, ſacking manufacturer (Allen and Exley, Furnival's inn
Parith, James, Thomas Parith, James Stafford, and Thomas Hardwic, Holloway's end, Stafford, glaſs manufacturers (Taylor, Southampton buildings
Pollard, William Thomas, Aldenham, farmer (Hurle, Cloak lane
Quarton, John, High Catton, dealer (Hall and Bell, Bow lane
Richardſon, Peter, Wakefield, woolſtapler (Allen and Exley, Furnival's inn
Rankin, Richard, Leftwick, and William Oheil, Liverpool, merchants (Huxley, Temple
Riding, Grace, and William Riding, Andover, linendrapers (Kinderley, Long, and Ince, Symond's inn
Robinſon, James, Liverpool, ſilverſmith, (Kearſey, Hare court, Temple
Reynolds, Charles, Norwich, woollendraper (Steward, Norwich
Snowden, John, Plymouth, draper (E. and T. Dawes, Angel court, Throgmorton ſtreet
Simon, Louis, Great Bath ſtreet, Cold Bath fields, watchmanufacturer (Ruſſen, Crown court, Aldersgate ſtreet
Sandbach, William, Northwich, ſhopkeeper (Cheſhire and Walker, Mancheſter
Scott, John, and Charles Stewart Biſſett, Liverpool, liquor merchants (Lace and Haſſell, Liverpool
Sanderſon, Robert, Pailgrave place, money ſcrivener, (Constable, Symond's inn
Thompſon, William, Birmingham, ſtonemaſon (Johnſton, Temple
Tucker, Ewens, Debtford, Tallowchandler (Dugleby, Old City chambers
Todd, George, King's road, Sloane ſquare, builder (Richardſon, New inn
Twycroſs, Robert Harcourt, Brook ſtreet, jeweller, (Mayhew, Pulteney ſtreet, Golden ſquare
Varley, Samuel, Weſt Burton, Bedale, hoſier (Barretts, Holborn court, Gray's inn
Walford, Richard, Cheſter, porter brewer (Battye, Chancery lane

Watmore,

Watmore, William, New Windsor, innkeeper [Hurd, King's Bench walk, Temple
Walker, George, Braintree, shopkeeper [Luxmore, Red Lion square
Willett, Wilmer Mackett, Rushforth hall, Bingley, cotton spinner [Ellis, Cursitor street
Wootton, Charles, Bath, milliner [Cuttwell, Bath
Witherington, Charles, Rose, vintner [James, Gray's inn square
White, Joseph Smith, Witham, miller [Tyrrel and Francis, Guildhall

DIVIDENDS ANNOUNCED.

ALEXANDER, John, South Lambeth, coal merchant, May 26.
Alderson, Thomas, Middleton, cornfactor, June 6.
Battier, John Ralph, and John Jacob Zorilin, Devonshire square, merchants, May 29
Bevington, Timothy, Worcester, dealer, May 21 final.
Benson, James, Greville street, painter, May 22.
Barker, Thomas, Brickwall, Hatfield, victualler, May 26.
Bevington, Samuel, Gracechurch street, merchant, June 5. final
Bevan, Thomas, Haverfordwest, shopkeeper, May 23.
Brydon, John, Charing cross, printseller, June 5, final.
Burke, John French, Cannon-street, shipowner, May 26.
Booth, Thomas, and Thomas Ireland Blakeley, dyers, May 30, and separate estate of Booth, same day
Burcham, Charles, Stowmarket, butcher, May 28
Bristow, Charles, Newgate street, linendraper, June 23.
Burke, Jos. and Edward Newton, Thavies inn, merchants, June 12.
Burton, Edmund, Daventry, money scrivener, June 7
Bayley, William, Wakefield, ironmonger, May 28, final.
Bichnell, Samuel, sen. and Samuel Bichnell, jun. Southwark, soapboilers, June 23.
Cother, Benjamin, Wotton under Edge, clothier, May 16, final.
Cowley, Henry, and Joseph Taylor, Gainsburgh, merchants, May 23.
Curling, Benjamin, Stephen, Portland place, Clapham road, stonemason, May 26.
Colombine, Francis, David Colombine, David Colombine, jun. and Peter Colombine, jun. merchants, joint estate, June 15, and separate estate of each, June 16.
Cripwell, Thomas, Ruddington, hosier, May 18.
Crook, Obadiah Thomas, Weybridge, timber dealer, May 19.
Collingdon, John, Plough court, Lombard street, merchant, May 22.
Collings, Henry, and Richard Ireland Gifford, St. Philip and [illegible], Gloucester, skinners, separate estate of Collings, separate estate of Gifford, and joint estate, all on June 20.
Cowen, George, Hoxton town, oil and colourman, June 1.
Dixon, Thomas, Godalming, timber merchant, June 5.
Drake, William, Ratcliff highway, draper, June 9.
Dunne, Charles, Durweston street, surgeon, May 19, final.
Danson, George, and Abraham Simon Doncher Cuvelje, Lancaster, brokers, June 4.
Dawes, George, Rood lane, brandy merchant, May 29.
Emerson, James, bitton, brass, and spelter maker, June 2.
Fletcher, Solomon, Manchester, linendraper, May 18.
Farquhar, John, late of Cavendish court, now of Winchester street, merchant, June 9, final.
Fawcett, Thomas, Chilwell street, brandy merchant, June 5.
Fower, William, Heywood, innkeeper, May 30.
Field, Benjamin, Union street, Bishopsgate, upholsterer, June 12, final.
Forbes, Francis, Blackman street, druggist, June 30.
Gardener, Samuel John, Pitt street, corn dealer, June 9.
Gowan, George, Great Ormond street, merchant, [partner with Thomas Gowan and Matthew Coats Horsley, both of Calcutta] June 12, final
George, Benjamin, Pope's Head alley, Needly and Fishhook maker, June 2, final.
Grunieon, Charles, Abchurch lane, merchant, June 19.
Gwynne, David, Frith street, taylor, June 5.
Hornby, William, of Gainsburgh, and Sir Joseph Estaile, of Marden Ash, Knight, bankers, separate estate of each, May 15.
Hancox, Edward, Dudley, banker, May 25, 26, 28, 29.
Hook, Joseph, Bermondsey street, leather dresser, May 18.
Howard, Bradford, Wilts, carpenter, May 21. final
Hook, James, and William Turner, Bridge foot, Westminster, coal merchants, May 26. final.
Harker, Daniel Winchcomb, soapboiler, May 28.
Hayward, Walter, New Sarum, clothier, May 30.
Hall, Charles, Ellerton, horse jobber, June 12. final.
Hattersley, Richard, Doncaster, grocer, June 6.
Hamilton, James, and William Tulkington, Finch lane, merchants, June 9.
Johnson, John, and Joseph Cullingworth, Leeds, joiners, May 24.
Jay, Joshua, Norwich, coal merchant, May 30.
Ivory, Richard, St. Clement, Oxford, upholder, June 11.
Key, William, Duke street, Aldgate[illegible] man's mercer, May 1[illegible]. final.
Kershaw, John, Wakefield, druggist, May 28, final
Kenyon, Joseph, Wakefield, linendraper, June 18. final
Lake, William, [partner with John Lill] Bishopsgate street merchant, May 16.
Leeman, Joseph, of Peterborough, linendraper, June 5.
Littler, Joseph, St. Clement's Danes, jeweller, July 2.
Lonsdale, Nathaniel, and Thomas Thompson, Bedford street, Covent garden, woollendrapers, June 9.
Moseley, James, and James Rose, Birmingham, factors, May 18, and separate estate of Moseley, same day.
Macklan, Thomas, Rumford, innkeeper, May 29. final.
Moore, Richard, Halesworth, linendraper, May 18.
Medley, Edward, Parliament street, money scrivener, May 26.
Manson, Thos. Token-house yard, merchant, May 26. final
M[c]Henry, Bernard, Stratford upon Avon, mercer, May 23.
Medford, Macall. Finsbury square, merchant [partner with John Lisle, jun. of Philadelphia] May 26.
Mesle, Stanilas Grandclos, Finsbury place, merchant [trading in the firm of Grandclos, Mesle, Fils, and Co. June 5.
Morison, Alex. Walbrook, merchant, June 2.
Nanfan, Thomas, manchester, warehouseman, May 15.
Nimmo, Henry, Bristol, merchant, May 19.
Noble, Joseph, Walthamstow, brewer, June 5. final.
Nixon, James, Princes street, Hanover square, ironmonger June 2.
Nicholls, Walter, Bristol, soapboiler, June 9.
Owens, John. Cardiff, Tanner, May 16.
Offner, John Paul, Kingsland road, brewer, June 5.
Ocearson, Arnold, Fenchurch street, merchant, June 19.
Ormes, Edward, Southwark, cheesemonger, June 22.
Powell, William, William Sutton, and Michael Ward, Leeds, merchants, May 14. final.
Peach, Robert, Wakefield, woolstapler, May 10.
Parker, Joseph, Glamford Briggs, malster, May 18.
Parker, Richard, Little Argyle street, fishmonger and potatoe merchant.
Perkins, John, Huntingdon, banker, May 23.
Plowes, John, Leeds, merchant, May 23.
Pevice, John, Lower Thames street, Fishmonger, June 5.
Pyne, Thomas, Southwark, victualler, May 31.
Powell, William, Shepton Mallet, innholder, June 4. final.
Parslee, John, Holt, bookseller, May 31. final.
Pearson, William, Sunderland, printer, June 12.
Pratt, Peter, Hart street, Bloomsbury, glass seller, June 12.
Rothwell, John, Nottingham, hosier, May 18.
Rushforth, Benjamin, Marshall Hall, and William Rushforth of Crowstorne hall, May 21.
Robinson, James, Crosby square, merchant, June 19.
Richings, Stephen and Somerset Richings, Oxford, glovers, June 5.
Reeve, Edward, Leeds, linendraper, June 2. final.
Smirthwaite, Geo. Bush lane, merchant, May 12. final.
Sharples, Robert, Anderton, shopkeeper, May 10.
Simmonds, John, Canterbury, linendraper, June 5. final.
Starcy, Thomas, Newgate street, wholesale linendraper, June 5.
Self, Stephen, Halesworth, cornmerchant, June 11.
Sheppard, Samuel, Marlborough street, victualler, June 5.
Sommervail, James, Liverpool, merchant, June 9.
Smith, Peter, Farnhill, shalloonmaker, June 11. final.
Taylor, John, Manchester, merchant, May 18.
Taylor, Edward, Blackburn, linendraper, June 7.
Tuther, Thos. Perry, Holborn hill, linendraper, May 26.
Tomlins, William, Bridge road, Lambeth, coachmaker, May 29.
Taylor, Thomas, Birmingham, draper, June 2. final.
Thompson, Francis, Bow lane, warehouseman, May 5 and June 5.
Travis, Joseph, and Peter Nevill, Bolton le-moors, muslin manufacturers, June 1.
Towes, William, Gracechurch street, stationer, June 5, final
Turner, Samuel, Jun. Laytonstone, farmer, June 22.
Townsend, John, Ludgate hill, laceman, June 9.
Waring, Samuel, Perthire, miller, May 22. final.
Ward, Joseph, Brentwood, publican, May 18.
Wautock, Charles, and John Henry Lutterloth, Mark lane, merchants, June 5.
Whitaker, John, and James Pitt, Birmingham, coachmakers, May 31.
Warren, George, Coventry street, upholder, May 18.
White, Thomas, White yard, Rosemary lane, cooper, June 2.
Wilton, Richard, Bread street, June 5.
Walley, Thomas, Liverpool, merchant, June 5.
Windett, James, Norwich, grocer, June 14.
Wilde, James, John Watts, and John Boddy, Upper Thames street, sugar refiners, June 9, separate estate of Watts.
We[illegible], John, Somers' place, East, plaisterer, June 2.
Warner, Overy, Marlborough, stocking manufacturer, June 9. final
Westmacot, Richard, Mount street, sculptor, June 9.
Walton, James, Ashton under line, cotton spinner, June 15.
Whitly Thomas, Making place, Halifax, merchant, June 11.
Young, James, Southampton, linendraper, June 5.

A TABLE of the Prices of STOCKS in *May* 1804.

18 4	Bank Stock.	3perCt. Red.	3 perCt. Confols.	4 per Ct. Confols	5perCt. Navy.	5perCt. Loyalty	Long Ann.	Short Ann.	Imp. 3 per Ct.	Imp. Ann.	Irish 5 pr.Cent	Omnium	India Stock.	Engliſh Tickets.	Confolsfor Account.
May 1															
2	151	55¼	56⅞	72⅛	91⅝	95⅝	16 3-8					4½ 4 Pm.	172	18 5 0	56⅞
3	151½	55⅞	56⅞	71⅞	91⅛	95⅜	16 ¼	3 1-16	54⅞			4 3¾		18 5 0	56⅞
4	151½	55½	56⅝	72	91¾	95⅜	16 ⅜	3 1-16	54¼			4¼ 4¾		18 5 0	56¼
5		55⅝	56⅝	72½	92⅛	95¾	16 ½		54¼			5 4¾		18 10 0	56¼
7		55⅜	56½	72½	92¾	95½	16 ⅝		54¾	9 5-16		4¾ ¼ ½		18 10 0	56½
8	151	55⅝	55½	72¼	92¾	94¾	16 5-16		54¼			4½ 3½	172	18 10 0	56⅜
9	152½	55½	56½	72½	92⅝	95⅝	16 7-16		54⅝			4½ 4		18 15 0	56½
11	152¾	55¼	56¼	72	92⅝	95¾	16 ⅜		54¼			4 3¾		18 15 0	56
12		55¼	56¾	71⅞	92⅝	95⅜	16 ⅜					3¾ 4		19 15 0	56⅛
14	152¾	55⅞	55⅛	71⅞	92¾	95½	16 5-16		54¼			4 3½		19 15 0	56
15	152	55⅞	55⅞	72	92¼	95⅛	16 ⅜					5¼ 3½		19 15 0	56¼
16		55	56	72	92½	95¼	16 ¼		54⅛			3½		19 15 0	56½
18		55⅜	56⅛	72	92⅜	95¼	16 7-16	3 1- 6	54½			4¾ ¼		19 15 0	56¾
19	153	55½		72⅛	62¼	95½	16 7-16			9 7-16		4¾ ½	172	25 0 0	57
23	152¼	55		72	93⅝	95⅛	16 ¼		54¼			4¾ 3¾	172		56⅜
24	153½	55¼		72⅛	92⅝	95½	16 5-16		54¼	9 7-16		4			56⅞
26		55⅛		72¼	92⅝	95¾	16 ⅜	3 1-16				4			56¾
27															
28															
29															

T. BISH, STOCK-BROKER, *Old State-Lottery Office, No. 4, Cornhill, London.*

TO OUR CORRESPONDENTS.

WE are extremely obliged to our elegant and learned Correspondent Polomicus, for a communication which would occupy almost half our Number, but it is so utterly inconsistent with the nature and design of our production, that we must decline the employment of it.

The paper of Agricola Meridionalis on national policy, with respect to the sise of farms, in answer to Agricola Northumbriensis, will most probably be introduced into our publication for the ensuing month, but A. M. will be aware, that according to our established rule, it is much too late for the present.

It is with no small concern, we have noticed the spirit of controversy between two of our most intelligent and valuable correspondents, carried a little beyond the limits of perfect good temper and placability. We wish at the same time, that we give this gentle intimation, we could adequately express our gratitude to them for the disposition they have manifested to insure the reception of this work by the continued exertion of mature abilities.

The paper signed "Cato Redivivus," is of a political tendency, and cannot therefore be introduced into a production professedly devoted to rural affairs. If the noble person to whom we understand, we are indebted for it would impart to us the Agricultural History of his own estate, and the observations of his numerous tenantry, we should consider such materials among the most valuable communications of our work.

A. P. C. L. Rusticus, Columella, and Hortulamus are received.

We have to apologise to our Correspondent, who have favoured us with the articles in page 333 to page 336, for the following verbal errors:

Page 333, line 25, for *increase*, read *income*.
334, ——— 11 and 15, for *establishment*, read *inhabitants*.
334, ——— 37, for *on*, read *our*.
336, ——— 17 and 21, for *will*, read *shall*.