

LIBRARY OF
THE NEW YORK BOTANICAL GARDEN

C. W. C. Gibson, inv.
N. Y. Society Library

September 1899

R. W. Gibson, inv.

rebound April 1959





THE
FARMER'S MAGAZINE :

A
PERIODICAL WORK,

EXCLUSIVELY DEVOTED TO

AGRICULTURE,

AND

RURAL AFFAIRS:

1800.

Ye gen'rous Britons, venerate the PLOUGH,
And o'er your hills, and long withdrawing vales,
Let Autumn spread her treasures to the Sun. THOMSON.

FIFTH EDITION.

VOL. I.

WITHDRAWN
COURTY LIBRARY

Edinburgh :

PRINTED BY D. WILLISON, CRAIG'S CLOSE,
FOR ARCHIBALD CONSTABLE, EDINBURGH.

SOLD BY MESS. LONGMAN AND REES, LONDON; MR ARCHER,
DUBLIN; BRASH AND REID, GLASGOW; AND THE
PRINCIPAL BOOKSELLERS IN THE
UNITED KINGDOM.

1802.

W. O. B.

A695
V. 1

LIBRARY
NEW YORK
BOTANIC
GARDEN

T O

SIR JOHN SINCLAIR, BART^r

O F

ULBSTER, M. P.

SIR,

You cannot be ignorant, that the language of dedication is much oftener the vehicle of flattery than the organ of truth; and that, upon numerous occasions, in place of answering any useful or respectable purpose, it has been the means of turning both the author and his patron into ridicule. Were we permitted to indulge the feelings arising from private friendship, founded upon a knowledge of the amiable and respectable qualities you possess, these would furnish them enough, and to spare: For that, however, there is no occasion; the comprehensive mind, who planned and perfected the STATISTICAL ACCOUNT OF SCOTLAND, and afterwards completed the SURVEY of the RURAL ECONOMY of the whole kingdom, stands in no need of individual praise. When the benefactors of mankind are mentioned, the

A

name

name of that person, whose unequalled exertions have, in spite of difficulties; almost insuperable, been the means of contributing, in so remarkable a manner, to direct the industry, and promote the happiness of a great nation, will live in the minds of posterity.

Your rank in the scale of society, the high degree of respect in which you are so deservedly held, added to the zeal you have shewn for the improvement of British Agriculture, encourage the promoters of the present Work to hope, that under your auspices, it will meet with the same favourable reception from the public, that every thing, in which you have hitherto been concerned, has done. They at the same time flatter themselves, that this Dedication will convey to you, and to the Public, at once, a testimony of the high regard in which they hold both your private and public virtues. With these sentiments, which they will ever be proud to avow, they remain,

S I R,

Your faithful and obedient Servants.

LIBRARY
NEW YORK
L. T. FAN
1817/18

THE
FARMER'S MAGAZINE,
MONDAY, JANUARY 6. 1800.
(No. I.)

INTRODUCTION.

AGRICULTURE is of such antiquity, as to be coeval with the first formation of Society. Accordingly, in the remotest ages, and amongst every people of whom we have any authentic history, we find the cultivation of the earth forming the principal employment of the inhabitants, and by all of them held in such veneration, as to have its origin ascribed to some deity or other. The Egyptians ascribe it to *Osiris*, the Phœnicians to *Dagon*, the Greeks to *Bacchus*, and the Chinese to *Fo-hi*.

Though we are destitute of authentic materials, to enable us to speak, with any degree of certainty, as to the wants of men in the rudest ages, or the means of supplying them, we have good reason to believe that their sustenance was derived chiefly from the forest, the ocean, and the milk and flesh of the few domestic animals of which they were then in possession: accordingly, we find, that the districts abounding with fish, game, and pasture, were peopled, and became the abodes of men, long before any other. It is impossible even to form a conjecture how long men continued in this situation; probably it lasted many ages; indeed there are many nations, who, at the present time, have no better resources.

It is obvious, that, even in the most fortunate of these situations, many circumstances would concur to diminish, or even entirely to cut off, the usual supply. The fisher, for instance, whose sole dependence, for his own and his family's subsistence, rested upon his success in fishing, and

was prevented, either by a long continuance of stormy weather, or the fish forsaking the coast, from procuring what was necessary, must have suffered uncommon distress, and been reduced to the necessity either of removing to a different part of the coast, or attempting to procure subsistence in some other way. The unsuccessful hunter, and he who depended upon the produce of his flocks, from a scarcity of pasture, or diseases attacking the animal, would be in no better a situation.

The failure of any, or all of these resources, must not only have occasioned uncommon distress upon many occasions, but cost many lives, and operated to the almost entire extinction of the human race. It is obvious, that such a state must not only have been extremely unfavourable to population, but highly inimical to the introduction of any of the arts connected with the immediate and indispensable comforts of society. As a proof of this, we find, at this day, the nations who live in the manner above described, without arts, and very thinly inhabited; indeed, the population of many of the Indian nations of North America has decreased considerably within the last thirty years.

Frequent calamities, of the kind we have mentioned, would naturally lead men to seek after articles of food that could be procured with more ease, and, at the same time, afford a permanent supply throughout the whole year. Perhaps, the discovery of curing fish and the flesh of animals with salt, or otherwise, was the first step towards securing a stock of Winter food in these rude ages*; and, certainly, to people formerly unacquainted with the art of preserving these articles, it was no inconsiderable advance towards the improvement of their condition.

Amongst

* The Esquimaux, and many of the tribes who inhabit the sea coast, even to the southward of them, have no other food in Summer but small fish, and the flesh of whales, seals, &c.; a part of which they cure during that season, and eat it with train oil through the Winter.

Amongst a people unacquainted with the means of multiplying and rearing domestic animals to the proper extent, there must, even though they were possessed of the art of curing their flesh, have been a deficiency of food, which would, as population increased, become every day more apparent, and prompt them to search for other articles. The different kinds of fruit and herbs would, in all probability, be first had recourse to, and would form no inconsiderable addition to their former resources. They would also soon perceive, that both the milk and flesh of their animals were improved by good feeding during the Winter. This would naturally lead to the cutting and preserving of green herbage for that purpose: hence the origin of *hay*.

The cultivation of grain, and the other vegetables now in use, belongs to a more advanced period of society; and many ages must have elapsed, before men, who were destitute of any other helps than those derived from experience and observation, could attain even an imperfect knowledge of Agriculture. The sacred writings inform us, that NOAH understood Husbandry; of course he taught it to his descendants: and, as it is one of those arts, which, when once known, the wants of men will for ever prevent from being lost, we may naturally conclude, that it has continued its course, with various progress, from that period, down to the present day. Many circumstances have, no doubt, contributed to favour that progress in some situations, and retard it in others. The history of the Egyptians, Babylonians, Phœnicians, and many other ancient nations, also informs us, that they were well acquainted with Agriculture. The pretensions of the Chinese go still farther back. They claim, and not without some foundation, the precedence of all the countries we have mentioned. Husbandry, without question, flourished in China at a very early period, and was then deemed of such importance, and held in such respect, as to claim the first, and indeed the principal attention of the government. The Emperors, in order to impress all orders of the community with proper ideas of its importance, condescended, once a-year, to hold the plough, in presence of their chief nobility, the great officers of state, and

the whole inhabitants of the capital; a custom that is still kept up, and deserves to be imitated by all sovereigns*.

At a period so remote as the present, and without the means of correct information, it is a difficult task to ascertain to which of these countries the preference is due. The most probable conjecture is, that each of them is entitled to a share; and that the agricultural knowledge of which they were then in possession, in place of belonging exclusively to any one, was the united stock of the whole. Indeed, if we reason from what we know, and compare modern with ancient times, we will be satisfied that this was actually the case. The husbandry of Britain, originally rude and imperfect, has arrived by degrees at its present state. This, however, has not been owing to the superior skill, or the successful practice, of any particular county or district, but to the united talents and industry of the whole. Is there any reason to doubt that this was the case with the ancients? Be that as it may, we certainly derived the rudiments of the art from that quarter; and though, in the west of Europe, and especially in Britain, it has attained a high degree of perfection, truth, and a just sense of the benefits resulting from its introduction, oblige us to acknowledge the East as the school in which the first principles were taught.

Of the slow progress of Agriculture, and the difficulties encountered in the first attempts to cultivate the earth, we may
form

* In this place, it may be proper to observe, that the long duration of the Chinese empire, and form of government, which has no equal in history, as also the riches and prosperity of that country, are to be ascribed, in a great measure, if not entirely, to the perfection of their Agriculture, and the ample supply of every necessary of life thereby produced. Their rural economy being of the most minute and perfect kind, demands the labour of a number of hands, greatly exceeding what are employed in almost any other part of the world. The produce, however, is great in proportion; and, at this day, it is computed that nearly seven eighths of the inhabitants of China are artizans, and owe the necessaries of life to the labour of the remainder; this great majority being employed in arts, manufactures, and commerce.

form some idea. The instruments originally made use of were, undoubtedly, very rude, and such as could be managed by the hand only, perhaps similar to our spade and hoe. The want of metals, together with their ignorance of the use of them, especially iron, would occasion these instruments to be constructed of hard wood. Agriculture, under such circumstances, must have been attended with a degree of personal labour, of which, in our present improved state, we can form but a very imperfect idea.

Laborious as these operations were, and low and abject as the state of human nature must have been, there is a circumstance, connected with their history, strongly descriptive of the benefits arising from the united powers of men, even in the rudest ages; and from which we may date all the advantages enjoyed in the most improved state of civil society.

We are told, that, in ancient times, (and the example of several nations, at this day, leaves little room to doubt the fact), the whole soil was cultivated for the general benefit, every member of the community being obliged to contribute his personal labour and assistance during the seed time and harvest; in return for which, a due proportion of the produce was assigned him. Perhaps one cause of this would arise from the lazy indolent members of the community neglecting to cultivate a sufficiency of food for themselves and families, and by that means becoming a burden upon the industry of the rest. It is, however, probable that the most powerful motive for this union was owing to another cause.

It requires slender experience to convince men, in any stage of society, that the united strength of the whole exceeds, in a very uncommon proportion, the solitary unassisted exertions of individual labour. The fable of the bundle of rods, so expressive, and now so familiar, undoubtedly belongs to that period, and must have forced itself upon the notice of every mind capable of observation. Without all question, the collected talents and exertions of the individuals of which any community is composed, constitutes a common stock, from whence the happiness and comfort of the whole are derived. Any system, therefore, that was calculated to

bring these into action, must, by stimulating the indolent to exertion, have removed a load from the great body, and established a balance between the labours and comforts of the whole.

But, to return to the subject, many instances can be adduced of the imperfection of the instruments originally used in Husbandry, and the ignorance of the first cultivators. At a period so near our own times as the conquest of Peru, the inhabitants of that devoted country were found by the Spaniards in the situation we have described: every thing was done by manual labour, without any assistance from beasts of draught or burden: they turned over the earth with an instrument resembling a shovel, and afterwards dibbled in the grain: even now, there are many nations whose knowledge of Agriculture is not greater. The inhabitants of Chili make use of a piece of wood, of a crooked shape, something like our plough, with which they turn over the soil; the seed is then sown, and covered, by dragging bushes over it in place of harrows. In the province of Lithuania, a part of ancient Poland, their plough is of the same rude construction; and in many other parts of the Russian empire they are in possession of no better instruments. To come nearer home, the ploughs of the Shetland and Faro Isles, and of Ireland, are as bad, and their Agriculture equally imperfect.

The instruments originally used, and such as we have now described them, no doubt, went through all the different gradations, from the coarsest wooden shovel, to the plough. That instrument was used by the Egyptians at a very early period; it was also used by the Babylonians, the Phoenicians, and Greeks, and was well known in Palestine. The other instruments used in Agriculture would follow, as a matter of course: these, in their original state, must also have been extremely rude, and much time, and great labour required, before men were able to perfect what was necessary for harrowing, thrashing, and separating the grain from the chaff, and, lastly, of grinding it into meal. It would appear, that Agriculture had proceeded considerably to the westward, before it arrived at much perfection: It was reserved for the shores of the Mediterranean,

diterranean, to furnish posterity with the pleasing picture of a perfect Husbandry.

Italy, and the northern coasts of Africa, were, for ages, the favourite seats of cultivation, and the granary of the Roman empire; and, while that people were extending their dominion almost to the limits of the then known world, the bread-corn, and almost every other article of subsistence, necessary to the support of their numerous legions, were drawn from these parts. The perusal of Virgil's *Georgics* affords an undeniable testimony of the perfection of the Italian husbandry. In that interesting work, the wheel-plough, the harrow, the flail, the scythe, the reaping-hook, together with every other instrument now in use, are accurately described, as also the system of cultivation pursued. Considering the period at which Virgil penned his *Georgics*, and the great difference of climate between Italy and Britain, the similarity between the system he lays down, and our modern husbandry, is astonishing. Fallowing and irrigation, with their benefits, are particularly described, as are also the advantages arising from alternate green and white crops: His account of the management of the different kinds of domestic animals, is equally beautiful and correct.

To those who are capable of tracing effects to their proper causes, the advantages produced by the Roman conquests will be strikingly obvious; and though, at that time, their legions must have been considered as the scourges of the human race, by the people amongst whom they came, the lapse of ages, and the amelioration of the human condition, enables us to view them in a different light. The ploughman of Italy, when he became a soldier, and was sent into Gaul or Britain, would neither forget his original employment, nor the comfort he would derive from practising it in the country where he was stationed. The troops kept by Rome in the distant provinces, were seldom relieved by others from Italy, and as seldom shifted from the stations where they were first placed; in that way, their residence became in a great measure permanent; a circumstance extremely favourable, not only to the introduction, but to the perfecting of Agriculture.—The first attempts

attempts would no doubt be made to cultivate the hardiest of the Italian plants; a conviction that these could be matured in Britain, would lead them to introduce others more delicate; the natives of the country, struck with these advantages, would soon learn to imitate an example that promised so materially to better their situation: The same thing would happen with regard to the other arts, which, by the time the Roman forces were finally withdrawn from Britain, had made such progress, as to place the country in a situation enviable, when compared to what it was before the conquest.

From that æra we may with justice date the introduction of every thing connected either with the comfort or the elegance of life. In the savage state, and even in the first stages of civilization, the labour and exertions of every individual must have been required, during the whole year, to procure a scanty and precarious subsistence, barely sufficient to prolong a wretched existence: circumstances so adverse must, as has been already observed, not only have operated as a bar to the introduction of other arts, but chilled and rendered torpid every faculty of the human mind. Man, so situated, discovers little of those rational powers, by which, in the more advanced stages of society, he is so eminently distinguished. It is only in situations where the means of subsistence are ample, where the labour of a certain part of the community is sufficient to provide the necessaries of life for the whole, and where a considerable proportion of the remainder are placed beyond the necessity of toiling to procure the first necessaries of life, that the powers of the mind develop themselves; mental exertion and much bodily labour having, in almost every instance, been found incompatible, especially in cases where the sole support of the individual depends upon that labour. Accordingly, in the inferior walks of life, where the individuals have received little or no original education, and have, from their infancy, been doomed to a laborious employment, which has occupied the greatest part of their time, we meet with innumerable instances where the rational powers are nearly extinguished, and the individual, from never having been accustomed to think; and excessive hard labour,

is reduced to a mere machine, and in a situation little above that of the irrational animals.

To the introduction of Agriculture we are indebted for that dignified place now held by man in the scale of created beings. By having his subsistence secured, without the necessity of bodily labour, his solicitude has been in a great measure removed, and the powers of his mind allowed to expand, and raise him to that situation he was originally intended to fill. The same thing may be said of the other arts of peace: from the period that Agriculture came to be so well understood, as to enable a part to raise corn and other necessaries for the support of the whole, the attention of the remainder would be directed to other pursuits. There is a natural propensity in man to aspire to something beyond what he possesses at the time. The first wants of life being once supplied, and a permanent provision made for them, new desires would be felt. Warm clothing, and comfortable habitations, would be the first in order: fine clothes, and other elegancies, would follow in succession, together with science, literature, and the fine arts.

These new wants and desires, in many respects so different from the real wants and natural desires of man in his original state, have, in their progress, gradually produced such a change on the face of society, as none but those who have had an opportunity of perusing ancient history could believe. While a proportion only of the population is now required to provide the necessaries of life for the whole, the remainder are employed in arts, manufactures, and commerce, and in cultivating the sciences. To trace the progress of any, or all of these, does not belong to a sketch like the present; which has for its object only a delineation of the origin and progress of Agriculture, and its inseparable connexion with the comfort and happiness of the human race.

Hitherto it has been taken in a general sense, and its effects, as far as they have had a tendency to better the situation of mankind, have only been noticed. Taking it in another point of view, as connected with national wealth and greatness, it assumes a high degree of importance, and claims, in the present state of Europe, the most distinguished attention

tion from every well regulated government. It requires slender knowledge of the present state of society, to convince any one, that, without Agriculture, Manufactures, and Commerce, no nation can be either great, populous, rich, or happy. Agriculture, however, is the foundation upon which the other parts of national greatness rest; without it, none of the others can have place. Indeed, in taking a survey of the different states of Europe, it may be assumed as a principle, that the nation most distinguished for an extended and successful Agriculture, holds the highest place in the scale. The cause is obvious: In countries where grain and other vivres are plenty and cheap, the lower orders of the community marry early in life, and have numerous families; the population, and the number of hands necessary for carrying on arts, manufactures, and commerce, is by that means increased; and as in every situation the price of labour bears an exact proportion to that of bread and other necessaries, it never fails to follow, that, in every country where these are abundant, the manufacturer is enabled to bring his commodities to market at an easy rate, and in that way to undersell the merchant or manufacturer of another country, where living is more expensive, and, of course, the price of labour higher. Britain, at this moment, furnishes a striking example in support of this truth. Much of the preference given to British commodities in foreign countries, is, no doubt, owing to the skill of our tradesmen, and the excellence of their workmanship; but, when to that is added, the cheapness of the articles, and their superiority over every other, the preference they meet with in all quarters of the world will excite no surprize; and, as that circumstance enables us to supply other nations with articles of much more value than what we need in return, the difference is received in money, which, by giving us a command of resources beyond what is possessed by any other power, enables us to hold the exalted rank we now do in the scale of nations. While our Agriculture continues to flourish, this will be the case; an extension of it, under the fostering hand of Government, which has been already stretched out for that purpose, will increase our independence,

pendence, and make us at once formidable and respectable in the eyes of surrounding nations. To those who preside at the helm of state, the task is easy; and to minds possessed of benevolence, like theirs, the gratification is exquisite. To command armies, and direct the operations of war, requires no common degree of courage and firmness of mind: Even with these requisites, unforeseen events may derange the best concerted plans, overwhelm the best cause, and plunge a whole nation into the lowest abyss of misery. The mind, capable of drawing the attention of a numerous people to their true interests, and of reconciling an increased industry with simplicity of manners, and correct morals, meets with a nobler recompense. Conquest and success confer a name that dazzles the world; but it is inferior to that acquired by those who have turned their attention to instructing men in the arts of peace, of directing their pursuits, and endeavouring to increase their happiness. The name of an Alexander has, no doubt, inspired many a romantic mind; but that of any of the rural deities commands a more extensive, as well as a different suffrage. In the one we behold a conqueror, wading through seas of blood, and sacrificing every thing to his ambition; in the other we contemplate the benevolent care of an affectionate parent, anxious to promote the happiness, and direct the future prospects of his family.

HAVING, in this hasty and imperfect manner, attempted a sketch of the origin and progress of Agriculture, together with the benefits that have resulted from it, we think it necessary to say something of the plan of the present Work, and the motives by which those who take an interest in its success are actuated.

The present state of British Agriculture, and the known eminence of many who practise it as a profession, are such as might justly draw upon the individuals who now address the public, the imputation of arrogance, were they to presume to improve the system by any superior knowledge or abilities of their own. They think it necessary, in the outset, to say, that it is not upon their own knowledge and experience they rely for carrying on the work, but upon the communications

nications of respectable and intelligent farmers, who have made Agriculture their particular study; and who, in place of amusing the public with *opinions*, are able to bring forward *facts*, which, under the sanction of *experience*, can be immediately adopted in practice. A want of attention to this fundamental principle, has rendered the greatest part of what are termed regular treatises upon Agriculture useless. Many of these have been drawn up by individuals, who, from having resided during the whole, or the greatest part of their lives, in particular districts, have formed opinions, and imbibed prejudices, in many respects hostile to the cause they profess to promote. Such authors, in general, discover more anxiety for the fate of their own opinions, than for the advancement of knowledge; and, in place of selecting facts for the basis of their works, and, reasoning from these, their solicitude to form systems of their own, has led them to bend facts to theories, and involve themselves in perplexity and error. In that way, society, in place of being benefited by their labours, is plagued and misled by their controversy; and, instead of a true picture of the husbandry, either of a district, or the kingdom at large, we meet with little more than the opinions of the author, clogged with his prejudices, and a laborious attempt to form a system suitable to these.

To the genius of a few respectable characters we are indebted for a better system, founded upon experiment and attentive observation: a channel through which alone just ideas can be acquired, either upon this, or any other subject. Accordingly, of late years, many of the speculative opinions, with which we were formerly amused, have given way to the simple unerring truths taught by experience; and though much labour and investigation still remain, we have the satisfaction of knowing, that the path hitherto traced is upon solid ground; and are enabled to look forward, with confidence, to a period, (perhaps not a distant one), when the system will be much more perfect, and our doubts less numerous, upon many points of the first importance to Agriculture. That, however, is to be accomplished, not by the propagation of fanciful opinions, but by details of successful practice, and

in all cases having an example ready at hand to illustrate our precept.

It is well known, that, upon subjects purely speculative, where no experiments can be made, and of course no absolute certainty obtained, much diversity of opinion is met with, which, from their nature, might be expected, and will for ever be the case. The person who reasons best upon such subjects, will, in the opinion of men of sense, be thought to come nearest the truth, and his doctrine considered the standard, till some competitor appear, whose reasoning is more persuasive. This has been the fate of all speculative opinions since the earliest ages, and will continue to be so, upon every subject that affords no certain data to direct the research of inquirers. Converts, amongst enlightened farmers, are not to be gained by theories and opinions: Before we lay claim to their belief, the principles upon which our own is founded, ought to be explained in a satisfactory manner, and that, not by reasoning alone, but the evidence of facts. Upon the present subject, this is in a great measure in our power, as most of the important points connected with Agriculture admit of being illustrated by experiments. One fact, so established, is superior to a thousand arguments; and, instead of being liable to change, as all opinions unsupported by facts must be, it serves as an unerring guide; and, instead of an opinion, assumes the name and importance of a principle. Were this system uniformly pursued; were men only to relate facts, and communicate their discoveries in the language of truth and plain sense; to place them in the common stock, and allow time and experience to form a whole from these parts: agricultural science would soon assume a more perfect form; authors would have no ill-founded opinions to retract or defend; pride and error would be no longer opposed to truth, and the progress towards perfection would be certain and uniform.

With this maxim before them, the promoters of the present undertaking beg leave to assure the Public, that it shall be their study to encourage and promote, as far as possible, a spirit of inquiry and experiment amongst agricultural men,
and

and to record faithfully the result of such information as may be communicated to them. Of these inquiries and experiments, some idea may be formed from a perusal of the Queries published in the present number, to which they entreat the attention of all intelligent farmers, whose communications will be received with thankfulness, and have all due attention paid them. One thing it is necessary to notice: Many farmers, from a diffidence of themselves, are withheld from communicating their observations to the public, from an apprehension, that their style and manner of writing are unfit for publication: In that way, many facts and observations, highly interesting to society, are either entirely lost, or but very partially known. To such we beg leave to say, that, provided facts, properly authenticated, and sound observations, are furnished, the style of the author will be considered as a matter of inferior consideration. For reasons that will appear obvious, the present number cannot be considered as a fair specimen of the work; the intention of publishing being known only to a few, and the short time that has elapsed, since it was first announced, having prevented several valuable papers from being brought forward. It is however hoped, that enough has been said to explain the nature of the undertaking, and the intentions of those who promote it, and who have no other interest in its success, than what arises from a wish to render it useful to the community.

THE
FARMER'S MAGAZINE:

MONDAY, 20. JANUARY 1800.

(No. I.)

PART I.
ORIGINAL COMMUNICATIONS.

FOR THE FARMER'S MAGAZINE.

*Observations upon the additional Statistical Account of the parish
of HOUNAM, Roxburghshire.*

“ The whole body of persons in a country, whose abilities are applied to un-
“ fruitful employments, are exactly the same as if they were not in being; their
“ negative existence is even a heavy burthen to the country, as every individual
“ who only consumes, requires a productive individual, whose labour must insure
“ the existence of the former. ” *Tooke's View of the Russian Empire.*

IT has been a principle assumed by a great number of the
Clergy, that *large farms*, or, in other words, that an accu-
mulation of farms, in the hand of one person, is unfavour-
able to population; and this, except in a few instances, they
have taken for granted, without offering a proof. In the
21st volume of the Statistical Account of Scotland, p. 10th,
some additional observations, by the Rev. Mr *James Ruther-*
ford, are made to his former account of the parish of Houn-
nam; and we select the following passages, p. 16. *et seq.* up-
on which we mean to make our remarks.

“ The great and most obvious cause of the decrease of the inha-
bitants, within the last thirty or forty years, is owing to the (per-
haps too general) practice of letting the lands in great farms, and to
the mode of agriculture now almost universally adopted, especially
since sheep and wool brought so high a price, of laying down the
whole lands in grass. The lands formerly, from 40 to 100 years
back, were parcelled out into four times, at least, the present num-
ber of farms: there was also much of these farms in tillage: and,
consequently, a greater number of people could be maintained, and
more hands would be necessary for carrying on the labour of the
lands. So late as the year 1756, there were no fewer than seven
tenants, with large families, on the lands of Hounam, now all rented

by one tenant, who employs only one shepherd. There were also several small lairds: their lands are lost in the large farms, their names extinguished, and their mansions confounded in the dust.

“ Though this last cause operates most strongly in depopulating the parishes where the monopoly of farms is frequent, yet it is by some made a question, Whether it tends to depopulate the country at large, in any great measure? No doubt, the towns and villages will increase as the country parishes diminish; and therefore, in this district, the villages of Yetholm and Morbattle have of late considerably augmented in the number of inhabitants and houses; yet it does not seem to be in the same proportion as the country districts around them have diminished. In this parish, where the real rent is 2720*l.*, were the farms four times the present number, namely, 56, or the lands divided into farms of 50*l.* each, which would amount to much the same number, at least 54; in this case, there would be 54 or 56 tenants in the parish, instead of 14, the present number; and each of whom might have a large family of his own, and employ a shepherd, who might also have a family; and the other inhabitants and cottagers might be the same in number as at present. This, surely, would make a prodigious odds in favour of the population of the parish, and afford also a sufficient extra number, who would find it necessary to withdraw to the towns and villages. Country places, too, are more favourable than towns to the rearing of young children: here they are healthier, and thrive better.—Besides, hinds and shepherds, driven from their native abodes and manner of life, will be disheartened, and discouraged from marrying: it will be with difficulty they can afterwards find the means of subsistence. It is observable, that in England, which is far more populous and richer than Scotland, the monopoly of farms is little known. In many places of Scotland, particularly the district to which Hounam belongs, a single individual has not only united four or five farms into one, in one parish, but has several farms united in this manner, in different parishes. These circumstances, taken together, surely make it very evident, that the monopoly of farms, and increase of pasturage, is a great injury to the population of the country at large.”

The causes above assigned for the decrease of population, viz. the practice of letting the land in great farms, and the mode of agriculture adopted, of laying down the whole lands into grass, are obviously distinct and separate, and have no connexion with each other; for the land may be let in small farms, and the grass husbandry recommended by Mr R. remain; or, it may be continued in tillage, and still large farms be the prevalent practice. It does not follow, that a large farmer should have a greater proportion of grass than his smaller neighbour:—No; this is regulated by inclination, by soil, and by the state of markets; and to the two last every good farmer will pay particular attention, whatever may be the size of his possession.

If the generality of the parish of Hounam can be more profitably employed in raising grass, than under a system of tillage, which we understand to be the case, it may be concluded, without further demonstration, that the interest of proprietors, the advantage of tenants, and the good of the State, are all concerned in keeping it under that mode of management, because under no other can it make such returns to the proprietor or tenant, or add so much to the national capital. The only question remaining, is, How this management is to be carried into effect at the least possible expence, and with the greatest advantage to the public?

In every grass farm, we mean farms where sheep are bred, practical men know well, that, to attain perfect management, it is necessary to have different *hirsels* or flocks, so as the old and young, the wedders and ewes, may each be fed upon the ground most proper for their growth and constitution. This of course requires, that a sheep farm should be of considerable extent, otherwise the profit of the stock, instead of paying the landlord an adequate rent, or supporting the tenant in a suitable manner, would be consumed by the wages of numerous idle shepherds, for whom there would not be half employment.

It has long been held as an axiom, that, to make manufactures flourish, it is necessary to simplify labour as much as possible, and, by the aid of machinery, to carry on work at the smallest expence. This, if applied to agriculture, which several political writers have considered as the first of manufactures, it must be admitted, that the system of management which makes the greatest return at the least charge, is the one most consistent with the welfare of those engaged in that profession. We have already said, that the sheep husbandry appears most adapted to the soil and climate of this parish; and, from what is mentioned above, it follows, that, as this husbandry can only be carried on with advantage where the farms are of sufficient extent to provide for different hirsels or flocks; consequently, that small farms, under these circumstances, are a certain loss to the landlord, unprofitable to the tenant, and detrimental to the public good, as they do not admit the same justice to be given to the feeding of sheep, as those of a greater size.

This brings us to the point at issue—the proper size of a sheep farm. It is evident the answer must always be regulated by the nature of the soil, the kind of sheep kept, the facility of raising winter crops for the support of the stock, and by other material circumstances. One general answer, however, may be given, viz. That in no part of the south of Scotland, since rents rose to their present pitch, can a farm of 200l. rent be called too large. We should rather be inclined to think such a one too small for a stock farm, more so if any

one part of it is employed in raising hay or winter crops for supporting the sheep during inclement weather. The rent of Hounam is stated to be 2700l., which allows it to be divided into 13 or 14 farms, of such a size as can be managed in a way that will at once prove beneficial to the individuals concerned, and to the community.

In this place, Mr Rutherford objects:—By farms of this size, you decrease the population of the country, which would be benefited and increased considerably by dividing each of them into four. This objection does not touch upon the inquiry,—Whether these 56 farmers will pay as much rent to the proprietor?—Whether they and their families will live in the like comfortable manner?—and, Whether the national stock will be equally benefited, or the like quantity of food provided to the public by their labours (which we look upon as of the first importance)—as will be done by those of the other description?

These points are passed over, and the number of inhabitants upon the premises is supposed to be the sole criterion by which the management is to be judged.

Were this admitted as the standard, every improvement in machinery, for facilitating labour, would be censured and condemned. The thrashing machine, for instance, which is deservedly ranked amongst our most useful improvements, ought to be destroyed; spinning machines, saw mills, and numberless other contrivances to diminish manual labour, would deserve to be considered as ruinous and destructive, upon the supposition of their having a tendency to depopulate the country.

There is certainly a mischievous, as well as a useful population. We call useful, what is necessary for carrying on the trade, labour, manufactures, &c. of the country; but where more inhabitants are to be found than those that can live, or, in other words, procure employment, we are certainly warranted to class them under the other description. An increase of population, without an increase of resources, must always be considered as hurtful. But as Mr R. wishes to fritter down the farms of his parish, in order to increase population, what would he think of dividing the *cure*?—a measure that would, in all probability, add several more families to the population. This idea, however ridiculous it may appear, is exactly in point with the reduction of farms; but, as we believe he is perfectly able to discharge the duties of his office without any assistants, we do not think the public good would be promoted by such an increase.

Mr R. seems ignorant of his subject, when he proposes to reduce the sheep farms to the size of a 50l. rent. Instead of 56 tenants, and 56 shepherds, all with large families, the probability is, that there would be only 56 men, who would necessarily

cessarily be both tenants and shepherds, and a great part of them without any family. He seems also ignorant of the return which a 50l. farm would make to the possessor, or what would be the work upon it. Were the tenant upon such a farm, under the present rents, not to keep his sheep himself, he would be a Gentleman at first, having otherwise little or nothing to do, and a Beggar afterwards, when his stock was exhausted, which would soon happen.

We now offer a few remarks upon the general causes which affect population, or occasion an increase at some periods, without being followed by an increase of trade and manufactures.

The number of people in any country, will, for the most part, be regulated by the price of provisions; with this exception, that if there is a great demand for labour, and wages rise in a proportional manner, population may progressively increase, so long as the workman can support himself and family by his earnings. When labour falls in value, without being accompanied by an equal fall in the price of provisions, it is a sure sign of the decrease of trade, in consequence of which a number of people are thrown out of employment. This occasions emigrations from one district to another, perhaps from one country to another; and these emigrants settle in such places as can give them employment, and where the value of labour is equal to what is required for the subsistence of themselves and families.

If all the people born in a parish, county, or kingdom, were obliged to reside in that parish, county, or kingdom, where they drew their first breath, it is evident the reasons above assigned, as influencing population, would not operate, and that an unnecessary or mischievous increase would, in many cases, be the consequence. The surplus, which is constantly thrown off from particular districts, where labour is scarce and wages low, for the supply of other districts, where employment can be got with greater facility, or where the flourishing state of trade and manufactures have raised the rate of wages, effectually prevents such an increase from taking place, and corroborates what we have already mentioned, respecting population being at all times regulated by the cheapness of provisions, or, in other words, by the means possessed for procuring the necessaries of life.

The scale of population may also, at certain times, be locally affected by a cause which is seldom attended to. Let us suppose the whole lands in a parish the property of one man, and that they are all out of lease at one period. The great body of the people in country parishes being made up of farmers servants, their number, under the above supposition, may be considerably increased by a total, or a partial change of tenants,

When the lands are re-let, without the least alteration in the size of the farms. The generality of farmers, when they commence business, prefer young men, or those lately married: hence, for a number of years afterwards, such a parish will have an increased population, and the scale will not return to its ordinary level, before the families of those servants are able to work, and remove to other parts, where their labour is wanted. We know of several farms precisely under these circumstances, and are acquainted with others, where the scale of population has been reduced, at particular periods, without the least alteration having happened in the size or management of the farm. In short, it is obvious that population may be augmented, or decreased, without any of the causes assigned by the generality of the clergy having operated.

One thing may be also noticed, which has probably occasioned several of the clergy to think large farms unfriendly to population; that is, the change which has generally taken place in the best cultivated counties respecting the number of cottagers. As all tenants are taken bound to support and leave the buildings in habitable condition at the end of their leases, and as the expence of repairs is now very great, it is found more eligible to keep up no more than are requisite for accomodating the ordinary farm-servants. Hence mechanics, weavers, tailors, hedgers, ditchers, labourers who work at large, widow women, &c. are now removed to villages, and take employment where they can find it. This, of course, has contributed to lessen the number of people resident at farm-steadings, especially at the large ones, where the classes above described, in former times, usually resided; while, at the same time, the population of the parish is in no respect decreased.

The population of Scotland, by the returns in the Statistical volumes, appears considerably increased; and this increase, as might be expected, has chiefly taken place in the manufacturing districts, where the value of labour is high, and the demand for hands greatest. In the counties entirely dependent upon husbandry, it is obvious, population must always remain nearly stationary, unless some great and general change take place in the system of management, or in the usual mode of conducting farm-labour. The introduction of two-horse ploughs had something of this effect, though perhaps not so much as was imagined: an increase of luxury, by reducing the quantity of arable, and increasing that of pasture land, may also locally affect the population of particular districts. The returns from the agricultural counties, however, shew that there is not any material alteration in their population since 1755; and in Roxburghshire it is increased.

Upon the whole, it appears, that the interest of the proprietor, the comfort and usefulness of the tenant, and the good of the community, require that sheep farms should be of considerable extent; and that if the suggestions of Mr R. were reduced to practice, the rent of the landlord, the condition of the tenant, and the advantage of the State, would be lessened and injured, while no benefit could possibly follow; unless the number of idle men and women, uselessly living upon the premises, and consuming the produce of the fields and the flocks, could be viewed as such.

We have dwelt longer upon this subject than was intended; but we trust that its importance, and the manner in which it has been discussed by a majority of the clergy, will be considered as a sufficient apology.

N.

FOR THE FARMER'S MAGAZINE.

On Manorial Claims.

[The following interesting Essay, on the operation of Manorial Claims, has been transmitted to us by a worthy friend in England, who is intimately acquainted with every branch of Rural Economy, the prosperity of which he justly views as a most important national concern. To our Scottish readers, the subjects here discussed will be almost new; consequently, the perusal of this paper cannot fail to afford them much information. While we earnestly wish the removal of these grievances from our southern neighbours, we at the same time exultingly contemplate the constitution of this northern part of the Isle, which has happily ordered matters in a way more conducive to general advantage.]

It is not the intention of the writer of these desultory hints, to enter much, if at all, into the Origin and History of Manorial Claims; but to express a few ideas, as they may arise, on the bearings and operation of such claims on the existing state of society in this island; a state surely very different from that in which the origination of manors found it, in regard not only to population, but to tenures and industry.

These privileged claims or rights may be considered in several points of view, viz. 1. The Game of the Manor or District. 2. Suit and Service to Freehold, and more particularly to Copyhold Courts. 3. Mill Sokes. 4. Waste, or Common Lands. 5. Minerals. 6. and lastly, Courts Leet, and Courts Baron.

1. The *Game of a Manor*, i. e. deer, hares, partridges, pheasants, and moor game or grouse, &c. was, at a remote period,

considered as the property of the Crown, but granted with the manor itself to an inferior lord, under the ancient forest laws, and has been, for many centuries, a fertile source of strife and discord to the more spirited inhabitants of this and other countries. The regulations concerning this subject of legislative wisdom, might seem indeed to have been invented with no other view; for though it were not probable that the lord of a manor, so granted, would have any dispute with his superior or grantor, yet the opportunities of harassing his inferiors, by efforts of petty tyranny, were such, as perpetually to embitter the minds, and indeed ultimately to debase the character, of both the oppressor and oppressed. After a part of the lands within the manors had been alienated so generally in fee-simple during the reign of Henry VII. and in subsequent times, the purchasers of such lands, or their heirs, now become freeholders, very naturally conceiving themselves interested in the game, in proportion to their acquisitions of landed property, except in cases of free warren; the difficulties of preserving the monopoly of this object of diversion and luxury, in the hands of the manorial lords, were much increased. Hence arose the apparent necessity of applying to the Legislature for a new code of game laws, the partiality and injustice of which are not more glaring than their absurdity.

This famous code is ably explained by that excellent commentator on the Laws of England, Sir Wm. Blackstone, in the following words, (Vol. IV. p. 408. 4th edit.) “ Another
 “ violent alteration of the English constitution, consisted in
 “ the depopulation of whole counties, for the purposes of the
 “ King’s royal diversion; and subjecting both them, and all
 “ the ancient forests of the kingdom, to the unreasonable
 “ severities of forest laws imported from the Continent,
 “ whereby the slaughter of a beast was made almost as penal
 “ as the death of a man. In the Saxon times, though no man
 “ was allowed to chase or kill the King’s deer, yet he might
 “ start any game, pursue and kill it upon his own estate. But
 “ the rigour of these new constitutions vested the sole pro-
 “ perty of all the game in England in the King alone; and no
 “ man was entitled to disturb any fowl of the air, or any beast
 “ of the field, of such kinds as were specially reserved for the
 “ royal amusement of the Sovereign, without express license
 “ from the King, by grant of a chase or free warren; and
 “ those franchises were granted, as much with a view to
 “ preserve the breed of animals, as to indulge the subject.
 “ From a similar principle to which, though the forest laws
 “ are now mitigated, and by degrees grown entirely obsolete,
 “ yet from this root has sprung a bastard slip, known by the
 “ name of the Game Law, now arrived to, and wantoning in

“ its highest vigour ; both founded upon the same unreason-
 “ able notions of permanent property in wild creatures ; and
 “ both productive of the same tyranny to the commons ; but
 “ with this difference, while the forest laws established only
 “ one mighty hunter throughout the land, the game laws have
 “ raised a little Nimrod in every manor. And in one respect
 “ the ancient law was much less unreasonable than the mo-
 “ dern : for the King’s grantee of a chase, or free warren,
 “ might kill game in every part of his franchise ; but now,
 “ though a freeholder of less than 100l. a year is forbidden to
 “ kill a partridge upon his own estate, yet nobody else (not
 “ even the lord of the manor, unless he hath a grant of free
 “ warren) can do it, without committing a trespass, and sub-
 “ jecting himself to an action.”

The partiality and injustice of this code is further apparent, in the attempt of the lords of manors to preserve the monopoly of the game in themselves or their deputies, by limiting the right or qualification to kill it, to the owner of 100l. per annum ; while a man, having any quantity of land less than the above partial and unjust limitation, is prohibited from killing a hare or a partridge in his own field or garden. The absurdity of the game laws is obvious ; because the very man who cannot kill a hare on his own field or garden, can prevent the one qualified by law from killing it there, by action of trespass and damages, and previous discharge from his premises. It is necessary here to call the attention of the reader to the absolute impossibility of rendering any law, authorising a marauder to enter the property of another man, under pretence of killing game, compatible with the sacred security of property, so imperiously demanding the attention of every legislator. But, in addition to this, what ought to be the character of that law, which demands ten times as much to qualify a man to kill a partridge, as it does to qualify a juror to kill a man ? In fact, since all these laws, instead of preserving the game for the rightful owner, have been fabricated in the genuine spirit of a grasping monopoly, the present property in the game is completely vested in the hands of the nocturnal poacher, who has, in most manors, even the *undisputed* possession : Indeed it is a necessary consequence of all unjust laws, to create the very thing they are intended to prevent.

On the whole, these game laws form a grievance to the cultivator of the soil, not only because he is generally debarred from any part of a pleasure which the game on his farm might occasionally furnish, and to which he seems to have so natural a right ; but because his crops and fences are generally injured by men, with their horses and dogs, taking liberties utterly

inconsistent

inconsistent with that security of property which ought to be held inviolable in all civilized countries.

All this injustice and partiality, all this absurdity and grievance, would be effectually banished, were the whole code of the game laws repealed, and a new law enacted, founded on the principles of justice and equity; whereby the *absolute* property of the game should be vested, as of common right it ought to be, in the proprietor of the land it can be killed on; whether such land be a rood, or an acre; whether a garden, a field, or a wood. It will appear, from the above quotation from the learned and laborious Blackstone, that this would be nothing more than a revival of the ancient Saxon or British law, which for ages had thus operated before the irruption of the Norman Conquerors; by whose fatal success all the excellent and free institutions of Anglo-Saxon policy were swept away, and on the ruins of which those tyrannous maxims of the feudal and military system, were firmly established. A reasonable objection to this repeal can scarcely be started; and the writer of this essay well remembers it as the decided opinion of that illustrious Peer, the late Marquis of Rockingham; the situation of whose principal mansion, in the vicinity of populous towns, rendered all attention to the preservation of the game from poachers almost a joke, on the principles of the game laws, which, in addition to its obvious equity, might probably create a wish in him for the restoration of the more just and rational Saxon law.

2. *Suit and Service* to freehold and copyhold courts, to be performed in kind, as was more generally the case formerly, were of two kinds, viz. Free or military, and other services appendant to the tenant in free socage; or, in other words, the holder or owner of lands in fee-simple of inheritance, anciently bokland, or bookland, *q. d.* Lands held by written charter or deed, now called Freehold. These services being considered as in some degree honorary and certain, were commuted by an easy payment, under various denominations, such as quit-rents, free-farm rents, castle-guard rents, &c. &c. which it is not in the power of the lord of the manor to increase. The other kind, viz. mean or base services appendant to the tenant in villain socage, or the holder or owner of lands, by copy of the court roll, at the will of the lord of the manor, and, according to the custom of the same, anciently called *folkland*, now *copyhold*. These services consisted in cultivating the domain of the lord of the manor, and many other laborious operations, which being more important and substantial, were of greater value, and of course commuted, by payment of annualrents of much greater amount, and by fines, certain and uncertain, to be paid by the vassal or copyholder, who consequently is in a
situation

situation at this day much inferior to that of the freeholder, whose payments are small and certain. These annualrents, or payments, are in some copyhold manors doubtfully imposed, and fines are levied at the end of a term of years, which, in certain situations, are so high, as to render the security of property, expended in improvement of various kind, very dubious. These fines have an indefinite prospect on any future value the estate may possibly arrive to, by improvements, however extensive or lucrative, to the great discouragement of such improvements: in short, they are such as, with the suit and service, &c. usually exacted, leave the copyholder in circumstances little removed from the state of absolute vassalage. The heritors of Durham, and some other parts of the country, are, in some sort, of this description; where the lord of the manor seizes, for his own use, the best horse, bull, or cow, or other beast, which he can find on the premises at the demise of the holder. Under this disagreeable tenure, are also levied fines on death, or alienation, of various kinds and degrees; all which, with the burdensome forms of some of the courts, the incidental expences of various kinds, and the extortions of the attorney stewards, who are continually racking their brains to invent pretences for increasing their fees, &c. together with the very galling idea and sense, in the mind of the holder, of the debasing nature of this species of dependence,—form a burden and grievance on the subject, loudly calling for the interference of any Legislature which has a sincere intention of acting on principles indissolubly connected with the public welfare. It were idle to insist on any objection to a general alienation, by law, of all rights or claims of this nature, by which every body would be gainers, and nobody losers: for it is the duty of individuals to do this voluntarily, as much as in them lies: and if individuals refuse, it is the bounden duty of the Legislature, on a general scale, to do any thing, and every thing in its power, towards the removal of grievances which may and ought to be removed, and to which nothing can be objected, but the pride and caprice of a few individuals; justice being no further concerned than in pecuniary compensation. The Crown has lately set a high example, by the sale of many, if not most of its claims of this nature, at a fixed and moderate rate; an example which it is very desirable may be enforced on all inferior lords, who indeed themselves, it must be presumed, in fact and law, held only of the Crown. A curious instance of sacerdotal selfishness on this head, occurs from Sir Thomas Smith's (secretary to Edward VI.) Commonwealth, b. 3. c. 10.; where he tells us, that "the holy fathers, monks, and friars had, in their confessions, and especially in their extreme and deadly sickness,

" convinced

“ convinced the laity, how dangerous a practice it was, for one
 “ Christian man to hold another in bondage: so that temporal
 “ men, by little and little, by reason of that terror in their con-
 “ science, were glad to manumit all their villains. But the said
 “ holy fathers, with the abbots and priors, did not in like sort
 “ by theirs; for they also had a scruple in conscience to im-
 “ poverish and despoil the church so much, as to manumit such
 “ as were bound to their churches, or to the manors which
 “ the church had gotten, and so kept their villains still.” Judge
 Blackstone farther observes, on the subject of copyholders, that
 their estates, in strictness, remain subject to the same condi-
 tions and forfeitures as before, though, in general, the villain
 services are usually commuted for a small pecuniary quit-rent.

3. *Mill Sokes* now claim attention, under which the owner
 of a mill claims the right of compelling all the inhabitants of a
 manor to grind their corn at his own mill, to the entire exclu-
 sion of any competitor; thereby possessing a monopoly of that
 most necessary and lucrative operation, the grinding of corn, at
 a price or multure in some instances almost arbitrary; for ap-
 peals to courts of law are now, by one mean or other, so ex-
 pensive, as scarcely to deserve the name of a remedy even when
 successful. This soke has been severely felt as a hardship, by
 some of the larger towns in particular, and involved the in-
 habitants in tedious and expensive litigations with the proprie-
 tors of mills; in which it has not unfrequently appeared, that,
 by the increase of population, and the negligence of the millers,
 the people have been left without flour for many days together,
 to the serious inconvenience of their families, and under which
 inconvenience whole townships have long laboured without re-
 dress. It is true, that these mills, like many other things which
 are now justly considered as abuses, had originally their use;
 having been formerly erected by the lord of the manor, for the
 use of the inhabitants thereof, who, being then in general his
 own tenants, may well be supposed to have been bound, and
 that equitably, to make use of no other mill than his own.

But the case is at this time materially altered in populous
 towns and districts, where the lord of the manor, for a valu-
 able consideration, having long since alienated part or most of
 the lands to a great number of freeholders, may justly and
 reasonably be considered as without any right to such a mono-
 poly over men who are no more his tenants, or of granting
 such a right to any other to whom he may convey his proper-
 ty in the mill. This claim, or right, if it can deserve such an
 appellation, has long been, and still remains, most fertile in
 grievous impositions, and almost intolerable abuses, in many
 parts of the island; and, in respect to which, the very nature
 and

and constitution of a free country must and ought to find a remedy: For how can a constitution be defined, that redresses not the grievances of the people, nor protects its subjects from the vexatious impositions, unjust extortions, and feudal tyranny of a few individuals?

Many thousands of pounds have been vainly spent in lawsuits, on this very harassing cause. In the case of one very considerable manufacturing town in the county of York, the inhabitants appeared to have a near prospect of emancipation from these *grinding shackles*, as they had succeeded in proving the insufficiency of the mill to grind the quantity required; when, by a stratagem, (for stratagems occur in law, as in war), the plaintiffs put them off the scent, gained time, from the common procrastination of the law, to rebuild the mill, and entirely defeated them. The prosperity of the town alluded to has been, however, materially affected, in consequence of the above mentioned confirmation of the claim of *soke*.

4. *Wastes, or Common Lands*.—These will be found, on due reflection, subjects worthy of all the attention that can be bestowed on them; and involving objects of the first importance to a nation, situated, like this, between an increasing population, on one hand, and an inadequate supply of produce on the other.

In cases of intended enclosures of the waste or common lands, the lord of the manor usually makes a claim on them to a considerable amount; which, being in some degree undefined, gives rise to much altercation, difficulty, and discouragement, in that important work; so that the adjustment of his claim frequently raises an obstacle which entirely defeats the plan of enclosure, so beneficial to the public, and leaves the whole in their old unproductive state. For it is well understood, that the opposition in a committee of Parliament, which the lord of a manor generally has the power of raising, will be so far prevalent, as to leave the commoners little chance of succeeding against him. This, added to the usual practice of appointing one commissioner out of two or three, together with the *tithes*, raise an almost insuperable bar to the enclosure, and consequently, improvement, of a great proportion of the waste lands in the island. The tithes are worse, if possible; for the hatred of the commoners, in general, to that creeping abuse, is so great and increasing, that, between their aversion to them, when taken in kind, and the sacrifice of a fifth to a tenth part of the waste to their exonerations, they are rendered, in many instances, perfectly indifferent about any enclosure at all.

The case of the waste lands in the manor of Hatfield, near Thorne, in Yorkshire, is a proof of the above observations; where the commoners, after numerous and heavy expences, in
fruitless

fruitless endeavours to reconcile all jarring interests to the desirable measure of enclosing some thousands of very improveable land; after having so far succeeded, as to secure the usual majority of common rights or claims; after having waved their objections to the payment of tithes in kind, in consequence of the tithe-holder's refusal of any terms of commutation; still the exorbitant, and perpetually increasing demands, of the agent of the lady of the manor, entirely defeated the whole scheme of this enclosure, which might have been the means of advantage and comfort to thousands of families, not to mention its obvious public benefit. All these are given up to the avarice or caprice of an individual, and to the idea, strongly inculcated, of the unlimited manorial power to oppose, with success in Parliament, any application for enclosure. Is this law? or is it equity? No: but it is a custom, and a custom which, being destructive of the common right, and threatening misery and famine to the community, demands an immediate alteration. Can any thing be more absurd in law? Can any thing be more subversive of every principle of political œconomy, than the very existence of an undefined power in individuals to prevent such plans of peculiar and obvious utility to the public, as enclosures of unproductive land in times like these, when, from various causes, the price of articles of the first necessity, the common produce of the country, is raised so high, as to be almost out of the reach of the lower classes of the community, and almost to portend the extinction of them, and their helpless offspring, by thousands?

5. *Minerals*, such as Coal, Stone, &c.—Some of the metals, as iron, lead, &c. are in many places claimed by the lord of the manor, and in nearly the whole of the waste or common lands; sometimes to the great injury of the owners of enclosed lands, and frequently of the community at large, by preventing the opening of collieries in convenient situations, by the enterprize of individual freeholders. Under this claim, when the lord of the manor takes into his head to bore, or to make trials, by digging, &c. in search of coal or other minerals, he can enter property, and do what he pleases of that sort, in spite of all opposition, even upon the most favourite and valuable spots, (house, garden, &c. excepted); and these frequently have been undermined, and almost ruined, while the owner is obliged to submit to it for a compensation, which, though the disturber be liable to pay to the amount of the mischief done, yet such compensation is too often much beneath a full, fair, and equal remuneration for the damages. This claim forms another prominent feature of that stern and tyrannous countenance, which, first by arms, and violence, and rapine, in the days of chivalry;

ry; then by what was called law, and now by custom and servility; manorial power has been enabled to assume, to the utter dismay and abasement of an humble, useful, and patient yeomanry.

6. *Courts Leet, and Courts Baron*,—to which all the male inhabitants of a manor, with some exceptions in favour of the clergy, &c. are deemed liable to attend, upon summons, for the purpose of paying rents or fines, performing suit and service, homage, &c. inquiring into nuisances, &c. chusing juries, and for other matters pertaining to the manor, are still regularly called in some freehold, and generally and frequently in copyhold manors, but at very distant intervals, *et pro forma*, in other freehold manors. But they are now of so little importance in themselves, and have so little power to do either good or harm, that it is not worth while at present to dwell on them, further than to say, that their jurisdiction and powers are so completely absorbed, by the Quarter-Sessions and other courts of law, that their total extinction would by no means be felt as a loss by any one, but the attorney-steward, who generally contrives to make the holding of manorial courts productive of some emolument to himself.

After due reflection on these subjects, the reader will perceive, that many things in the manorial, or feudal system, though, as parts of such a system, they may have had their use in former times, are now, if not intolerable, yet very injurious abuses in many instances, and in some almost destructive of the common rights of the people.

The power, almost arbitrary, of the lords of manors to prevent Enclosures; the Tithes, with large quantities of land in mortmain; the Entails, links of the same chain,—all tend to preserve the monopoly of the very soil from which we derive our being, in the hands of a very limited number of proprietors; and thereby leave so small a proportion of the lands in the island in a state possible to be brought to market, though ever so desirable to all parties, that the price of land, both in fee-simple, and in rent, has advanced, and is advancing so rapidly, as to be almost out of the reach of the most laborious and patient industry of the cultivator, and to banish the most distant hope of encouragement, from the possibility of becoming a freeholder in his turn; a hope so essential to be cherished in every free state, “the cheap defence of nations,” the high reward of merit and useful industry, that industry by which we all live and breathe.

If the attention of the people were wisely turned to their own concerns, means might be found quietly to remove all abuses, of whatever nature; to establish the sacred rights of property, on her ancient, genuine, and liberal foundations; to give

give stability, action, and effect, to the rights and duties of mankind; and, moreover, to secure to all, peace, and smiling plenty, instead of war, famine, and pestilence. These blessed objects might be attained at less expence than that of a single campaign, and I trust will soon engage the serious attention of the Legislature.

Finally, it may plainly be demonstrated by reasoning, that the extinction or commutation, by some means or other, of tithes, manors, and entails, is absolutely necessary in the present state of population and industry; of which salutary object, a patriotic and independent House of Commons will have no difficulty in the execution, whenever it shall, in its wisdom, see it in the light of a proper, just, and necessary measure. *W. P.*

FOR THE FARMER'S MAGAZINE.

Letter from a Scots Farmer, who lately made a Tour through England, to his Friend in Edinburgh.

LETTER I.

THE question, Whether travelling, or reading books, contributes most to the information of mankind?—has been often discussed, and plausible arguments have been stated upon both sides. Whatever ought to be the result of the question, it is obvious that very few persons have an opportunity of enjoying the first mode of instruction, while the other is within the reach of the greatest part of mankind. If, therefore, those who are favoured with a perusal of the book of life, were generally to present the result of their observations to the public, it would be of material advantage to other classes, whose means of information are necessarily more limited.

During my late journey through different parts of Scotland and England, a journal was kept; wherein was marked down every thing of importance which occurred in conversation, or came under our inspection. As you wish to see an abridgement of these remarks, I take the opportunity of a leisure day to present a short detail of our tour. You must not expect that I am either to describe great men, or great houses: No, these lay out of the sphere of our observation. I will confine myself to a cursory description of the state of the country through which we passed, with occasional remarks on subjects connected with its improvement. If this is in the smallest manner gratifying to you, the time bestowed on this letter will be considered as well employed.

It is hardly necessary to say a single word concerning the vicinity of your city, or the state of the country within twenty miles thereof, as you are intimately acquainted with every part

of it; but I cannot help remarking, that I was particularly struck with the garden-like culture of East Lothian; which shews what may be accomplished by a spirited and independent tenantry. This district has long been famous in the annals of Scotland for superiority in rural science; and the appearance of the country sufficiently proves that the present possessors are not behind their forefathers in professional knowledge. It was here that Summer-fallow was first practised north of the Tweed; and, indeed, almost all our modern improvements were used by the cultivators of this favourite spot, before they were introduced into other parts of Scotland. I have at different times examined the husbandry of England, and, with a few exceptions, can safely say, that it is not superior to that of this small, but fertile district. I wish most sincerely that the proprietors may continue to cherish and encourage such an active and useful class of men as the present possessors, by giving them suitable leases, upon fair and reasonable terms; and am inclined to think, that a great deal of its present flourishing condition may be attributed to the liberal system of connexion hitherto preserved betwixt landlord and tenant; which has afforded to the one an extent of rent not exceeded in any part of Great Britain, while the other has not been depressed, nor limited in the means for cultivating and improving the ground to almost its utmost extent.

After passing Dunghass bridge, we entered the parish of Cockburn's path, in the county of *Berwick*, which is equally well cultivated with the conterminous country. That beautiful piece of architecture, the Pease-bridge, next came under our examination, which will be a lasting monument to the memory of the celebrated Henderson. The old tower of Dunghass stands near the bridge; and here the Earl of Haddington and a number of the East Lothian gentry, were blown up by gunpowder in the year 1640. The circumstance is mentioned by several historians; and I state it here, with a view to correct an error in Pennant's Tour, which has remained hitherto undetected. This generally correct and well informed tourist, describes this melancholy business as taking place at Dunghass upon *Clyde*; which affords cause to presume that in some cases he did not collect his materials upon the spot, but took them from record, and that, in this instance, he was led astray by the similarity of names.

The higher grounds which we ascended after passing the Pease-bridge, can hardly be supposed susceptible of any kind of improvement; and, till we arrived at the Press-Inn, the country within our view appeared a bleak and uncultivated waste. From the Press-Inn to Berwick, the soil gradually turns better;

and round the village of Ayton, under the influence of a benign landlord, improvements are very far advanced. The gentlemen of Berwickshire, to do them justice, are active and enterprising; and their endeavours, I am informed, have been well seconded by a respectable and intelligent tenantry.

Leaving Berwick, where there is a considerable fishing and corn trade, our road through the extensive county of *Northumberland* presented few objects capable of affording enjoyment to an agriculturist. The soil in general, contiguous to the great road, is below mediocrity; and the state of cultivation displays strong proofs that improvements are but yet in their infancy. This is exemplified by the circumstance of almost every ridge remaining in its original crooked state. The straightening of ridges, though a hazardous and expensive process, is almost absolutely necessary to the carrying on of improvements. Without it, a field can hardly be either properly ploughed, harrowed, sown, or even reaped; and where crooked ridges prevail, it is a sure sign that cultivation is defective. No doubt an alteration ought to be attempted with the greatest caution, and never but when the field is under Summer fallow. By repeated cross-ploughings, gathering up all the hollow places, and frequent harrowings, the field may be completely levelled; and if a sufficient quantity of hot lime is thrown in with a dose of manure, the new soil will at once be brought into action, and no loss sustained.

Many parts of Northumberland are well cultivated, and the district of Glendale Ward, perhaps to an equal extent with any part of the kingdom. The coast side, or what is called *Bamboroughshire*, has long been in a state of aration, and probably was the first cultivated part of the country. About Alnwick, Felton-bridge, &c. and upon Tyne-side, there is likewise a considerable portion of good land, though large tracts still remain in an unproductive and unprofitable state.

I was much surpris'd to learn that one of the largest estates in the county was possessed without leases, and that the cottages thereon were all taken out of the farmers hands. The first practice is so customary among our southern neighbours, that some excuse may be allowed for it, though I am convinced it must militate greatly against the proprietor's interest; but the other is so novel, that I am at a loss to imagine what reasons influenced the noble proprietor to adopt it. Does not the greatest part, if not the whole of these cottagers, receive their employment from the farmer, consequently ought to be attached to him by every tie? Whereas, by separating the houses from the possession of the ground, a different interest is reared up, which may prove prejudicial to the master, without adding to the comfort or advantage of the servant.

I have cause to believe, that the withholding of leases is meant to increase the political influence of the landlord; who thereby sacrifices a part of his annual income, and injures the national capital, merely to promote a purpose, seldom beneficial to himself, and contrary to the spirit of the British constitution. It augments the number of votes in the hand of one man, and is just the same thing as if the proprietor was to possess the right of election, according to the extent of his estate. After all, it often goes for nothing; as two or three, or a greater number of freeholders, by a conjunction of interest, may be a match for the greatest; and coalitions of this nature have not been unfrequent in this very county.

Newcastle is a throng, busy place; much engaged in the coal trade, and, like all our old towns, built in a most inconvenient and confused manner. The collieries in the neighbourhood afford employment to an immense number of people; and if many fortunes are not gained in this line of business, yet great sums of money are thereby circulated in the town and adjoining country. The town is almost surrounded by wind machines for grinding flour, &c.; and there is a large muir at the very gates, the division of which has always been opposed by the *independent* burgessees.

From Newcastle to Durham, the road is exceedingly disagreeable, as it is carried to a great height over Gates-Head-Fall; whereas, by turning round by the lower ground, it might have been made incomparably easier to the traveller, without much increasing the distance. Similar instances of inattention prevail in many parts of the kingdom, particularly where roads were earliest made, and occasion a heavy loss to the trade of the country. Many people think that a straight line must always be the shortest road, which certainly is the case when the ground is level; but in hilly and mountainous situations, the reverse is generally the fact.

Durham is a most irregular built city, but well stocked with clergymen of all descriptions, who possess a large share of territorial property in the neighbourhood. The bishop is an amiable character; is very popular, from some recent instances of public spirit; and, I believe, well deserves the large stock of worldly goods which has fallen to his share. I have sometimes attempted to ascertain the use for which prebends and other dignitaries of the like kind were intended, but have constantly failed in the attempt. To me it appears, that the grant of a prebendary means the grant of a comfortable pension, without drawing it from exchequer; and that religion is neither directly nor indirectly concerned in the transaction.

I noticed with pleasure, to the northward of this place, fe-

veral large fields, which were formerly in a state of common waste, now divided and enclosed, and improvements going rapidly forward. Paring and burning the sward, seemed to be the great mean used for bringing these fields into a state of cultivation; and I am inclined to think, considering the difficulty of reducing the turf, and the immense number of ants and grubs with which the soil is stocked, that such a process is the most effectual that can be devised. Theorists have often objected to this radical cure, because, say they, it wastes the soil; but practical men generally laugh at their fears, from a thorough conviction of the beneficial consequences attending the operation in the first instance, which, under judicious management, seldom fails to procure at once such a stock of manure, as to render the improvement solid and lasting.

Around Darlington, particularly to the southward of the town, the soil is very fine; and here I discerned the first proof of the climate being improved since we left the vicinity of your metropolis. Every thing in the fields was hitherto far back in growth; the ear of the wheat was not seen, and the hedges had not, in a single instance, shewn their blossom; but passing this place, the wheat ears were discovered bursting from the blade, and the hawthorn appeared in full flower. As we advanced southward, I could not perceive any further alteration in the growth, either of hedges or grain, till we arrived within twenty miles of London.

Darlington is a clean healthy town, and discovers some marks of trade and manufactures. A great number of the people called Quakers reside here; and, from their sober appearance and regular demeanour, it is to be wished that more of our countrymen belonged to that sect. They shew their faith by their works; and, however formal and stiff their behaviour, in some respects, may be viewed by strangers, their general conduct is such as fully to justify me in ranking them as valuable members of the State.

The bishopric of Durham is, upon the whole, a valuable district: a great part of it is enclosed, and in a very productive state. I was informed the enclosures were chiefly made about the time of the Restoration, and, agreeable to the fashion of the times, they are rather small. The trees in the hedge-rows, though very ornamental to the country, are dangerous neighbours to the arable farmer, by preventing a free circulation of air; and the pastures, from their age, cannot be considered as producing any thing like what the ground is capable of bearing, if it was renovated with fresh seeds. This must always be the case where the subsoil is not dry, and ought to influence the possessors to break up such fields, which, after being properly disciplined,

disciplined by the plough, might be sown down again with proper feeds, and a large additional quantity of grass would be procured.

A great number of English landlords view the breaking up of old pastures as a most mischievous business, and absolutely believe their property would be ruined, was this measure to be carried to any extent. These apprehensions must be produced by former instances of mismanagement in the breaking up of grass lands; for it must be confessed, that too many farmers adopt an erroneous system in such cases. The first crop, which is usually oats, will be good, if the land gets only common justice in the operations of ploughing and harrowing; but the goodness thereof tempts the farmer to sow another white crop, and here commences the evil; for all old grass lands are disposed to run foul, and the riches accumulated for a number of years, give a decided encouragement to the growth of couch and other weeds. The crops of grain therefore fall off, and the land gets into the wildest and foulest state. The sure way of preventing these evils, is to give a complete Summer-fallow the second year of ploughing, which will destroy the turf and the store of weeds with which such fields generally abound, and will bring them into a proper state of cultivation for carrying heavy crops. Wherever this management has been adopted, I have never seen it fail; and it is the only one which can render the breaking up of grass lands advantageous to the tenant, and not detrimental to the proprietor.

After leaving Darlington, we crossed the Tees, a few miles to the southward of that place, and entered the North Riding of York. We had some conversation with an intelligent farmer at *Northallerton*, the head town of the Riding, and were surprised to learn that wheat was preferred after clover, instead of oats, because the latter is apt to make the ground run *wild*. Sowing wheat upon a clover stubble, is a very usual practice in many parts of the kingdom; and the crop is certainly, in most cases, superior in value to oats, particularly in England: but, to suppose that oats contributed more than wheat to render the land foul, was what excited my wonder; for all land sown in Spring must necessarily be cleaner than if it lay in a harrowed state during the Winter months. Besides, oats are a close crop at the root, which wheat is not, and, being good foragers, thrive well on clover leas. Indeed, from comparative trials, it has been ascertained, that, at the difference of one third in price, a crop of oats is equal in value to a crop of wheat, independent of the superior condition in which the land is left for succeeding crops.

The land about Northallerton, and through the whole North Riding, till we arrived at York, is mostly of an excellent qua-

lity; and the fields, with some exceptions, which happen everywhere, are in apparent good order. Perhaps too much of the land is in old grass pasture; but still the quantity under the plough is considerable. I should suppose that it is capable of yielding very heavy crops of all grains; but the want of leases, and the restrictions imposed upon the tenantry, are obstacles to the exertions of the occupiers, which will always prevent agriculture from being carried on in a perfect manner. Unless a farmer has liberty to work the land he possesses agreeable to his inclination, it is impossible that he can farm with advantage. When he is insecure in his possession, and liable to be turned out by capricious summary warning, he is of course destitute of the great charm which everywhere sets industry in motion, that is, the prospect of reaping the fruits of the money expended in improvements; and when his powers of management are limited; he can only be considered as a tool to another person, who prescribes directions for his government, which must be implicitly obeyed, whether they are agreeable to his judgement or not. I should humbly suppose that these things have greatly contributed to keep the practice of husbandry, not only in this district, but over all England, much more in a stationary position, than it would otherwise have been, had the farmer enjoyed the same discretion in the conduct of his business as is possessed by merchants and manufacturers. The latter classes have made much greater progress to perfection than the cultivators of the ground, who may be described as following, from one generation to another, the same beaten path.

The city of *York* occupies a greater extent of ground than many places of equal population. The river *Ouse* is navigable here, and even to the distance of *Ripon*, in the *West Riding*. I believe the city is a county of itself, and, together with what is called the *Ainstey*, unconnected with any of the three districts into which *Yorkshire* is divided.

There are no manufactures at *York*, at least we did not hear of any; which is rather surprising, considering their extent in the western and southern parts of the shire. Perhaps the ground in the neighbourhood is too good for manufactures thriving upon, as it is well known they are generally most successful upon barren spots. Shall I trace this to the bountiful direction of Providence, which uniformly influences the dispositions of the people to such works as is most conducive to general prosperity? Where the soil is good, and capable of producing subsistence in a plentiful manner, the inclinations of the great bulk of mankind are turned to rural affairs. Where it is inferior, and incapable of supporting a number of inhabitants,

inhabitants, they are led to carry on manufactures, and are thereby enabled to purchase the necessaries of life from the cultivators of the ground. The one is fed by the productions of the farmer; while, on the other hand, the manufacturer prepares raiment, and many other things, for the comfort of those who toil and labour to provide the means of his existence. In this way, both classes contribute to promote the public good, without, after all, meaning any thing, themselves, but to promote their own private interest.

I dare say you will think the length of this letter sufficient for my first epistle; and as York is half way to London, and the place where travellers generally take a night's repose, I shall, in conformity to their example, drop my pen, and give you a respite till a future occasion. I am, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

STEPPING one day last Summer into your Parliament House, and observing a crowded auditory attending the pleadings, I anxiously inquired concerning the business on hand, as it seemed to be of importance, from the great number of lawyers reciprocally employed. Finding it was a process about mislabouring a farm, I listened with attention to the pleadings on both sides, but was much at a loss to comprehend the nature of the obligations contained in the lease; particularly where the tenant was taken bound to keep the land in *Tath* and *Quend*, or *Querd*, for the Counsel did not read all one way. As I could not understand their meaning, it will be particularly obliging that you give this letter a place in your first Number, which I hope will induce some of your friends, skilled in the antiquities and ancient language of Scotland, to explain the import of these cabalistical and unknown terms. I am yours, &c.

No Antiquary.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

SPECULATIVE men have often amused themselves, by endeavouring to ascertain what proportion of the produce of land should be given to the landlord in lieu of rent; but these inquiries being generally founded upon theoretical principles, the result has seldom turned out agreeable to what practice would have dictated. While Mr Young thinks that one third is too much for rent, and that in most cases one fifth is sufficient, some landlords are not satisfied unless they get a full

half of the produce, and, according to the greatest part of our modern leases, little more than that proportion may be considered as reserved to the tenant for interest of his capital, stock, tear and wear thereof, expence of working the ground, and the support of his family.

It is not my intention to enter upon a discussion of this question at the present time, but to confine myself to a few curfory remarks upon the dangerous consequences of increasing rents too much, or, in other words, taking every halfpenny from the tenant which can possibly be got. Perhaps, nothing has contributed more to retard improvements, than the avaricious disposition manifested by many proprietors, to increase their rents, and to prevent the tenantry from acquiring sufficient capital for working the ground in a perfect manner. It is entirely owing to the fluctuating state of capital, that improvements in agriculture have not kept pace with the arts and manufactures of modern times. Though, at first sight, one would have been inclined to think, that as husbandry is absolutely necessary to the existence of mankind, the practice thereof would have sooner advanced to perfection than any other art, daily experience, however, may convince the most superficial observer, that this is not the case; nor will it be otherwise, till the cultivators possess a greater power over the soil they occupy, and are provided with sufficient means for undertaking all the different operations which belong to their complicated business.

It must be confessed, that for fifty or sixty years past, these circumstances have less applied to the low country of Scotland, than to any other part of Britain; and that a liberal system of connexion has generally been maintained betwixt proprietors and tenants, the salutary effects of which are discernible to the dullest capacity. It is from an apprehension that a change is gradually taking place in the nature of this connexion, which must necessarily be detrimental to the public good, that these animadversions are offered. A firm conviction of the unavoidable dangers which must follow the wresting of capital from the tenantry, either by an exorbitant rise of rents, or by imposing arbitrary restrictions upon their management, which indirectly accomplishes the same end, solely influences us, upon this occasion, to state the consequences.

From tradition we are informed, that, after the accession of James I. to the throne of England, the prosperity of Scotland suddenly declined, which was in great measure owing to the increased luxury of the landed interest requiring an augmentation of rents. At the conclusion of the last century, almost the whole capital employed in the cultivation of the soil was drawn from the tenantry, who were thereby reduced to the
greatest

greatest poverty. Fletcher of Salton, who wrote at that period, describes them as sunk into the most abject degree of wretchedness; and Lord Kames declares, that, before the Union, they were so *benumbed with oppression*, that the most able instructor in husbandry would have made no impression. It is well known, that, betwixt the beginning of this century and the year 1750, landlords found a great difficulty in procuring tenants who could stock their farms, and secure them in payment of any rent at all; and that, when they found one of this description, he got any length of lease he pleased. These long leases, which at that time were universally granted, gave a spur to the activity of the tenantry, and, together with the growing prosperity of the country, enabled tenants to recover and increase their capitals. If these capitals are again wrested from them, it does not require the spirit of prophecy to predict, that similar consequences must again take place; and that the kingdom, from a flourishing condition, will return to that state of wretchedness and misery in which it was before the Union.

We have a striking instance of what necessarily accompanies a depressed husbandry, in the present low condition of Spain. The prosperity of any country does not depend so much upon the quantity of gold and silver it contains, as it does on its internal industry, and the diffusion of capital for carrying it on among all ranks of the State. Whenever, therefore, the capital of the husbandman is dissipated, the chain is broken, and, as in France before the Revolution, a luxurious landed interest, rich merchants, and monied men, opulent contractors, and farmers-general, may be found, while the face of the country lies uncultivated for want of capital, and the mass of the people are reduced to the most abject condition.

Whether matters are in a train for bringing about such a change in the state of this country, we presume not to say; but it is certainly true, that the great increase of rents and public burdens, and the augmented charge for every article of labour, must necessarily injure the tenant's capital, unless prices of every kind of produce rise in an equal proportion. That this, for an average of years, has not been the case, we believe will not be disputed; and that farmers have been able to go on, must be attributed to the superior skill generally displayed in the management of rural affairs, and to the capital formerly accumulated, when rents, taxes, and labour, were comparatively less.

Under the present exorbitant rents, the greatest part of tenants live in a constant dread of a fall in the value of produce, which, in a few years, would strip them of their capital, and reduce themselves and families to beggary. Nor can they have
the

the smallest assurance this will not be the case; for the rise upon produce is occasioned by the fall upon the value of money, the increase of trade, the prosperity of manufactures, and the wealth of Asia, which is continually flowing into this country. But, reverse these circumstances.—Suppose trade and manufactures checked, and Britain stripped of her foreign possessions; corn would then rapidly fall in value, till it came to a level with the prices of other countries. These things would, no doubt, soon find their level: in the mean time, the leaseholder might lose his capital, and be reduced from a state of affluence to poverty and wretchedness.

It may be said, Why does the farmer offer more rent than he is able to pay? We shall answer this question, by putting another—Why do proprietors, in general, take such methods of letting their lands? This is a most important subject, and to enter upon it now, would probably engross more room than you could conveniently spare in one Number. We shall therefore reserve it, together with remarks upon some modern attempts to narrow the power of the farmer in the management of the ground, and to impose restrictions upon him, not formerly considered as necessary, for a future letter. In the mean time, with best wishes for the success of your Magazine, I remain yours, &c.

ARATOR.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Subsetting of Land.

GENTLEMEN,

I PERUSED your Prospectus with a great deal of pleasure, and rejoice that the nineteenth century is to be introduced with such an useful publication. I trust it is an evidence of the progress of knowledge, which is fast spreading amongst all ranks, and hope that you will experience a liberal support from the cultivators of the soil, both in this and the sister kingdom.

Among the benefits which our profession will receive from a work exclusively devoted to their information and instruction, is the opportunity it affords of discussing every subject connected with rural economy. In Newspapers, and Magazines of a miscellaneous nature, these subjects were formerly overlooked, as people thought it unnecessary to convey their remarks through such precarious and neglected channels. Your publication, however, presents a sure road to attention; a circumstance of particular importance to those whose interest is affected by the subjects discussed.

Under this impression, I beg leave to transmit you some observations

observations upon a question which I consider as materially connected with the prosperity of agriculture in this and every other country : namely, Whether tenants ought to be allowed liberty of subsetting their farms, where they have not agreed to denude themselves of that liberty ? That they have not such a right by common law, is a doctrine lately advanced, and I believe partially confirmed by a few decisions of our Supreme Court ; but, taking the matter in the abstract, these decisions, unsupported as they are by Statute law, cannot have further weight against the right, than merely what ought to be attached to the collective voice of an equal number of individuals of the same knowledge and information.

In the Agricultural Survey of an eastern county, highly celebrated for superiority in rural science, the learned and respectable personage employed to draw up the work, says, (p. 128. of the quarto edition), “ It is now an understood principle at common law, that, unless the tenant shall stipulate this power, and that there shall be a special covenant to that effect in the lease, he can neither assign nor sublet ; or, in other words, if the lease shall be silent upon this point, the tenant has no such power : ” and he afterwards adds, that “ the principles upon which this rule has been established, seem to me to be grounded upon good sense and sound policy. ”

By the word *now*, in the first part of the quotation, it appears that this rule has been but lately established, and that the law of Scotland was formerly interpreted in a different manner. But by whom has this alteration been introduced ? Was it enacted by the Three Estates in Parliament assembled ? No : but by the will of persons who are themselves proprietors of land, and who probably have imbibed old feudal prejudices, which prevent them from observing that such a rule (for we will not call it a law) contributes to sink the spirit of the tenantry, and to stop the progress of agricultural improvements.

Mr Erskine, in his Institutes of the Law of Scotland, seems to entertain a different opinion upon this point ; and it is surprising that the Jurisdiction Act, which abolished the old feudal rule, that a vassal could not be received on an estate without the consent of the superior, did not also abolish the feudal clauses in leases, prohibiting a sublet of land, or, in other words, do away the power retained by proprietors, to prevent any person from possessing land, whether they had their permission or not ; which is exactly similar to the feudal rule, that a vassal could not be received without the consent of the superior. In this respect, the Russian boor is superior to the British farmer ; for, according to the ingenious Mr Pooke, it is perfectly indifferent to the owner of the estate, in what man-

ner, and by what means, the boor procures his livelihood, so he do but regularly pay his *obrok*, or rent; and that, under this adjustment, the latter is in some sort his own master, being free to dispose of his activity, as well as of the share of the soil committed to him. Were tenants in this country allowed in like manner to alienate their property, and to change their situation, they would certainly possess no more right than is already enjoyed by the rest of the community.

But what injury would the landed interest sustain from the exercise of such a right? Would the rent be less secured, or the prestations of the lease more imperfectly implemented, when the tenant alienated and disposed his lease in favour of another? An unprejudiced person would rather be led to think that additional obligations would create additional security for the faithful discharge of the burthens originally contracted, as that any injury would be sustained by the alienation of the lease, and the change of the tenant.

We come now to the remark—That the withholding a right to sublet is founded on good sense and sound policy;—and we may inquire, where the sense or the policy of the refusal is to be found. In no respect can the landlord's interest be injured; on the contrary, as already said, it is additionally protected, by two or more persons being concerned in the transaction. The refusal, therefore, is rather an instance of a lack, than a proof of sense; and as for the policy of withholding the right, it is equally undiscoverable. It is obvious, that the majority of sublets would proceed from the inability of the original tenant to keep his possession, or from a desire to change his situation in life. In the first case, the farm cannot be properly cultivated; and in the other, the tenant may leave the premises under the management of a servant; against which practice, no law has as yet been established. In both cases, the property may be deteriorated, and at any rate it will not be improved; whereas, if a sublet had been allowed, a superior tenant might have been procured, whose capital was sufficient for the undertaking, and whose inclinations led him to follow after rural affairs. Again, in the first case, a person is obliged to continue in possession till his affairs are totally embarrassed; and, in the other, he must abide like a fixture upon the premises, or commit his affairs to the direction of others. Let these things be duly considered, and the impolicy of withholding the right contended for, will be clearly discernible.

Under every view of the matter, the landlord cannot be injured by the exercise of this right. It may be said, he is entitled to chuse his tenant; and that, by subsetting, he may get a disagreeable person upon his estate. These objections have
little

little weight ; for, whoever is the tenant in possession, the original lessee is bound for the faithful observance of all the prestations ; and if these are performed, the landlord can have but small concern with the occupant. Besides, even under the strictest prohibition, the choice of a tenant is not in a landlord's power, while the lease goes to heirs-general, and it may run through as many hands in this way, as if it were permitted to pass to assigns. Even the disposition of the original tenant may change during the course of a tack, and a greater alteration of conduct may be experienced, than what would have proceeded from the introduction of a third person.

In a word, we consider it as sound and equitable doctrine, that, if a person has not renounced a right to sublet, he is, according to the principles of justice, upon which law is certainly founded, entitled to the exercise of that right. If, on the contrary, he has specifically bound himself not to exercise it, he of course is not entitled to complain, as he has made a law for himself ; but, upon the general question, Whether it would be sound policy to allow every tenant to alienate his lease, in the same manner as is done with every other species of property ?—we are clear, that such a liberty would not prove prejudicial to the landed interest, while the public good would be greatly benefited, and improvements forwarded with increased rapidity. I am yours, &c.

A Friend to Improvements.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Annual Charge attending a Plough and two Horses.

GENTLEMEN,

EXPERIMENTAL Agriculture being an object of importance, I am glad to notice that you propose to pay it considerable attention. Having some reasons to believe that the expence attending experiments is seldom justly ascertained, I beg leave to send you a statement of the annual charge of a plough and two horses ; which may serve a double purpose. It will shew the immense increase which has taken place in the price of labour, and assist those who may transmit you the result of experiments, how to calculate the expence.

Annual

Annual Charge attending a Plough and Two Horses.

Servants wages and maintenance	-	L. 21	0	0
Corn for 2 horses, from the first of October to the middle of June, 3 firlots per week, which, with odd feeds, may be taken at 30 bolls, at 16s. per boll	-	24	0	0
200 stones of hay, to be eaten when the horses are taken from green food, and betwixt yokings during feed time, at 7d.	-	5	16	8
1½ acre of clover and tares for summer food	-	9	0	0
Smith and wright work	-	5	0	0
Saddlery work	-	1	0	0
Interest on capital stock at 5 per cent. *	-	6	0	10
12½ per cent. on 70l. perishable stock, for tear and wear	-	8	15	0
		<hr/>		
	Annual charge	L. 80	12	6

Now let us endeavour to ascertain, from the above, what is the charge per acre to the farmer for ploughing and harrowing his land.

It will readily be granted, that 42 Scots acres per plough is as great a quantity as can be properly managed in ordinary cases. If this extent is arranged agreeable to the common six-course shift, there will be 7 acres in Summer fallow, 7 in wheat, 7 in beans, 7 in barley, 7 in clover, and 7 in oats; and the number of ploughings and harrowings during the course will be,

1. Fallow,

* The capital stock, so far as respects ploughing, may be reckoned as follows:

2 horses	-	L. 42	0	0
Plough, brake, and harrows	-	5	5	0
Long and close carts, with wheels and iron axle	-	15	0	0
Barrows, grapes, forks, &c.	-	0	15	0
Saddlery	-	7	0	0
Servant's wages	-	21	0	0
Horse corn	-	24	0	0
Hay	-	5	16	8

L. 120 16 8

1. Fallow,	6 ploughings,	3 harrowings.
2. Wheat,		2 ditto.
3. Beans,	2 ditto,	3 ditto.
4. Barley,	2 ditto,	4 ditto.
5. Clover,		
6. Oats,	1 ditto,	3 ditto.
	—	—
	11	15

Multiplying the above numbers by 35, the quantity of acres actually under tillage, and dividing the amount by 5, the number of breaks; the result will be, that two horses, during the year, plough 77 acres once over, and give 105 double times of harrowing to one acre of ground. As their expence for that time is 80l. 12s. 6d., it may be classed as under:

77 acres once ploughed, at 18s. 3d.	L. 70	4	3
105 harrowings, at 2s.	-	-	-
	10	10	0
	—————		
	L. 80	14	3

It will no doubt be attended to, that all the other operations performed by the man and the two horses, when not engaged in ploughing or harrowing, are included in these charges; but as they are paid from the produce of the above quantity of land, and as these incidental operations are, in fact, work required upon the premises, it is deemed unnecessary to state them separately, as this would not lessen the sum total of the labour-account. It therefore appears, that 35 acres of land, in a productive state, and under a six-course shift, are laboured by the farmer at the expence of 80l. 12s. 6d., or 2l. 6s. per acre, independent of feed corn, grafs seeds, harvest work, thrashing, marketing, incidental expences, and the support of the family.

In debiting a particular field for farm labour, I know of no better method, than first to ascertain the ordinary outlays, then to reckon up the number of ploughings and harrowings given to each field, and, after finding how much that amounts to per acre, to proportion the expence accordingly. If these rules are adhered to, the expence and profit of the farmer's operations may be as minutely ascertained as the concerns of the merchant and manufacturer.

I need scarcely add, that every article in the annual expence of a plough and two horses, is very moderately charged, being at least one third below what they will amount to this year: For instance, the servant's wages and maintenance will be 30l., and the value of corn given to the horses, in all probability three fifths more than the sum charged.

I am, Sir, yours, &c.

December 6. 1799.

A Rural Economist.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

The necessity of Summer-Fallow, upon all clay soils, is well described in the Agricultural Survey of Yorkshire; and I beg leave to transmit you a few Remarks made on that section of the Report, by a Landed Proprietor of that district, which you have leave to publish in your Magazine. I am, &c. N.

WHY does the farmer fallow more than the gardener? The first has worse soils to contend with than the latter, and he has always less force, in proportion to his farm, than the gardener has to cultivate his garden: The latter can also generally command more manure; for he either is a market-gardener, near a great town; or a gentleman's gardener, having the care of his master's garden; he can also command a greater occasional force. I do not think it proper to include, in this question, small gardens, belonging to farmers and smaller proprietors; for the small size of such gardens is in favour of my argument. Could farmers command, at a reasonable rate, a force as superior to the cultivation of their farms, as the gardener can in proportion to his garden, what number of servants and their families would they not maintain? and, strictly speaking, the whole country would be cultivated like a garden. But here, commerce, or, more properly, manufacture, interferes; and, by offering high wages, renders this cultivation impossible to effect, without a great advance in the price of the farm-produce. Here again commerce and manufactures step in, and say, this must not be; we must be unfettered ourselves, but it is for our benefit, *ergo*, for the benefit of the country, that the farmer should be shackled; and the farmer, thus enclosed on all sides in a circle, is obliged to fallow his ground, because he cannot, by a great force, eradicate his weeds, and clean his ground, in a given time, as short as that required to render fallows unnecessary. To this may be added, the want of manure; and, even what takes place with the best farmers, and who have the most force, untoward seasons, such as the last, which on a farm, by preventing and postponing the work, ultimately diminishes the force. This very idle idea of not fallowing farms, has been taken from observations inaccurately made on the cultivation of gardens, without attending to the above circumstances; and that almost every crop in a garden is drilled, or planted in lines, with sufficient space to admit sometimes the plough or horse-hoe, but always the hand-hoe. Observe, say the enemies of fallowing, how you act against your interest: Why, they never fallow in a garden: But more injury has been done by not fallowing, than any advantage which has been gained by continued cropping. Virgil, in his Georgics, commands worn-out lands to be fallowed for two years; and I have known land in this condition moderately manured, when made completely clean by a double fallow, make every farmer or labourer, who saw it, a convert to that mode of management.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

I beg leave, through the channel of your publication, to suggest the most productive method of sowing *Tares*, when intended for feed; which is, to mix them amongst beans when drilled, at the rate of one firlof of tares to one boll of beans. From trials made, it is ascertained that the quality of the tares is vastly improved by being blended with beans, as, by clinging to the latter, they are kept from the ground, and enjoy the full benefit of the sun, for ripening them in a perfect manner. They are in this way much easier harvested than when sown by themselves. They answer, at the same time, for bands to tie the principal crop; and the produce may, on an average of seasons, be considered as at least double. As a considerable quantity of tares are annually imported into this country from England for feed, I am confident, if they were sown in the way now recommended, that we could not only render this importation unnecessary, but also be able to supply other districts where they might be wanted.

It will be obvious, that when tares are intended for green food, there is no necessity for mixing them with beans. When such is the purpose, they require to be sown tolerably thick, so as the surface may be early covered; and if the ground is good, and recently dunged, an acre of them will afford as much *keep* for horses and cows, as can be gained from a full clover crop; at least I found them last season fully as beneficial.

One material object procured by sowing tares, is, that the farmer is never at a loss for a sufficient stock of *green food*, be the season almost what it will. They also come in with great advantage betwixt the first and second cuttings of clover, or when the latter fails, as was generally the case last season. Indeed, those farmers who were unprovided with tares, were at a great loss for meat to their horses, after the middle of August; and many had to resort to their hay stacks, which is one of the causes why that article is so scarce. To attain the full benefit of this species of green food, the sowings ought to be at different times, beginning the first as early as possible, so as progressive cuttings may be got, without allowing them to stand till over ripe, when horses are not fond of them. In England, they have a custom of sowing Winter tares; but I am apprehensive our climate will not admit of this practice; at least, from some trials which have been made, expectations were disappointed. At any rate, Summer tares may be got for food from the middle of July till the middle of November, and in favourable seasons, even later.—I am, &c. *A Farmer.*

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

IN this country, we are confessedly behind our southern neighbours in the rearing of live stock; and I am apprehensive our practice will not be improved, till greater attention is bestowed upon the raising of green food, for supporting them during the Winter months. As matters are now carried on, the greatest part of our cattle and sheep are starved during one half of the year; and, at that time, they necessarily lose the flesh which they had previously gathered, and, of course, at next grass season, are so weak and emaciated, that a considerable time elapses before they are restored to their former condition.

Under these circumstances, it will not excite surprise, that our breeding farms (at least where cattle are the chief stock) are only capable of paying a very trifling rent, which would not be the case, were suitable industry used to procure Winter food. In the low parts of Scotland, it is well known, that, in nine cases out of ten, young cattle receive little other sustenance but what they get in the straw yard, or from the pickings of barren moors; while in the Highlands, where the greatest quantity is bred, they hardly receive as much straw, or coarse boggy hay, as will preserve them alive. Hence, they are stinted in their growth, and prevented from arriving at any size, while the time for fattening them upon better pastures is consequently prolonged. Great losses are also sustained by this procrastination, which, added to the interest of capital, and the charge of so many years maintenance, renders the profit, when a sale is made, very inconsiderable.

It appears to me that these circumstances might be obviated, were due attention paid to what I have mentioned. It is certain that all the cattle in Scotland might be fattened for the butcher, after passing three years of age, and that their weight might be increased at least one third, were Winter food provided for them. Where this is unattainable, it would be found good policy to introduce sheep in their place. I know few situations where turnips may not be raised; and it is truly surprising what effects are produced from a very trifling quantity given to young stock. Their blood is thereby kept in a proper state, and the constitution of the animal is in a manner predisposed to receive more benefit from the dry food given amongst with them. In short, I hardly know a more beneficial way of using turnips, than applying them in this way; and, in a breeding farm, every object ought to yield to their culture, so far as it is practicable.

Almost

Almost every thing I have said will equally apply to a sheep-farm, though I have no difficulty in admitting, that the want of green food is attended with less loss and inconvenience in the one case than in the other. Experience sufficiently assures us, that a Highland farm is capable of paying a great deal more rent under the sheep than the cattle system; and the real cause is precisely what is here assigned, to wit, that the first may be profitably kept without the aid of green food during the Winter; whereas, the other cannot be reared with advantage, unless such collateral support can be procured.

Hence it follows, that breeding farms, where green crops cannot be raised, ought to be applied solely to the sheep husbandry; and that the rearing of cattle ought to be confined to such parts of the kingdom as are capable of producing a supply of food during every season of the year. I am, &c.

VERUS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Best Food for Horses.

GENTLEMEN,

HAVING some time ago observed a Publication advertised, intituled, "The Farmer's Magazine," a work which I hope will be equally creditable to you, and useful to the public,—I take the liberty of suggesting a few hints respecting the food of our domestic animals; which, under the present circumstances of scarcity, and the bad quality of every article of provision, may be attended with some benefit. In seasons so unfortunate as the present, uncommon vigilance is necessary; the highest degree of which will be little enough to avert a very serious and widely extended calamity. Having made some observations upon the quality of provisions in particular years, I lay the result before you. In late wet seasons, the first evil arising from damp or unwholesome grain, is a disorder of the bowels, attended with gripes, looseness, &c. which carry off many individuals of all descriptions; and, of those that survive, the aliment passes so rapidly through their bowels, that little of the nutritive qualities remain. To counteract this evil, boiling has been had recourse to; and, to a certain degree, has had the effect of preventing gripes, and lessening any immediate danger. The practice is, however, subject to one disadvantage; namely, that of opening the bowels too much. There is another remedy, which, from experience, has been found more beneficial, not only for removing the griping and disorder of the bowels, but at the same time in-

furing the greatest proportion of nourishment to the animal; namely *kiln-drying*, which, when properly done, and the grain afterwards broke, affords, in any season, a most valuable nourishment, particularly in such a one as the present. I know it will be objected to by some farmers, on account of the bulk of the article, and the trouble and expence with which the drying and breaking so much grain would be attended; a trouble which, I confess, is considerable; but which will, upon trial, be found more than repaid by the attention recommended. A great proportion of both straw and hay are this year exceedingly bad; and nothing but an uncommon degree of attention can prevent an evil, which at present appears to be a most extensive one. I am, &c.

A Friend to Agriculture.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

The following valuable paper was transmitted by the British Consul in Prussia, to the Lords of the Committee of Council for Trade, and obligingly communicated by Mr Chalmers, their Secretary, to Sir John Sinclair, Bart. As it belongs to a branch of Husbandry which at all times has been viewed as of importance to the prosperity of Great Britain, I trust it will readily find a place in your Magazine; in which case, some other papers of the like nature, received through the same channel, and now in my hands, shall afterwards be sent you. I have only to add, that the public are infinitely obliged to Mr Durno for the trouble taken in drawing up such an useful and satisfactory Report; which certainly describes the Flax Husbandry of Russia, Poland, and Prussia, with the greatest perspicuity. I am, &c.

N.

Mr Durno's Report concerning the method of cultivating Flax and Hemp, in Prussia, Russia, and Poland; dated Berlin, 4th November 1789.

As Mr Durno cannot be supposed *individually* to possess a competent knowledge of this subject, he thinks it necessary to premise, in order that the foundation on which the credit of his Report rests may be known, 1st, That, for the purpose of obtaining the best information possible, he formed a chain of questions; and, availing himself of the advantage of an extensive acquaintance throughout the interior parts of the countries in question, forwarded these—not to the Learned, because he could have expected from them only theory—nor to
 Merchants,

Merchants, because they are accustomed to see these articles only in their *prepared* state—but to *such* country Gentlemen as have distinguished themselves most by their attention to the cultivation of their estates, and may therefore be supposed to have combined *practice* with *theory*, and consequently to speak from *experience* as to the result of *both*.

For further satisfaction, he annexes a translation of these questions, with that of one of the returns thereupon received. On a general comparison of which, the result appears to be,

1. That a black (not morassy) open gravelly soil, has been found to produce the best crops both of flax and hemp; and that, as they become too exuberant, consequently *coarse*, on a soil too rich, much care must be taken to reduce such a superior, as to raise an inferior or poorer soil to a middle degree of strength, on which the *quality*, which is of much more consequence than the *quantity*, that may be gained, wholly depends.

2. That the raising of *previous* crops of grain, on such fields as are destined for flax and hemp, is, in general, practised as the best mode of ascertaining this middle degree of strength. On a vigorous soil, in the usual manner cultivated, wheat is first sown; then rye, barley, and oats; succeed last of all, either peas, flax, or hemp. Such lands bear two successive crops of hemp, if intermediately dunged; and for one of flax, are not manured at all. But on a soil of less strength, flax and hemp are sown immediately after a Winter crop of rye, the field being ploughed up once, either in the intervening Autumn, if the weather allows, or, if not, in the Spring; harrowed over and manured; and then again ploughed immediately before sowing. The disadvantage of this, is however the less, if there arises any at all; because a Winter crop of rye may be sown in the same field again, immediately after drawing of the flax or hemp; if after a crop of hemp, *without*, but if after a crop of flax, *not without*, being again manured. A field that has lain fallow, if only ploughed up, yields a better crop of flax, than if cultured and manured in the above, or in any other way.

3. The usual time of sowing flax and hemp in those countries, (which, though mostly under the same parallel as England; that is to say, those parts of them that grow the articles in the greatest quantity and perfection, are so much colder in Winter, and warmer in Summer, and subject to such instantaneous changes from the one to the other, that they can scarcely be said to enjoy the temperature either of Spring or Autumn, night frosts being very prejudicial), is between the

25th May and 10th June, to the reaping, &c. of the flax in the end of August, and the hemp in the end of September: Hence it appears, that the flax is three, and the hemp about four months, in a state of vegetation.

4. The difference, if any, between these two articles themselves, as also, between them and barley, in respect to the degree to which crops of them impoverish the soil, is held to be very trifling; because, as already observed (§ 2.), though no sort of grain can be sown immediately after a crop of flax, unless the land has been again dunged, yet after one of hemp, any other sort, and even hemp itself, may be sown without previous manuring. This *difference*, seemingly so material, would *yet*—(when it is, on the other hand, considered, that the field destined for a crop of hemp is, while that intended for a crop of flax, is not, previously manured; and that hemp, though it thus requires the aid of manure, while flax does not, kills or suffocates all sorts of weeds;—thereby, in some measure counterbalancing, by the cleanness which it leaves, the greater degree of strength which its vegetation may be supposed to require; and, *lastly*, that neither article is supposed to impoverish the soil more than barley),—instead of being realized, ultimately resolve itself into the establishment of this very material fact, that flax and hemp may be, and are, cultivated in these climates, without any greater preparation or prejudice of the soil, if the farmer only ranks his crops according to its primitive strength, than will arise, or be necessary, for the growth of any sort of grain adapted to its then actual or temporary state of cultivation; nay, even, that a soil which is foul, or infected with weeds, may, by a crop or two of hemp, be cleaned, and of consequence greatly improved.

5. That hemp killing or suffocating (chiefly through its sudden growth, and the exclusion of the free circulation of the air, occasioned by the largeness of its leaves) all sorts of weeds or undergrowth, there is no trouble of this kind with it; but that flax is, in general, weeded once or twice before it blooms.

6. That, in the ordinary course of cultivation, the flax is plucked, when the stalk has become yellowish, the pods brown, and the seed hard and full-bodied. It is then perfectly ripe, and the seed of such crop is fit for the purpose of sowing. But those who refine, or are desirous of gaining a superior, or the finest possible quality of flax, from one and the same seed and field, pluck it earlier, viz. while the stalk is yet green, the pods only beginning to change colour, and the seed grains quite flat; and this being done before it is ripe, the harl of the flax
proves

proves indeed much finer, but the seed is sacrificed, and fit for crushing only; and though the quality of the oil thereby produced is as good, the quantity is much less, than an equal measure of the ripe seed would have rendered.

The hemp is also pluckt or drawn, in the usual course of cultivation, when the stalk and pods have turned colour, and the seed grains are become plump and hard, and not earlier on any account whatever. But those who proceed systematically, and refine most on the quality of this article, make a distinction between the male and female, or such stalks as do, and such as do not, bear seed-pods, plucking the latter before the former, or as soon as the stalks *only begin to change colour*; and, at all events, keeping it separate, as rendering a *finer* hail.

7. The seed, if the flax is very dry when pluckt or drawn, is *stript* off immediately; if not, after drying two or three days in the field; and, in case the weather will not admit of this last operation, the tops of the stalk, as far as the seed goes, are *cut* off. In either of these three cases, the seed and pods are immediately spread out as thinly as possible on a floor, through which the wind has a free circulation, there turned over twice every day, until so dry, that the pods open of themselves, and are then thrashed out and cleaned in the same manner as the different sorts of grain.

For gaining the *hemp seed*, the hemp itself, as soon as pluckt or drawn, is set up upon its root-ends against the wall-palings, or other such places as, according to the weather, are most convenient, until perfectly dry. The roots and top-ends, as far as the seed goes, are then cut off; the former thrown away as useless, and the latter thrashed out and cleaned immediately.

If the seed of either is suffered, instead of being immediately cleaned, to remain for any length of time in a foul, moist state, its colour is thereby spoilt, and even its substance so much injured or reduced, that it cannot be employed for sowing; and, when crushed, produces, not only a less quantity, but also a worse quality of oil, than it would otherwise have rendered.

8. As soon as the seed has been gained in the manner above described, both the flax and the hemp are immediately put into the steep, so carefully sunk, as that no part of them may remain above the surface of the water; and there keep the flax until it disjoins itself from the rind, and the hemp until the harl springs from the stalk.

If the weather is warm, and the water soft, nine or ten days may be sufficient for that purpose. In hard water, and cold weather, from fourteen days to three weeks are generally requisite; stagnant is preferred to running water, not only

as it produces the same effect in less time, but because running and spring water make the harl red and towey: And large bodies of stagnant water are preferred to small, because they have been found to give a whiter or cleaner colour: But fish-ponds must be avoided, because the fish would be thereby destroyed; as also such places as cattle are watered at, if they are so small as that the whole mass may be thereby impregnated, because such water is held to be both unwholesome and unpalatable for them.

Of the different kinds of bottoms or soil, on which such pieces of water stand, the muddy or slimy is preferred, and such only as are particularly prejudicial avoided, being either morassy, from being metallic, or appearing to contain cold springs.

In the southern provinces of Poland, as Volkinia, Podolia, &c. which have the best soil and climate for the production of these articles, but which, for want of a water-communication with the Baltic, have been hitherto least cultivated, the mode of steeping is not practised at all, on the supposition that the harl is thereby weakened, and the colour darkened. But when it is observed, *on the one hand*, that steeping can only have such pernicious effects when injudiciously or improperly managed; as, for example, by using hard instead of soft water, or letting it lye too long in the steep; and, on the other, that, when dried, instead of being steeped, it is impossible to separate the harl from the rind of the flax, or from the stalk of the hemp, without breaking, consequently without shortening it; nor with so little labour; consequently at so small an expence (that of the steeping taken into the scale), as if it had been *watered* instead of being *dried* --- there seems to be less doubt of the mode of steeping being preferable, since it is, in the climates in which these articles are cultivated of the best quality, and to the greatest extent, almost universally practised; and that the method most generally adopted cannot but be supposed to be the best.

9. After being taken out of the steep, and standing a few hours on end, to let the water run off, the flax is spread out on a grass field, where it cannot touch the earth, 14 days on the one side, and 14 days on the other, then gathered together, set up in small stacks, and there left standing until perfectly dry; but the hemp, instead of being spread out on a field, is set up against the walls or palings, until it is likewise quite dry; and then both are housed in such situations, as to be exposed as much as possible to a free draught of air; but neither to any the least wet from without, nor dampness from within; because so much of them as might suffer from either
the

the one or the other, would be quickly rotted, besides having a tendency to spread and infect the rest, the more and the farther, the longer it might remain undiscovered.

A continuation of rainy weather, during this operation, is rather unfavourable, but seldom or never productive of any material loss; *because* less time of *such*, than of dry weather, is sufficient for effecting that preparatory degree of mortification thereby intended, or which is necessary for completing the disjunction of the harl from the stalks, rinds, or scales; the lying in this situation a few days longer than is absolutely necessary, not being prejudicial, and the opportunity of *one fair day* only, sufficient for the purpose of housing. The needy peasant sets about dressing as much as possible immediately, in order to turn it into cash, for the payment of his Michaelmas rent; but the man of substance does not think of this, until he has first put his Winter seed into the ground, and finished all his out-of-door, or field work.

10. The manner of breaking and cleaning, as well as the forms of the instruments therein employed, being supposed to be the same all over, and the ultimate difference to consist only in the degree to which the cleaning is carried, a particular description of either seems to be superfluous.

If the weather is clear and warm, the heat of the sun proves sufficient for effecting the first part of the operation, (*viz. of softening the harl, and springing or splitting the scales*); but if it is not, a room, moderately heated by an oven or stove, must be had recourse to; and every peasant, in the practice of cultivating any quantity, either of flax or of hemp, has an apartment for that particular purpose.

11. However much may depend on the judicious management of these essential points, it is nevertheless to be observed, that the great *difference* of *quality*, distinguished by the names of the several provinces, countries, or estates, in which they respectively grow, do not arise from the variety of the quality of the seed, or from that of any other circumstances than the soil and climate; and that the utmost exertions of knowledge and industry, can therefore only to a certain degree *improve*, but never effect an absolute *change* in the *quality*, known to be the produce of any particular province, country, or estate, so far as that the best of the one can never be brought to equal the best of the other, although situated under the same latitudes.

12. It is generally understood that the cultivation of flax and hemp is more profitable in these countries than that of any sort of grain.

Supposing a piece of ground put into the usual state of cultivation for bearing a crop of hemp, the other crops which it would

would be most fit to carry, being barley or peas, the calculation would stand thus : 4 sheffels of hemp seed would produce, on an average, 10 stone of hemp, valued at 6 f. - F. 60
 8 sheffels of seed, valued at 3 f. - - - 24

Making together, Prussian money - - - F. 84
 And deducting the seed sown, being 4 sh. at 3 f. - - - 12

would leave gross produce - - - F. 72

On the same piece of ground there might be sown 3 sheffels, producing a crop of 15 sheffels of barley, valued at 3 f. F. 45
 deducting the seed, 3 sh. at 3 f. - - - 9

would leave gross produce - - - 36

On 2 sheffels of peas, producing a crop of 12 sheffels, valued at 4 f. - - - 48
 and deducting the seed, 2 sh. at 4 f. - - - 8

leaves gross produce - - - F. 40

So that, in the gross produce, there would arise a minus on *barley* against *hemp*, of 36 f. in 72 f.; and on *peas* against *hemp*, of 32 f. in 72 f.; being about 50 *per cent.* on the former, and 44 *per cent.* on the latter; the tow of the hemp being allowed against the straw of the barley and peas.

It is indeed true, that the farmer, individually considered, does not gain the whole, nor, perhaps, any thing more than a very small proportion, of this gross surplus, the greater expence of cultivation and dressing, consuming the rest; but it seems no less obvious, that, whatever may be the proportion which remains to him as a nett profit, the whole of the gross surplus, if the matter is considered in a national point of view, falls to be placed to the credit of the public; in as far as, whatever the farmer gains less than the sum total of the gross surplus of the value of *the one article* above *that of the other*, consists in money paid for the extra or greater expence of cultivation only; that is, in money paid for hand-labour in the prosecution of an operation which, at the same time that it obliged him to hire, enabled him to pay a greater number of industrious people than he would otherwise have either wanted, or been able to maintain; and if the acquisition of this surplus would be an object of importance, supposing it to arise on the difference of the value of two articles of our *export*, how much *more so* is it not, when, as in the present case, it would arise from the cultivation of articles, without which, neither our marine nor manufactures can subsist, and for which we would otherwise be obliged to depend on others, in as far as we must

must import, to the extent of whatever our manufactures or consumption exceeds our *home* growth, from *foreign* countries, at least at the same, if not at a yet greater expence, than the gross sum at which the valuation is here stated? And if such an accumulation of similar operations be supposed to take place, as to extend itself all over the nation, to what a degree might not its population be carried, since the population of any given spot, or country, naturally depends on, or is in proportion to, the means of subsistence which it affords; of consequence, its manufactures, trade, and revenue, are in the same ratio?

It may be indeed objected, that grain, as the first and grand necessary of life, ought to be the first object. But this position seems only allowable, when combined with certain local circumstances, and particularly when it is taken for granted, that the cultivator is solely and absolutely dependent on the growth of the identical spot on which he lives, or of his own lands, for his daily subsistence; as may be supposed to have been the case of Adam and his family, in the primitive state of man; or that would be the case of England, or of any other island, absolutely secluded from all communication with other people or countries; because, if the contrary is admitted, that is, that the individual, consequently any given number of individuals, as composing a nation, may as easily, in the concurrence of reciprocal wants, or at a market, buy any given proportion of corn, as of wool, flax, or hemp, the *chief part* of what he eats, is the *whole* of that material without which he cannot earn his bread. We need only farther suppose, what experience has ascertained to be a matter of fact, viz. that the general or average produce of those parts of our hemisphere, which lay within the compass of such an intercourse or exchange of reciprocal necessaries, is equal to its general consumption, in order to find reason to conclude, that that maxim, though applicable in some, does not apply to all situations; and that, though it ought not to be lost sight of in any case, it may, under some circumstances, be carried to a prejudicial degree; and particularly in such a case, when the economist, who has the choice of cultivating any *one* of *two* articles, *both* of which he *must* have, does not, from prejudice, or other motives, prefer that which would render (or, which is exactly the same thing, would cost him) *the most money*: For who, to substitute another comparison, foreseeing that he will want both wheat and oats, and having a piece of ground on which he can grow *both*, or *either*, would not sow wheat only, and take his chance of being able to lay in the oats, and to gain a surplus with the excess of the value which the

wheat

wheat crop would render, above that which a crop of oats would have produced? If such is the case, considering the subject in a theoretical point of view, the only doubt that remains, in respect to the practical application thereof to the object of the present report, may be reduced to this simple question, Whether England, in particular, is in the first or the last of the two situations above described? Since, if it is actually in the last, there would then remain no doubt, that the cultivation of flax and hemp, as two articles which, if we do not grow, we must import, may and ought, to a certain degree, be countenanced or encouraged, in preference even to that of corn; or, at least, affords so great a probability of the truth of this conclusion, as to recommend the subject to the investigation of persons of superior knowledge.

13. Be this as it may, certain it is, that, in some countries, and particularly in West Prussia, the peasants are not allowed to cultivate either flax or hemp, until they have first sown a sufficiency of corn for their own consumption; while no traces of any encouragement, given by either of them, are to be found; these governments, it would seem, entertaining an idea, that there is a sufficient, if not even too great an encouragement or temptation, to prefer these articles to corn, simply in the superior profit arising from the comparative produce of their crops.

Allowance is, however, to be made for this material circumstance, that, in those countries, the peasantry are yet in a state of bondage, either actual or *consequential*, and therefore without any other stimulus to industry, or even to provide for their own personal sustenance, than what proceeds from a fear of either suffering actual want, or corporal chastisement.

Berlin, 14th Nov. 1789.

JAMES DURNO.

TRANSLATION.

Question 1. What soil is deemed best for growing of flax or hemp?

Answer. Flax and hemp will grow best upon a middling soil, as they become too exuberant when the soil is rich; and a sandy soil, particularly if the season be dry, has not sufficient power to mature them; but still the same soil does not, in every district, produce the same crop. It has been found, that the Oberlands seed, sown in Lithuania, in the same soil it sprang from, degenerated the third year; on the other hand, Lithuania seed sown in Oberlands, improved, and produced, the third year, a crop equal to the best Oberlands.

2. 2. When is the best time to sow flax and hemp?

A. In Oberlands, they sow flax and hemp in the beginning of

of June, and pick it about the beginning of September, according as the season proves favourable, or otherwise.

Q. 3. What grain, on the same land, is generally sown immediately before or after flax or hemp?

A. If flax and hemp be not the chief object of cultivation, and the soil in its full vigour, it is customary, in Oberlands, to sow first wheat, then rye, barley, oats, peas, and then flax or hemp, the last on the same piece of land; because the plucking up of the roots tenders the ground, and prepares it for the manure. It is with this view alone, that flax or hemp is sown the last; for it is not supposed their cultivation impoverishes the land more than any other grain, as, after the crop of flax, the ground is manured with common dung, and is thus prepared for whatever sort of grain may be wanted.

Q. 4. How is the land manured for flax or hemp?

A. As agriculture is here not pursued very scientifically, if the land requires manure in general for other grain, the same is used for flax and hemp.

Q. 5. What grain impoverishes the land most, and how must it be treated after a crop of flax or hemp?

A. This seems difficult to determine, though it may be observed, that barley can only be sown twice on the same land without manure, but other grains oftener; and when any preparation is requisite, the management of the land is the same for flax or hemp as for other grain.

Q. 6. When, and how often, ought the flax and hemp to be weeded?

A. It is not adviseable to weed either flax or hemp at all, as too much is destroyed in the operation; therefore, the best method is, to be very careful in cleaning the seed.

Q. 7. When ought flax or hemp to be pulled?

A. When the seed is fully ripe; as flax or hemp, pulled in the bloom, gives a weak unserviceable harl.

Q. 8. Can the seed be collected in pulling the flax or hemp, or must it first be dried?

A. So soon as the flax or hemp is plucked, the seed pods are cut off, and left on the field to dry, and are afterwards thrashed and cleaned.

Q. 9. When must the flax or hemp be laid in water? How long steeped? And why is standing water preferred to running water?

A. Immediately after the pods are cut off, the flax or hemp must be hurried into the water, and there lye entirely covered. If the weather be hot, and the water soft, nine or ten days are sufficient; but, in spring water, and cold weather, it may be three weeks ere it be ready; but by no means let

it be put into running water, as this makes the flax red and towey. Ponds, however, may, in case of need, be filled from a river or stream; but so soon, or rather before, the flax or hemp is in, the communication must be stopped, and no fresh water admitted. It must be remarked, that the water in which flax or hemp has been steeped, is of no more service for that year, and fish ponds must be avoided, as it will kill all the fish. Flax, put into large bodies of standing water, as lakes, generally turns out the whitest.

Q. 10. Is it immaterial on what ground the ponds are?

A. Morasses and springs must be avoided; otherwise the ground, where the ponds are made, is immaterial.

Q. 11. How long must it dry in the field? Can it in this situation be spoiled? And is this danger not to be avoided?

A. If the season be dry, three weeks will suffice; but if there be continued rains, the whole is spoiled, and no remedy.

Q. 12. Is it prepared directly? Or, if not, where, and in what manner is it kept?

A. If time permits, it can be immediately prepared; otherwise, provided it lies only dry, it may wait your conveniency.

Q. 13. How is it prepared for sale?

A. Before it be broke, it is put into a room gradually heated by stoves, and, when sufficiently crisp, it is taken out and broken on a wooden machine made for that purpose, and then swung and cleaned proper for sale.

Q. 14. Why is the preparation through steeping preferred?

A. Because it produces more flax, stronger harl, and better colour; for it is supposed the linen worked up from unsteeped flax never can be well bleached.

Q. 15. How many feet square are required for sowing six sheffels of lintseed, and how are the profits of these six sheffels calculated?

A. Six sheffels of lintseed suffice for about five morgans-land, or 67,500 square feet culm, the land measure here, which is computed to be nearly 60,000 square feet English measure. The Prussian peasant makes no calculation of his profit on these five morgans, until the produce be sold.

Q. 16. What is deemed most advantageous to be sown in the land of the same extent, and prepared in the same manner as is requisite for sowing these six sheffels of lintseed?

A. As it is already observed, in the third article, that flax is sown upon land which has been already used; therefore, such land is only proper for oats or flax, of which two it may be presumed that flax will yield the more profit.

Q. 17. Is the Prussian peasant allowed to cultivate as much flax as he pleases?

A.

A. The Prussian peasant is not allowed to cultivate flax, until he has sown a sufficient quantity of corn for his own consumption; and the further use of his own ground then depends upon himself.

Q. 18. Is flax cultivated every where in the same manner?

A. Flax is cultivated and prepared in the same manner throughout Prussia, and made quite ready for sale, by the peasant alone.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

If the following Observations upon the Climate of East-Lothian appear worthy of notice, you are at liberty to insert them in your Magazine, I am, &c.

A. B.

THERE is perhaps no district, of equal extent, in the united kingdom, in which the climate is so various, as in the county of East-Lothian: From the sea-coast to the Lammermuir hills, a distance of only 13 or 14 miles, all the different shades of climate, generally met with in the north of Europe, are experienced.

This variety is evidently owing to the elevation of the land, in different parts, above the level of the sea: From the southern boundary of the Frith of Forth, the country rises towards the Lammermuir hills, not in a gradual slope, but in a sort of ridges, running nearly parallel to each other, in a direction from west to east: Each of these ridges possesses a climate in every respect suited to its altitude; those nearest the hills being colder, and the seasons later, than such as are less elevated and nearer the sea; while the vales, or intermediate spaces, enjoy, with little variation, the same climate and seasons as the open flat part of the county.

But though the actual degree of heat, as measured by the thermometer, in the different parts of East-Lothian, will be found to correspond pretty nearly with this description, there are other circumstances to be taken into the account, which have a very considerable influence upon the climate; such as the prevailing winds, and the figure and situation of the most elevated lands: this last may indeed be said to regulate, in a great measure, both the violence of these winds, and the quantity of rain that falls in different parts throughout the year.

From December till May, the winds are variable, chiefly from east to north, and most of the rain and snow that fall during that time, are from these quarters, with occasional storms

storms from the north-west. Towards the beginning of May, the sea-breeze sets in from the east, and, in ordinary seasons, continues with very little interruption till the end of July or beginning of August: During that period, contrary to what happens for the remaining part of the year, the east winds are generally attended with dry weather, a circumstance of considerable importance to the east part of the county. From the beginning of August till the end of Autumn, the winds vary from the west, to south and south-east; in which last quarter, they are for the most part attended with rain or foggy weather, and often occasion much perplexity and loss to the farmers during harvest: But the heavy gales that happen in August and September, are mostly from the south-west.

It has been observed, that the land rises from the sea towards the hills, not in a regular or gradual slope, but in ridges, most of which (with the exception of Garleton hills) commence near the western extremity of the county, and are continued eastward for many miles. The northermost ridge, forming a part of the sea coast, commences on the east side of Aberlady, terminates at North-Berwick Law, and comprehends the whole of the lands to the north of the vale of Pessler. The intermediate ridges between that and the hills, terminate a considerable way inland, with the exception of that which forms Drumbender Law, and which runs much farther east than any of them.

By means of these terminations, a very valuable, as well as extensive plain, is formed on the east part of the county, the extreme boundary of which is the Lammermuir hills on the south, and North-Berwick Law on the north. This figure of the county has a considerable effect, not only upon the winds, and the quantity of rain that falls during the year, but also upon the productions of the earth. It has been observed, that the prevailing winds, during the Summer months, are generally from the east; and that east winds, at that season, are, for the most part, attended with dry weather; any rain that falls during that time being from the west, owing to the circumstance of a part of the clouds, coming from that quarter, being attracted by the high lands at the western extremity of the county, and divided in such a manner, as to send them off in two different directions, one towards the Lammermuir hills, the other taking the direction of the Frith of Forth.

The remaining clouds which escape these heights, continue their course to the eastward, till they meet with Garleton-hills, Kilduff, and Drumbender Law, where, owing partly to the attraction of these hills, and partly to the sea-breeze from the east,

east, which they then encounter, they are sent off in a triangular direction, one part being carried towards the Frith of Forth, and the remainder to the Lammermuir hills; along which they are carried till they reach Dunghass, where they empty themselves into the sea.

The figure of the east coast of Scotland contributes greatly to the uniformity of the sea-breeze in the county of East-Lothian. The high land of St Abb's Head, on the south, and the Fife hills, on the north, form a bay of great extent; into which the wind, from the east, enters, as into the mouth of a large funnel. This current of air, in its progress westward, is gradually confined by the contraction of the country; and, when it reaches the coast of East-Lothian, is divided into two streams by North-Berwick Law, and the ridge that runs west from it; one of which takes the direction of the Frith of Forth, and the other blows over that extensive plain which forms the east part of the county.

As the current proceeds to the westward, it is gradually confined within a narrow space: in that way, its velocity is so much increased, that when it encounters the clouds from the west, it has acquired a degree of strength sufficient to alter their direction, and prevent their further progress towards the east. Owing to this cause, very little rain falls in the east part of the county during the Summer months; a circumstance that has often tantalized the farmers in dry seasons, when they had long expected rain with much anxiety, and flattered themselves with the near prospect of it; a disappointment which, though it has by some been considered a serious misfortune, deserves to be viewed in a different light. In fact, the want of rain, to a certain degree, in that part of the county, is productive of advantages that are not very generally understood; as the superior quality of the grain raised there, is owing, in a great measure, if not entirely, to its growing and coming to maturity under such favourable circumstances.

The fact is now well established, of the beneficial effects of light and heat on vegetation; as it is perfectly known, that the colour and flavour, as well as the nutritive qualities of all the productions of the earth, depend in a great measure upon the proportion of the light and heat they enjoy during their growth. This is remarkably the case with fruits of almost every description, and with such sorts of grain as are subjected to the process of fermentation in the different operations of brewing, distilling, &c.

It is only since the invention of the saccharometer, an instrument now used for ascertaining the strength and value of worts, that the public attention has been directed to this

point. By the help of this contrivance, it is found that grain, produced under the favourable circumstances already mentioned, is much more valuable than that which is raised in situations where more rain falls, and where it enjoys less sunlight and heat during its growth and ripening.

Trials, made with every possible care, and under the direction of the best judgment, prove, beyond a doubt, that grain, produced in the earliest and driest situations, contains greatly more of the saccharine or fermentable matter than that which is raised under less favourable circumstances.

The east part of the county of East-Lothian is fortunately situated in this respect. The soil, which is a light loam upon a gravelly bottom, would be in danger of suffering from the Summer's drought, were not the heat tempered by the sea-breeze, which keeps it always moderate; in that way, the bad effects of excessive heat are obviated, and all the advantages resulting from the combined effects of light and moderate heat obtained.

To lay down rules that will apply to every situation, is a difficult, perhaps an impossible task, especially where circumstances are so dissimilar; but, in the choice of grain for brewing, distilling, or indeed for any useful purpose, the buyer will find his account in purchasing in those districts where the soil is dry, the harvest early, and where the greatest portion of heat and light are enjoyed during the Summer and Autumn.

The invention of the instrument above mentioned, has considerably altered the standard by which the value of grain was formerly estimated; and, if properly taken up, will tend to establish a rule for judging of the value of produce, much more correct, than any with which we have yet been acquainted. Formerly, the *weight*, in proportion to the cubical measure, was considered the best criterion; and, certainly, where grain is meant to be manufactured into meal, the circumstance of its weighing well, will be a primary object with the buyer, and insure a high price to the feller. To the consumer, the trial by the saccharometer is a much more certain test; as, whatever the weight of grain may be, if it contains little saccharine matter, its nutritive qualities will be short in proportion. That circumstance, and that only, is the cause of the marked preference we daily see given to the grain raised in the lower parts of the county; which, by enjoying the advantages it does, arrives at maturity with all the qualities it ought to possess.

Besides the trial by the saccharometer, there is another, though a much more uncertain test of the value of grain raised in the different parts of the county; namely, the *flavour*. Every person of judgment, who has had an opportunity of
comparing

comparing and making himself acquainted with the productions of the early and late parts of the county, can with great ease distinguish them by the taste, particularly the oat meal, the taste of which is in general so inferior to what is made in the low country, as to sell from one to two shillings *per* boll cheaper.

It would be at once tedious and difficult to describe, with accuracy, the climate of each district, or the causes connected with it; perhaps, the most certain way of forming a right idea of it, is by marking the period at which the harvest commences in each. The east part of the county is from a month to five or six weeks earlier than the hills. The intermediate grounds are later, in proportion to their elevation; but soil, and other circumstances, form several exceptions to this rule.

The snow, in the later parts of the county, seldom continues long; in the immediate vicinity of the sea, it does not lye at all; but, in the Lammermuir hills, it sometimes continues for three months together; and there are instances of its continuing, on some parts on the north of these hills, till the middle of June. This last is, however, a rare occurrence, and only happens when the snow has been much blown during the Winter, and the following Spring happens to be cold and late.

Upon the whole, the climate of East-Lothian, from its variety, seems better adapted to the different kinds of husbandry than almost any other in the kingdom; and the perfection of its rural economy may, with truth, be ascribed as much to its favourable situation, as to any other cause.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Cursory Hints on Agricultural Publications.

GENTLEMEN,

ALLOW me to offer my best wishes for the success of your intended publication, which comes forward at a proper time, and promises to be attended with the happiest effects, if conducted agreeable to the liberal principles laid down in the *Prospectus*. To promote a spirit of inquiry and experiment; is at all times a laudable object; for it is only upon the solid foundation of facts and observations, that a just system of husbandry can be erected.

I was extremely sorry to learn, from a notice on the cover of the *Agricultural Annals*, that such publications are not very popular among our southern neighbours. The ingenious Editor therefore recommends, that gentlemen, or their stewards,

should intimate, at the *audit*, or counting day, that favours would not be granted to those tenants who did not take in the *Annals*; which is a sure proof of the bad taste that prevails amongst that useful class of men; for, with persons of discernment and information, coercive measures, in my humble opinion, would be totally unnecessary. In order that you may not be obliged to resort to this new-fashioned way of procuring readers, I beg leave to suggest, that diligence, judgment, and impartiality, will be the best preventatives. While the public always wish to deal upon the principle of "value received," they are generally disposed to countenance and reward every person who furnishes them with wholesome instruction and rational entertainment. Yours, &c.

AMICUS.

FOR THE FARMER'S MAGAZINE.

Questions upon General Subjects of Agriculture.

IN order that such persons as wish to promote what must be considered the true interest of Britain, and are capable of communicating their knowledge, may be at no loss in the choice of subjects, we subjoin a list of several leading Questions; Answers to which will be highly acceptable.

1. Whether is it most advantageous to the State, that land should be cultivated by proprietors; or, that a right to cultivate the soil should be assigned, for a limited time, to other persons, upon certain terms, prestations, and reservations?

2. By which class, proprietors or tenants, have improvements been most generally introduced?

3. What proportion of the produce is the possessor of an arable farm capable of paying to the proprietor, upon the supposition that three fifths of the same are under corn, and that the crop, upon an average of years, shall be seven bolls *per* acre; one fifth under clover and pasture; and the remainder, one half under turnips and potatoes, and the other half plain summer-fallow: It being understood, that the possessor shall receive legal interest for his capital stock, with a sufficient allowance for upholding his stock, so as it may be equally valuable at his departure from, as at his entry to, the farm; and that his personal income from the farm should not be less than what is usually acquired by merchants and manufacturers, who invest a capital of a like extent in their respective trades?

4. Whether

4. Whether is it conducive to the public good, that restrictive covenants should be laid upon tenants? and, if these are for the public good, to what extent should they be imposed?

5. What is the most proper size of an arable farm, where the growing of corn is the chief object, and the grass system only considered as meriting secondary attention?

6. Whether are small or large farms most for national advantage, holding in view the interest of proprietors, the comfort and welfare of the tenants, and the benefit of the State?

7. Does the size of a farm affect the population of the country, under similar management? Or, does the number of people, upon a given spot of ground, depend upon the system of husbandry adopted? that is to say, whether the land is principally kept in pasture or tillage, and whether improvements are neglected or practised.

8. Has the population of the agricultural counties of Scotland increased, or decreased, within these 50 years; and, if it has decreased, What are the causes which have occasioned it? And how were the people employed in former times, when the cultivation of these districts was confessedly imperfect?

9. Has the condition of the labouring peasantry been meliorated within these 50 years? It is not meant here to inquire, whether wages have been raised; but, whether are they better fed, better clothed, and more comfortably accommodated?

10. Whether is it most for the public good, that the ground should be ploughed by horses, or by oxen, holding in view the original outlay in purchasing the stock, the expence of supporting each kind, the quantity of labour they are capable of performing, and the value of the animals at the latter end? The attention of those who work, or have worked, oxen, is particularly requested to this question.

11. What is the sum, per acre, required to stock a farm of arable land, where the horses and implements are of the best kind, and where the tenant enters at Whitfunday, and cannot receive any benefit from the farm, till the succeeding crop is reaped?

12. If land is exclusively kept in grass, Whether is the State equally benefited, as if aration was occasionally introduced?

13. Does grass land improve, when kept to a great age? and, if it does, Is the improvement equal to what may be gained from breaking it up, fallowing it after a few crops, and sowing it down with fresh seeds?

14. If land is kept in grass, Which is the most profitable way of stocking it, with cattle, or with sheep? If with the former, Whether is the large or small kinds most advantageous? If

with the latter, Whether is the short Highland sheep, or any of the varieties of the white-faced kind most profitable?

Any answers to this question should be regulated by the soil, climate, and situation of the farm; and by the demand afforded at the contiguous markets, where the stock is to be re-sold.

15. Is there a necessity for smearing sheep? and, What is the best method of doing it, for the safety of the animal, and of the least prejudice to the wool?

16. Is the milking of ewes of advantage or disadvantage to the farmer?

17. Whether are turnips most profitably used in feeding cattle or sheep? If by the former, Whether should they be consumed at the stall, in an open yard, or in a grass park? If by the latter, Whether should the sheep be confined in hurdles, or stakes, upon the spot, or have the turnips brought to them in an adjoining grass field? and, Will the expence of carriage be repaid by the superior value of the animal?

18. Whether should turnips be raised according to the broad-cast way, or in drills? and, If they are taken as a fallow crop, In which method will the land be cheapest and most effectually cleaned?

19. What is the cause of black, or smut, amongst wheat? and, if the cause cannot be assigned, What is the best preservative against this disorder?

20. What is the cause of the *curl* amongst potatoes? and, Is any other method found out to prevent it, than by procuring fresh seed from high lands, or late soils, where it was not fully ripened?

21. Can waste lands be improved in a more profitable manner, than by planting them with barren trees adapted to the soil and climate? and, What may be the expence of planting 100 acres of such land, fencing it completely, and training the trees up? and, Whether the value of the grass, and the thinning of the trees, in a few years, would not exceed any profit which could accrue from the land in its original state?

This last question is so materially connected with the welfare of the kingdom, that we cannot but recommend it to the notice of those who are versant in matters of this kind, with the greatest earnestness. It is obvious, that large tracts, in almost every county, cannot be improved in any other manner; and, while we are dependent upon foreign nations for a supply of timber, it is an object of importance to inquire, Whether it is not in our own power to raise a sufficient quantity at home, and whether this might not be done with profit to those who embarked in such undertakings?

Though we have suggested the above as leading questions to our correspondents, we by no means attempt to confine their investigations within such narrow bounds. Any fact, which will throw light upon the husbandry of Britain, or contribute to promote its further improvement, will be acceptable. Freedom of inquiry we wish to encourage; and those who choose to render us assistance in the undertaking we have embarked in, may confidently rely, that their favours will be gratefully acknowledged.

Queries upon Practical Subjects, to which Answers, founded upon Experience only, are required.

Q. 1. Have any experiments been made upon the causes of smut in wheat? What are their results, and the remedies that have been found most effectual in palliating or preventing the distemper?

Q. 2. On the blight in wheat, with the remedies that have been found most useful?

Q. 3. On the curl in potatoes, with the remedies that have been tried and found most useful?

Q. 4. On the curl in beans, with the remedies, &c.

Q. 5. On the destruction of slugs, with the remedies?

Q. 6. On the destruction of insects, with the remedies?

Q. 7. On the rot in sheep, with the remedies?

Q. 8. On the cheapest and most oeconomic mode of feeding horses, black cattle, &c. with the results of such trials as have hitherto been made?

Q. 9. On the feeding of hogs, and the articles that have, from experience, been found most useful in fattening them with the least expence?

Q. 10. On the feeding of poultry, with the cheapest and best articles for that purpose?

Q. 11. Comparison between the advantages of feeding with grain in a broken or unbroken state?

Q. 12. Whether do Autumn, Winter, or Spring tillage, conduce most to the fertility of the soil? and for what crops are they best adapted?

Q. 13. What degree of tillage has been found best adapted for different soils, and at what seasons?

Q. 14. What are the crops to which particular soils are best adapted?

Q. 15. What are the manures adapted to each soil?

Q. 16. What quantity of manure ought to be laid upon each soil, so as to afford sufficient nourishment to the crop, without any part of the manure being lost?

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

View of the Agriculture of MIDDLESEX, with Observations on the Means of its Improvement, and several Essays on Agriculture in general. Drawn up for the consideration of the Board of Agriculture. By JOHN MIDDLETON Esq. Landsurveyor. 597 pages. Nicoll, &c. London; Creech, Edinburgh.

THE utility of a NATIONAL BOARD, for promoting and superintending internal improvement, being apparent, it must excite surprise that Britain was so long destitute of such an establishment. *Hartlib*, a respectable writer of the last century, warmly suggested the propriety of appointing a director of husbandry, under the authority of Government; and several intelligent persons have, upon different occasions, expressed a similar sentiment. The carrying such a measure into effect, was, however, reserved for Sir JOHN SINCLAIR, Baronet, whose patriotism and perseverance are universally known and admired. Under his auspices, the present Board of Agriculture was opened in July 1793.

The first, and certainly the most rational plan that could be adopted by the Board, was, to ascertain the actual state of husbandry throughout the kingdom, to serve as a foundation or ground-work for future operations. Under their authority, surveys of every county have been made, printed, and circulated; several of which, after being amended and enlarged, are now reprinted. The survey of Middlesex is selected as the subject of the present observations. Two reasons determined this preference: 1st, Middlesex possesses many advantages over almost every other county, from its comprising the capital of the British Empire, the seat of Government and Legislature, of the Law, of Literature, and the Fine Arts; where all the families of the first rank and wealth generally reside during the sitting of Parliament; and where the business of the richest merchants, bankers, and citizens, is carried on to an extent that is unequalled in any other part of the globe: And, 2^{dly}, Because this work, being mentioned by Mr Pitt in the House of Commons, when the income tax was under consideration, gained thereby a considerable share of public notice*.

Middlesex,

* It is said, a similar circumstance first brought Dr Smith's valuable work, "The Wealth of Nations," into public notice. Charles Fox quoted it in Parliament; and every body flew to peruse that celebrated performance.

Middlesex, from local circumstances, does not possess within its bounds such extensive means of agricultural information as many other counties. It contains only 179,200 statute acres, of which not above one tenth, or 17,500 acres, are under corn crops; the remainder being either occupied by houses, gardens, or nursery grounds; or used for raising hay or pasture grass for supporting milch-cows, which in this district are necessarily very numerous. Such a small portion of it being therefore under the plough, and the cultivation not of the most perfect kind, renders this district (fertile as it otherwise is) rather barren in the sources whence agricultural knowledge can be collected.

Mr Middleton has, however, amply supplied this local defect; and, by extending his inquiries to general subjects of rural and political economy, has, upon the whole, presented to the public a work well calculated for conveying, not only instruction, but amusement. Whether the extraneous matter he has introduced, be consistent with the title of the work, is a problem we do not pretend to solve; nor are we disposed to call in question the propriety of extending the survey of the metropolitan county, or of discussing subjects therein, which generally affect the interest of the whole empire.

After a sensible introduction, wherein Mr Middleton expresses his surprize that Agriculture, 'to which we owe not only many of the comforts and conveniences of life, but even the means of existence, should so long have been neglected and almost despised,' he proceeds, in the execution of the work, agreeable to the plan laid down by the Board for the direction of their surveyors; and to this he has added a number of additional sections. We have heard several objections to this plan, which we are inclined to think have some weight. Uniformity, however desirable in other respects, cannot be obtained in a detail of rural affairs; for different districts contain different means of information; and hence we meet with some of these publications, like Sterne's works, with little more than blank chapters and sections. Besides, this uniformity occasions a sameness in the surveys, which, not to say worse of it, is calculated rather to tire, than instruct or entertain the reader, and somewhat like what he feels on a journey through a long flat country, where no variety prevails in the prospect before him.

Mr Middleton, notwithstanding his good sense, seems very much under the influence of professional prejudices. In the chapter on the State of Property, page 34. *& seq.* he describes, in a very animated manner, the loss sustained by landed proprietors, from having their estates under the management of

London attornies; and points out the character of a person fit for such an office. In the first part of the observation we heartily agree with him; for the agency of attornies has not only laid the foundation of much trouble and litigation to both landlord and tenant, but, by the absurd covenants they have introduced, have impeded the progress of agriculture in a very great degree. When he details the qualities necessary to be possessed by persons to whom the direction of estates should be intrusted, he, in a great measure, reduces the farmer to a cypher. In short, he wishes to invest the agent with a power, which no person whatever ought to possess over the affairs of another; and allures proprietors to give them this power, with a promise, which certainly is very tempting, no less than that of doubling in most instances the value of their estates, without laying out a single halfpenny more than paying the salary of an agent. *The proprietor, who refuses to have his revenue doubled upon terms so easy, must be blind indeed to his own interest.*

The character given by Mr Middleton, of the Middlesex farmers, is illiberal in the highest degree; and we trust will be omitted in the future publications upon the rural economy of that county. It requires no ordinary opinion of one's self, to warrant the speaking of others in terms so disgusting and disrespectful: In short, this part of the survey ought to be expunged.

When characterising the rural artificers, he says, page 54—

“ The ordinary wheelwrights and smiths of Middlesex have no ideas of machinery, nor have they a capacity for executing any thing from drawings or specifications. The generality of the farmers labourers are equally stupid, and unwilling to execute their work in any way to which they are not accustomed. Hence, the difficulty of introducing any thing new in the implements or practice of husbandry, is almost insurmountable. Even the most trifling alteration, or deviation from the old system, is resisted, both by the artificers and labourers, and every possible obstruction thrown in the way of the farmer, to prevent what they deem an unjustifiable innovation on the established customs of the place. It is absolutely impossible to get a plough, a thrashing-mill, a winnowing machine, or indeed any other implement of husbandry, made on the best principles, by the country artificers of Middlesex; and it is not much less difficult to induce the labourers to use them, when they are brought from any other parts. Thus, the farmer is reduced to the disagreeable necessity of treading in the steps of his grandfather, though the practice may be, and in many points frequently is, at war with his own judgment and inclination. ”

If these things are true, the Middlesex farmer is in a most uncomfortable situation.

The subject of *Tithes* is considered in a just light, and treated in a more manly way than by several other surveyors, who, notwithstanding they disapprove of this tax, seem afraid to point out its pernicious consequences. We extract the following passages with pleasure:—

“ The parish of Hutton, in Essex, was much occupied by the suckling of calves. The clergyman insisted on taking the tithes in kind. The inhabitants were willing to set out one tenth of every meal’s milk; and it was the only means they had of continuing the suckling business.

“ This, however, would not content the parson.—No; he insisted on having *all* the milk of every *tenth day*, though he must know that it would ruin their suckling system. They of course resisted; the parties were several years at law, and at last an unreasonable composition was obtained from the farmers.

“ The success of these, and like cases, stimulated a vicar of Battersea to draw the tithes of that parish in kind, which was continued for two or three years; during which time, nothing was more common than to meet his carts in the streets, retailing his tithes, with a person in each, vociferating, “ Come, buy my asparagus!—“ oh rare cauliflowers! ” &c. &c.

“ A few instances, equally oppressive with these, have happened in every county in England; and the necessary consequence is, that they have severally put a stop to some expensive, but promising improvements. Every matter of this kind becomes a subject of general conversation among farmers; and, of course, prevents their making the like attempts. *In short, an act of Parliament to prohibit the improvement of land by any considerable expenditure, would not more effectually do it than the tithe laws.*

“ Had tithes never been established, happy would it have been for this country, and still more so for the clergy. They are a powerful cause of many quitting the church, and of creating and supporting sectaries: they are the never-ending source of ill-will, quarrelling, and litigation; and are, unquestionably, one great cause of the continuance of so much common and uncultivated land in these kingdoms. Within the narrow limits of my own knowledge, several premeditated bills of enclosure have been given up, rather than the land should be subjected to yield tithes in kind, after the great expence of the act, the commission, the survey, the making of new roads, the building of bridges, the fencing and erecting new buildings, and cultivating the land—should be incurred.

“ A meeting was lately held, for the purpose of considering an application to Parliament for enclosing the commons above Pinner, in this county. It did not suit the rector to attend the meeting; he therefore

therefore sent his proposal in a letter ; which was, that a particular part of the commons, containing 300 acres, should be allotted to him in one piece, enclosed with a ditch, bank, and park-paling, and maintained in good repair for ever, at the expence of the other persons who had a right of common. As such an *unreasonable* request could not be complied with, it of course defeated the intended application, and the land still continues in common.

“ For about 794 years after Christ, tithes had no establishment in this island ; and *then*, only over a small part of it, till about the year 854, when they were extended to the rest of England. The occasion of their being given, is a powerful reason against their continuance. It was at a time, too, of great superstition and gross ignorance ; and tithes are continued to these days, by a barbarous policy, which sets an insurmountable obstruction in the way of every great improvement, and lays an intolerable burden on the most virtuous and valuable class in society, to which half the property in these kingdoms contributes nothing. The operation of this tax is, to keep down or reduce the produce of the earth to much less in quantity than it would otherwise be, and of course to increase the price, and promote our dependence for bread on the importation of corn from foreign countries, which could with ease be raised at home.

“ Tithes create grievous heart-burnings on account of their *partial* operation, and which is visible in most parts of this county, by a very great number of the most wealthy persons living in expensive houses, or carrying on the largest manufactories, and who pay to the clergyman nothing, or, at the most, only a few shillings a year, as a composition in lieu of the tithe of a garden. But, mark the reverse : The smaller farmers are a very numerous class in society, supporting their families by the utmost exertion of their industry : many of them are unable to keep the wolf from the door, although themselves, their wives and children, would think it an indulgence, could they afford to fill their stomachs with the coarsest fare. Yet will the tithe laws not fail to compel such miserable, but valuable beings, to pay a sixth, a fifth, or even a fourth, of the rental value of their land ; and, in some cases, more than the rent. Thus, the poor farmer pays to the clergyman from 10l. to upwards of 100l. a year, while his wealthy neighbour does not pay so many shillings.

“ Every possible argument in favour of tithes upon land, in exclusion of houses and other property, is insupportable. Why tax the land to build churches ? Does the land go to them ? Is it benefited by them ? There is not, nor can there be, any connexion whatever between the land and the church. Religion, in a word, is a mere *personal* concern ; and, of course, every possible expence relative to it, ought to be defrayed by a *personal* tax, without reference to any particular species of property. A
greater

greater absurdity can hardly be found, than to tax land, houses, money, stock in trade, merchandize, shipping, &c. for the support of the church. Land has certainly no more analogy than shipping, to the church; yet, no one ever thought of taxing shipping for the support of it. Neither, I repeat, ought land to be assessable for that purpose."

Mr Middleton is a friend to *Leases*, and thinks the withholding them is a powerful bar to improvements. He is also an advocate for the tenant having power to sell or assign his lease, and thinks it bad policy to deny him that liberty: sentiments, in which we heartily concur.

Under the article of *Expence and Profit*, (a section which ought not to have been included in the plan laid down by the Board) we notice a statement of the produce of 150 acres of grass land, which is supposed to yield the farmer 2l. per acre of profit. We have no idea that any land will admit of being annually cut for hay for any length of time, unless it is very frequently recruited with dung; and cannot think the quantity of dung applied (300 loads) would prevent its progressive deterioration. We know no method so effectual to scourge land, as to cut hay from it every year; indeed the crops in the neighbourhood of London (which are but poor indeed) corroborate this doctrine.

Speaking of the *Implements of Husbandry*, Mr Middleton makes a comparison between the swing plough, and one of the same construction upon wheels, and very justly gives the preference to the former. No excuse can be admitted for using the latter, except where unskilful ploughmen prevail; and, from our observation, good ploughmen are very scarce in Middlesex. He justly reprobates the swing plough commonly used in that county, which is, without question, the most awkward implement for tilling ground that can be imagined.

The *Commons* in Middlesex are next described; and the great disadvantages sustained by the public, from their being allowed to remain in that unproductive state, are detailed in a perspicuous manner. It must excite astonishment, that, in this county, where the means of improvement are so numerous, the waste lands should equal the quantity annually sown with corn; yet such is the fact. Mr Middleton states, that the neighbourhood of commons is unfriendly to the health and longevity of mankind; which is an additional reason for improving them.

The calculations, p. 111, respecting the number of persons wholly supported by agriculture in England and Wales, are curious.

“ Cultivators

“ Cultivators of farms, six persons to every 100 acres, is — — — — —	2,340,000
Ditto of gardens, hop grounds, nurseries, &c.	300,000
Smiths, wheelwrights, bricklayers, masons, carpenters, painters, plumbers, glaziers, various manufacturers of furniture, woollen cloth, and making it up, linen, and making it up, leather, and making it into shoes, boots, &c. hose, harness and saddlery: as much of each of these descriptions of persons as are wholly employed by the cultivators of the soil, men, women, and children, about seven persons to each farm of 100 acres, is — — — — —	2,800,000
The like of millers, bakers, maltsters, brewers, distil- lers, starchmakers, dealers in corn, and persons em- ployed in the commerce of corn — — — — —	500,000
The landlords of farms — — — — —	40,000
Persons supported by taxes on the produce of land	120,000
	<hr/>
Total — — — — —	6,100,000

It will be evident, at one glance, that these calculations are more fanciful than just. Political arithmetic has lately been much in vogue, and who would not follow the fashion?

The section upon *Tillage*, page 138, confirms what we have already mentioned relative to the imperfect cultivation of this county. We select the following passage:

“ In general, the ploughing is deep, and with a wide furrow, which, of course, very much increases the weight or draught, and necessarily requires a strong team, which, moving with a very slow pace, as all heavy teams do, performs but very little work in a day. It is not one time in fifty that they go to plough with so few as three horses; but mostly, for the lighter work, using four; on rather stronger land, five, and even sometimes six: in every instance drawing at length, or one before the other. In May 1796, I saw, in one day, two teams, with six horses in each, and three men to attend each team; namely, one to hold the plough, and two to drive the horses, ploughing, with a wide furrow, about three quarters of an acre per day. Indeed, these long heavy teams of horses do not, on an average, plough more than four or five acres in six days; at an expence, to the owners of such teams, of about twenty-seven shillings an acre for one bad ploughing. I have seen a barley soil receive the last ploughing, previous to sowing turnips, with a team of five horses, and two men to attend them; and, at the same time, a team of six horses in length, with three men attending, were giving the first ploughing to a fallow.”

It

It is our opinion, that if the system of ploughing in this county was reformed, much more gain would accrue to the proprietors, than by appointing land doctors and agents, as is eagerly recommended by our author.

We do not coincide in opinion with Mr Middleton, respecting the breadth of ridges on wet lands. Experience justifies us in saying, that the ground, in every case where the bottom is wet, ought to be raised up, which narrow ridges will not admit; and that the breadth of the ridge, in such cases, should always be in direct proportion to the depth of the soil.

A striking instance is afforded, page 148. of this work, being rather a general survey of the kingdom, than confined to a single county; for the practices of five different counties, viz. Aberdeen, Merioneth, East Lothian, Dunbarton, and Perth, are given in one single page.

We apprehend, the rotations of cropping, recommended in this work, are liable to exception; and would neither prove profitable to the farmer, nor beneficial to the ground. For instance, take rotation, number 4th,

Peas,
Beans,
Corn,
Clover,
Tares,
Turnips,

which is a rotation that no man in his senses would practise. If there be a just and true principle in farming, it is, that leguminous and culmiferous crops alternately afford the greatest possible return from the soil. Whatever might be the profit from the above crops, in the vicinity of a great city, we are certain that, in ordinary cases, a farmer would pay little or no rent, if he followed such a rotation. Mr Middleton puts too much dependence upon the merits of a rotation; for every thing must depend upon the manner in which the rotation is followed out in all the different processes of management. When he speaks of taking three green for one white crop, upon the worst or more exhausted land, he appears not to have paid due attention to his subject. Bad lands are not calculated for green crops; and experience proves, that it is easier to raise a heavy crop of wheat, than a crop of turnips, upon inferior soils.

Our author says, page 167, that the old doctrine of fallowing for wheat, is exploded; but we think he is rather hasty in making such an assertion. In some situations, it is an easy matter to lay aside Summer fallow, and to raise wheat after
green

green crops ; but we are of opinion, that no man, who is generally acquainted with the soil and climate of Great Britain, will attempt to explode Summer fallow altogether. The advanced state of agriculture has already, in a great measure, superseded the necessity of resorting so frequently to the ancient practice of fallowing for cleaning the ground ; but while we mention this, we are at the same time confident, that a great proportion of the arable land in the kingdom, could not be kept clean, or in good order, without being completely wrought during the Summer months. In those counties where the harvest is early, and the crops removed from the ground before the heat of the sun is abated, the land may be wrought in a very perfect manner after carrying a crop ; but in all situations where the harvest is late, and no tillage can be given before Winter, it will be found absolutely necessary to practise Summer fallowing at stated periods, without which, the soil, in process of time, would be overrun with weeds. This remark is supported by the condition of the lands in the vicinity of almost every great town, where, from high rents, and stock of manure, the farmer is tempted to proceed in raising corn crops much longer than the rules of good husbandry will justify. A number of improvers have gone from one extreme to another : From censuring the old mode of one fallow to two crops, which was a very improper practice, they have gone the length of condemning Summer fallow altogether.

Speaking of the management of *Meadows*, Mr Middleton says, pages 224 and 225—

‘ Manure is invariably laid on meadow land about the month of October, while it is sufficiently dry to bear the drawing of loaded carts without injury ; and when the heat of the day is so moderated as not to exhale the volatile parts of the dung.

‘ This large tract or district of *clay land* would have been of little or no value in a state of aration. The difficulty of tilling it ; the expensive teams which must have been employed on it ; the few months in every year when it could be ploughed with success ; and the *uncertain* produce of such a soil, are circumstances which *would have kept down its value to little or nothing.* But, mark the difference ! *Laying it down to permanent grass, has been the means of advancing its rent to 3l. an acre, and of its producing, in a medium of seasons, two tons of hay per acre, of the highest quality in the world for the feed of horses.*’

That clay land, especially where manure can be purchased in quantities, is of little or no value, we expressly deny. No kind of soil will pay so well for manure, nor will any yield such profitable returns of wheat and beans, as clay and heavy loam,

loam, if well cultivated. This is not a matter of opinion, but confirmed by the experience of farmers in every quarter.

Clay land has seldom been considered as lying in the most profitable state, when kept permanently in grass; nor does the extent of the produce, mentioned above, equal what might have been raised by sowing clover and rye-grass amongst a fallow crop of corn. We are of opinion, that no land whatever should be kept exclusively in grass; and that heavy soils, especially, stand in need of being often recruited with fresh feeds.

Under the article of *Feeding*, we find the following passage:

‘ I am fully persuaded, that all the straw in haulm in the kingdom, over and above what is indispensably necessary for thatching buildings, and littering cattle, might be easily converted into wholesome food, and made to contribute materially towards the rearing and support of lean stock, by the simple operation of cutting it into chaff; and, in some cases, by the commixture of roots and other articles, in order to render it more palatable, and to induce the cattle to eat an increased quantity. When so prepared, it should be given to them in mangers of rather a large size, and calculated to prevent waste. There can be no doubt but this method of preparing and consuming straw, haulm, &c. would tend considerably to increase the number of black cattle; and, when compared with the present practice of treading and rotting it into manure of a poor quality, must be considered of great national importance. Thus the straw, &c. is not only rendered fit for the support of live stock; but, by being digested, and passed through their bodies, it must become a much more highly enriched manure, than in the ordinary way of treading and rotting.’

This doctrine is certainly questionable. Query, What supports the animal? Are not the finest parts of the straw appropriated to that purpose, while the inferior or feculent part is thrown off for dung? It is very certain, that a quantity of straw eaten, assists to ferment the remainder; but if all the straw in the kingdom were cut into chaff, and passed through the intestines of an animal, we believe that both the quantity and quality of dung would be greatly curtailed.

Mr Middleton very justly is of opinion, that improvements are executed at less expence by farmers, than by proprietors; and recommends, as the best mode of letting lands, that the landlord should grant leases, proportioning the rent and duration of the lease, to the nature and supposed expence of the intended improvements. We join him in opinion, that this mode would render complete justice to the interests, and promote the advantage, of both parties.

Upon the subject of *Paring and Burning*, our opinions are not very different from those entertained by Mr Middleton. We are aware that those who have made chemical science their study, do almost unanimously condemn the practice, while the generality of professional husbandmen as eagerly maintain its utility. If Hounslow-heath, Finchley-common, or other wastes, were to be put in a state of aration, we know of no method so effectual as to pare and burn them, in the first instance; but, upon the other grass lands of Middlesex, we consider such an operation as wholly unnecessary.

Upon the subject of *Irrigation*, our author speaks rather in too high terms. After stating the advantages attending this mode of improvement, he says:—

‘Forty acres of good water meadow will support, in the greatest luxuriance, 500 Wiltshire ewes and lambs for six weeks, from the middle of March to the 1st of May, during which time they will improve one shilling a week, or pay *three pounds fifteen shillings* per acre, at a time of year when all other farmers are distressed for a want of food for their stock. In Middlesex, it would still be more valuable, as five pounds worth of hay might be mown off it the first week in May.’

The above exceeds any thing we have met with respecting the produce of grass land; for it is only the best meadow that will feed 5 ewes and lambs, per acre, from the middle to the 1st of May; and the greatest part of the pastures in the kingdom will not support near so many.

A very distinct account is given, page 328. & seq. of the manner in which milk cows are kept in the vicinity of the metropolis. The expence per week is stated at 7s., or 18l. 4s. *per annum*, and the produce 29l. 10s., leaving a profit of 11l. 6s. per cow; but this includes allowance for interest of stock, rent of buildings, losses, attendance, and all other expences.

The dung and urine of sheep, at 20 miles or more from London, is stated to be worth about 5s. per head *per annum*, which, in many cases, is more than the rent of the land. Mr Middleton deals too much in calculations of this kind, and appears to build them more upon conjecture than experiment. His observations upon the sheep stock in South Britain, are given in the same manner, and seem to have been more the result of information than observation.

The section concerning *horses*, and their use in husbandry, compared with *oxen*, contains much valuable matter. The mode of feeding farm-horses is amply detailed, and the expence *per annum* said to be 35l. Mr Middleton is inimical to work-
ing

ing oxen, and gives solid and substantial reasons for preferring horses in carrying on farm work. It appears, that no more than 13 oxen are wrought in the whole county; which is a convincing proof of the estimation in which these animals are held by the Middlesex farmer.

Public houses are stated to be more ruinous to the lower orders of society, than all other evils put together. One reason given for their increase is, that so many brewers and distillers are in the commission of the peace.

That public houses or dram shops are destructive of morals, and inimical to the welfare of society, is a point upon which there can be no difference of opinion; but that their increase is owing to the numbers of brewers and distillers being in the commission of the peace, we deny. The far-fetched and ill-founded observation of the man whose earnings amount only to 9s. per week, bringing home a shilling more at the end of it than the person who earns 12s., does not carry conviction along with it. We should be glad to inquire, what tie of virtue, or sense of duty, could influence the one, more than the other. The temptation to both is the same; and were we only to reason upon the subject, we would say, that the person who had the smallest income, with a large family to support, would be the first to dissipate a part of it, in order to drown care. Much of what is said on this subject, can be considered only as declamation.

The risible faculties are not a little excited, when we observe our author recommending milk and water to the labourers, instead of malt liquor. A hundred thousand volumes would not convince an Englishman, that the former is a better beverage for allaying his thirst, and enabling him to perform his work, than ale and porter. A manuscript paper of Sir William Pulteney's is likewise quoted, wherein the worthy Baronet recommends vinegar and water as an excellent substitute for other liquors. We are fearful that the obstinacy of this class of people will prevent those salutary advices from being successful, and that they will rather take their hazard of receiving mischief from fermented liquors, than give up the use of them for any of the substitutes proposed.

After mentioning the price of provisions, which are generally as low in London as any part of the kingdom, Mr Middleton calculates, that each inhabitant of the county, young and old, consumes 30 stones and a half (of 8 lib. each) of animal food, 8 bushels of wheat, and 1 ton of vegetables, per annum. As for malt liquors, the quantity said to be drunk by the lower ranks, is astonishing. Take his own words for it.

‘ There are some persons who do not drink malt liquor at all ; most people of fortune and fashion drink it very sparingly ; while great numbers of the lower orders, particularly coalheavers, anchor-smiths, porters, &c. drink it to great excess, even, it is supposed, to the amount of five hundred, or one thousand gallons a year each. Upon the whole, I apprehend the quantity of *malt liquor* consumed in the county, would almost average a hundred gallons per head of all ages and conditions.’

One thousand gallons per annum, is nearly, on an average, about 14 bottles of ale or porter per day, and is almost equal to what is passed through many drains, made to carry off the superabundant moisture from the earth.

In another part of the work, when treating of victualling houses, Mr Middleton supposes, ‘ that upwards of three millions of money are expended by the labouring people, upon ale, porter, gin, and compounds, which is 25*l.* per family of that description of persons.’ If wages, on an average, be 12*s.* per week, the amount per ann. is 32*l.* 4*s.*, which leaves only 7*l.* 4*s.* for purchasing bread, butcher meat, vegetables, and clothes !

The different public markets in London are well described, though it appears the Lord Mayor (Watson) affected want of knowledge when applied to for information. Accounts taken from the Customhouse books are likewise given ; which show, in a clear light, the different quantities of corn imported into, and exported from London and other parts of the kingdom. Mr Middleton suggests, that it would be an useful measure to license and swear the Smithfield salesmen ; and likewise, that they should be obliged to find security for faithfully executing their office. The latter might prove of advantage to the public ; but if a person is determined to play the rogue, licensing and swearing will hardly prevent him.

When treating of *Manufactures*, Mr Middleton, with great propriety, ranks Agriculture in the highest class. He states the farming capital in South Britain at 5*l.* per acre, or 200 millions, and that the annual produce is 65*l.* per cent. or 130 millions. From thence he deduces, that agriculture must be allowed to surpass all other manufactures that can be brought into competition, not only as to the gross amount, but also as to its superior usefulness.

We perfectly agree with Mr Middleton in his conclusions, but differ widely from the premises he assumes. In the *first* place, we do not consider the quantity of arable land in South Britain to be so great as he states it ; and we apprehend the commons and wastes to be more extensive. In the *second* place, no agricultural capital is required for the land occupied by

by roads, woods, hedge-rows, and water, or as pleasure ground; and these, by his own computation, amount nearly to four millions of acres. If we add the commons and wastes, which, in some counties, are one fourth, and even, in Middlesex, are one tenth, of the whole land, and which require a very trifling stock, it will be found, that agricultural capital is mostly laid on about 20 millions of acres, and that the amount of this capital will not much exceed one half of what is here computed. We suspect much, that Mr Middleton led the Premier astray, when he founded upon his calculations. Political arithmetic is a deceiving science. The first figure is usually drawn from an hypothesis, and the smallest error at the outset renders the whole calculation delusive and fallacious.

The greatest part of the next chapter (viz. the 17th, and entitled Miscellaneous Observations) may be termed a most ingenious romance; and we give the author great credit for the fertility of his imagination. The section concerning the depredations committed upon the farmer's property, by game and vermin, exceeds any thing we ever saw in the calculation line. A very fair and well written account is made out, and figures are used to prove, that the farmer sustains an annual loss of ten millions, from moles, mice, sparrows, rooks, magpies, &c. If we add to this another loss, being 4s. per acre on all the land in England, which the author computes is sustained from thieving, &c. it will appear, that nearly twenty millions Sterling is the total amount of the damage sustained by the landed interest annually. After this, who will say that farming is a good trade? or rather, who will not be surprised that the whole of the farmers of the kingdom have not long ago been ruined?

The attempt to estimate the quantity of arable land in South Britain has merit; but, from a deficiency of facts, it proves little. For instance, the supposed extent of arable land is first used to ascertain the number of horses employed in agriculture; and the quantity of corn necessary for supporting these horses, is then brought as a proof of the number of acres of arable land; which is certainly a most ingenious mode of calculation.

Our author thinks, that one fifth of the arable land in England is every year under summer-fallow, or in a non-productive state; but we are confident he is mistaken in this opinion, and that the quantity is not so extensive by one half. In several counties, there is scarcely such a thing as plain fallow; and, unless it be upon the common fields, such fallows are much less frequent than formerly. Even in the most of places where the tenant is taken bound to have one fallow for two crops of corn, turnips are taken in its place. In-

stead, therefore, of two millions eight hundred thousand acres, we are inclined to believe, there are not one million of acres of plain fallow in all England.

Under Chap. 18. (*Means of Improvement*) the number of lawyers, who practise in the several courts, are stated to be seven thousand and forty! We believe this is the first time that this learned and respectable profession was ever classed amongst the means of improvement; though gaols and houses of correction (the number of which are also detailed) may very properly come under that description.

A variety of quotations are given from Colquhoun's *Treatise on the Police of London*, which, we hope, for the credit of its inhabitants, contain exaggerated accounts of the crimes committed in the capital, and its vicinity. It is mentioned, that 115,000, or nearly one fifth, are persons whose pursuits are either criminal, illegal, or immoral; or, in other words, that every fifth person deserves the gallows. If such things are true, the fair inference would be, that there is no such thing as a police in the county of Middlesex; or, how could the daring offences mentioned in this work be committed with such impunity?

It gave us surprize to notice a kind of comparison, p. 480, between the Middlesex husbandry and that of some other counties, wherein the author concludes with a flourish in favour of the former. He says—

‘ There is not any land in Middlesex, (the commons excepted), from the well protected and healthy copes at Riselip, to those wonders of their kind, the gardens at the Neat-houses, but what is cultivated, and, for the most part, raised to an astonishing degree of fertility.’

How can this be reconciled with the accounts previously given of the farm-management of the district? The farmers were said to be unprovided with proper ploughs; the servants could not hold, nor the artificers repair them; the lower ranks did little but pilfer and drink; and the higher ranks were inattentive to the management of their estates. This is the substance of what is said concerning these matters, and probably it is just:—But can the husbandry of Middlesex be considered as perfect, if it is defective in every point leading to perfection? Censure is either improperly applied in the one case, or unmerited compliments bestowed in the other.

As many objects are embraced in this survey, which will likely be neglected in others, we have devoted a larger space of our pamphlet to the task of reviewing it, than, in ordinary cases,

cases, can be spared to works of the like kind. We have stated our sentiments, with candour and freedom, upon the different articles of rural and political economy; and, in pointing out the errors of the author, have acted under the impression, that we were thereby benefiting the public, and affording him the means of correcting these defects, when the work comes to a second edition, which, it is expected, will soon happen.

Upon the whole, the survey of Middlesex may be read with pleasure, as it contains much important information, though rather arranged in a desultory manner. Though we have not objected to the great mass of political arithmetic which the author has introduced, we cannot help remarking, that he would have been more correct, probably as useful, and certainly entitled to as much applause, had he simply confined himself to a detail of the agriculture of Middlesex, with observations on the means of its improvement. N.

ART. II.—*General View of the Agriculture of the County of NOTTINGHAM, with Observations on the Means of its Improvement. Drawn up for the consideration of the Board of Agriculture and Internal Improvement. By ROBERT LOWE Esq. Nicol, &c. London; Creech, Edinburgh.*

THE different surveys of this kingdom, published under the authority of the Board of Agriculture, though drawn up agreeable to an uniform plan, prove, in a most convincing way, that the scheme proposed to be adopted for detailing the husbandry of Great Britain, is not perfect, because it is uniform, and that their value and importance must necessarily depend upon the abilities of the surveyor, and the manner in which he discharges the duties of his office. In some of these works, we observe very useful information, respecting the present state of husbandry in the district described; while the observations upon the means of exciting and accomplishing further improvements, (which is certainly the main design of the publication), are neglected and passed over. Others, again, use facts in the manner some clergymen do a text, and extend their observations to a greater length than may be deemed consistent with the nature of the publication. The latter stand a chance, however, of being more acceptable to the public; for this mode admits full scope to the talents and abilities of the surveyor, and affords him an opportunity of communicating knowledge upon almost every branch of rural affairs.

The work under consideration may be classed amongst those first mentioned; and Mr Lowe, in a preliminary observation, F 4 acknowledges

acknowledges that his intentions were “only to state, as far as came within his knowledge, the usual course of husbandry, the new practices introduced, and such improvements as suggested themselves to him, without pretending to enter deep into scientific disquisition on the subject of political regulation, which the reader therefore must expect to be but slightly touched upon.” This observation appears to have guided him in the execution of the work; for, while we peruse a plain, and, we believe, a very faithful description of the present state of husbandry in the county of Nottingham, the means of accomplishing future improvements, or of removing obstacles, are only slightly noticed.

The *climate* of this district is described to be dry, and the harvest generally early; circumstances of the first importance, and which affect the value of the land much more than is usually supposed. In point of soil, Mr Lowe divides the county into three districts: 1st, sand or gravel; 2d, clay; 3d, limestone and coal land: And these he afterwards subdivides into smaller portions, so as the subject may be fully comprehended. We have always accounted it a matter of difficulty to present an accurate view of the soil; which is so variable in most counties, and many of those varieties approaching one another so nearly, that it is almost impossible to give a map or description of those particulars, without unavoidably falling into error.

In the chapter upon the *cultivation of arable land*, and the rotation of crops, the author mentions, that “the introduction of turnips was of great importance in ensuring a good crop of barley, after being fed off with sheep; but that, till within these few years, it was not usual to lay down with seeds.” He adds, “that the culture of a break, well managed, may be stated to be—Break up for, 1st, turnips, laying ten quarters of lime on an acre; 2d, barley; 3d, rye, sometimes wheat; 4th, oats, with seeds; *i. e.* white clover and rye-grass, which are mown for hay, and then thrown open.” We may readily suppose that this rotation will not be viewed by many farmers as a judicious one. The fact is, it is certainly as bad a course for turnip land as can be practised; but we must remark, that this is only followed on the forest breaks, where it has been an immemorial custom for the inhabitants of townships to take up temporary enclosures, and keep them in tillage for five or six years.

Skegs are mentioned in this chapter. Query, What kind of grain are they? A note at the foot of the page bids us turn to the Appendix; but, upon consulting the place referred to, we receive no other answer, than that they are Skegs; or, in other words,

words, that they appear to be the *Avena Stipiformis* of Linnaeus. Our author should have attended that he was writing for farmers, and not for botanists.

But the greatest improvement on forest lands is, where they are permanently enclosed. We extract, with much satisfaction, what is stated concerning the Duke of Newcastle's improvements on the land at Clumber-park, which originally was a mean heathy soil.—

‘ Amongst these, deserves to be named, in the first place, Clumber-park, belonging to his Grace the Duke of Newcastle, between ten and eleven miles round, and containing in the whole about 4000 acres, which may be said to be a new creation within these thirty years: at which time it was a black heath, full of rabbits, having a narrow river running through it, with a small boggy close or two. But now, besides a magnificent mansion, and noble lake and river, with extensive plantations, which will be particularly noticed hereafter, above 2000 acres are brought into a regular and excellent course of tillage; maintaining, at the same time, between three and four thousand sheep, and are all in his Grace's own occupation.

‘ The following courses and practices of husbandry, used in Clumber-park, were communicated to me by Mr Birket, his Grace's farmer, a very active and intelligent person.

‘ *On the best Land.*—First year, turnips; second, barley; third, clover; fourth, wheat; fifth, turnips; sixth, barley; seventh, seed; which lye from five to six years.

‘ *On bad Land.*—First, turnips; second, oats, with seeds, which lye as before. The whins are stubbed constantly, to hinder his being obliged to break up sooner. He keeps a year's stock of dung before hand, and lays it on for turnips in autumn, ploughing directly. He harrows and gets out the twitch, (called in some counties couch grass) as usual in the Spring. He lays two chalders, or eight quarters of lime an acre for turnips, but never after in that course.’

The following passage on the culture of *roota бага*, or Swedish turnip, we recommend to the attention of our readers.—

‘ The *roota бага*, or Swedish turnip, is now cultivated by a few farmers in this district. It appears to be superior to the common turnip in many respects, particularly in hardiness, as it stood the last severe Winter without the least injury. It is ate with greediness by all animals, from the horse to the swine. Sheep prefer it to all others: but the material advantage that has been made of it, is the substituting it for corn in the food of draught horses; in which it has been found to answer the wish of every person who has yet tried it. The turnips are put into a tub or barrel, and cut small with an instrument like an hoe, with the
blade

blade put perpendicularly into the shaft ; a man will cut in one hour as much as six horses can eat in twenty-four. The tops and bottoms are previously cut off, and given to the pigs. Horses, that are hard-worked, look full as well when fed with this turnip, and very little hay, as they formerly did when very high fed with corn. The Swedish turnip should be sowed early, from the 15th of May to the 10th of June.'

The following information on the culture of the *roota бага*, is given by J. DAIKEN, Esq. of Nottingham:—

' Mr Daiken, † about the tenth of May 1794, sowed about four acres with the seed of *roota бага*, about 2 lb. per acre, on good sand land, worth twenty shillings an acre, manured as for turnips, and having been ploughed four or five times ; the rest of the field, to the amount of nine acres in all, with comon turnip, and turnip-rooted cabbage, all broad-cast. They were not transplanted, but hoed out nine inches asunder, at three hoeings, at seven shillings and sixpence an acre ; no other culture. In November, began to use them for horses, giving at first clover and rye-grass—hay, oats, and beans ; but finding that the horses did well upon them, left off all corn, and continued them on hay, and the roots only ; fifteen were thus fed for about two months, were constantly hard worked, and preserved themselves in very good condition. Mr Daiken is so well convinced, that in this application they were worth thirty pounds an acre, that he would in future, if he could not get them otherwise, rather give that sum per acre for one or two acres, than not have them for this use. They lost their leaves entirely when the frost set in ; but the roots were not the least affected, though the common turnips in the same field were totally destroyed. Passengers passing through the field cut holes in them, which did not let the frost injure them, nor were those hurt which were damaged by cattle biting them. Some came to the weight of 16 lb., and Mr Daiken thinks the average of the crop 8 lb., and much to exceed in tonnage per acre common turnips.

' Mr Daiken gave them also to hogs, cattle and sheep. They are excellent for hogs ; and sheep being let into the field before the common turnips were destroyed, gave so decided a preference to the *roota бага*, that they would not settle on the common turnips, while the others were to be had.

' The method of giving them to horses, is to cut off the top-root, to wash them, and to cut them roughly with a perpendicular hoe, and then given directly, without keeping them to dry. The horses ate them with avidity, and seemed even to prefer them to corn. Their qualities appear to be singular, as they bind horses instead of relaxing them, as other roots do. One mare was kept entirely upon them and straw, worked every day, did well, and
never

† Mr Daiken thinks, that, in general, the *roota бага* should be sown about a month sooner than other turnips.

never looked better : this mare was more bound by them than the rest. They have a strong effect upon making the coats fine ; and one or two affected by the grease, were cured by them, as they act as a strong diuretic. In this mode of application, one acre maintained fifteen about two months ; and Mr Daiken is so well convinced of the utility of the plant, as well as many of his neighbours, that he intends, and they also, to increase the cultivation much.

‘ Mr Daiken suspects there are two sorts of the roota бага, because some, upon cutting, are white within, but in general yellow ; otherwise of the same external appearance. The yellow is the best.’

Mr Lowe is very particular in describing the *Woods* and *Plantations* in this county, and takes up more than one fourth of the Survey, or one fifth of the whole work, if the appendix is included, on this subject. This is a branch of an agricultural survey well deserving attention, and which, perhaps, has been too much neglected by the generality of surveyors. The climate and soil of this county appear favourable to the growing of timber ; and we notice, with pleasure, that the landed proprietors do not neglect this permanent and national improvement ; which we hope, from what was mentioned last session of Parliament by Sir William Dolben and Mr Pierrepoint, will in future be attended to in every enclosure bill.

It appears that there is not much waste land in Nottinghamshire, and that what remains is chiefly in rabbit-warrens. The ancient Royal forest of Sherwood, which was of great extent, may now be considered as wholly disforested ; for the soil is understood to have been granted by the Crown to different lords of the manor, reserving only, in forest language, the *vert* and *venison*, or trees and deer, which last is now entirely extirpated.

The use of *lime* is very imperfectly understood in this county. One gentleman considers lime as hurtful without farm-yard manure. Another has laid from 1 to as far as 20 chalders, or 640 bushels, on an acre of cold clay soil, and found no benefit whatever. A third limed part of a red clayey loam, and dunged the whole, but saw no difference in the crop ; and where the heaps were laid, nothing has grown since. From these particulars, Mr Lowe concludes that the benefit of lime on clays is not fully established.

We have often remarked, that lime has, in many instances, been used at random, no inquiry being made, nor attention paid, to the condition of the soil, whether it has been over-cropped and worn out, or has lately been refreshed with grass, or enriched by dung. From inattention to these particulars,
and

and erroneously considering lime as a manure, in place of a stimulus, much money has been unnecessarily expended upon this article, and many attempts to improve, rendered unsuccessful.

One gentleman has been rather more fortunate than his neighbours; for an experiment upon a clay field, with him, turned out well. But, mark the extent of his experiment. He thinks it of as much use the second year as the first, and even of service the third! We would say, in answer to this, that it is of more service the second year than the first, being then intimately mixed with the soil; and that its effects, under a proper system of management, will remain undiminished for *nine* or *twelve* years, and will be of use for a great deal more. No doubt, by applying the whip and the spur, it may be wrought out earlier, but this will only happen where improper farming is practised. A very sensible paper from the Reverend Dr Coke of Brookhill, closes this article, which deserves the attention of the Nottingham farmers.

Paring and *Burning* does not seem a favourite practice with Mr Lowe, nor is it with us, but under certain circumstances. When tough coarse sward is first broken up, no operation is equal to paring and burning, for bringing the land into sufficient culture. Without doubt, under good management, no coarse sward should be suffered; but before the whole kingdom is brought into proper order, we cannot join with those who indiscriminately condemn paring and burning.

Mr Lowe thinks weeding is not sufficiently attended to, particularly in the clays, where very foul crops are to be seen. He seems to recommend the Bedfordshire way of weeding beans with sheep, which is a most slovenly custom. Sheep may keep down the couch and annuals when the beans are young, without doing material damage; but, after the crops get to any length, they must be injured and broke over by the sheep; and, what is worse, the roots of the couch being firm in the ground, and not previously loosed by the horse or hand hoe, must, by the time the sheep are removed, have acquired such strength, as to prevent them from being afterward extirpated.

Our author's opinion concerning the *Commutation of Tithes* is rather novel. He objects to that measure, because he thinks it would increase the burden upon the landed property. We shall quote his own words—

‘ But what weighs most with me is, that in this, and, I believe, most other counties, more tithes are paid by composition than in kind. These compositions, from the desire of clergymen
to

to live well with their parishioners, and partly perhaps from habit, are much lower than the real value of the tithe. If, therefore, a general compensation is to be fixed by law, which must necessarily be by understanding persons upon oath, I apprehend much the greater part of the occupiers would, instead of being relieved, find themselves charged with a much heavier expence than before; and, consequently, instead of a general satisfaction, a general complaint would ensue.

The chief argument which operates with us against tithes, is, that they are a tax upon industry, operating with greater severity upon the active and industrious, than upon the careless and slovenly husbandman. If they were commuted, this objection is at once removed; for the burden to the tenant would be no more than paying a part of his rent to the titheholder, and the remainder to his landlord. To the farming interest of the kingdom, it is a matter of no importance upon what principles they are commuted; whether at their full value, at a half, or any given rate. It is enough that they are fixed. When that is accomplished, the good farmer will have no partner to share the fruits of his well-earned labours. If he has limed, manured, inclosed, and drained, at a heavy expence, and thereby doubled his crops, no man will have a right to claim a tenth share of the produce of those beneficial improvements. In a word, laying aside every question respecting the origin of tithes, the right of impropiators of all descriptions, the animosity which their collection often occasions;—we say, laying these things totally out of view, that a tax, which must necessarily rise or fall according to the exertions of the person who has to pay, or the disposition of him who is to receive it, must be founded upon improper principles; and that few measures of legislation would be more conducive to the internal prosperity of the country, than a valuation and commutation of tithes.

This work, upon the whole, though rather more concise than we could have wished, displays a good deal of knowledge in the science of Agriculture; but we notice, from the correspondence, that the author has been ably supported by Sir Richard Sutton, Bart. who appears to have taken a considerable deal of trouble in collecting materials for his information.

N.

ART. III. *Travels through the United States of North America, the Country of the Iroquois, and Upper Canada, in the Years 1795, 1796, 1797, with an Authentic Account of Lower Canada; by the Duke de LA ROCHEFOUCAULT LIANCOURT. Vol. I. Quarto, 650 pages. London, Philips, &c.*

SINCE the separation of the United States from Great Britain, a variety of publications have issued from the press, describing the soil, climate, and agriculture of America; but none of them, which have come under our inspection, deserve to be compared with the enlightened and circumstantial work now before us. Influenced by liberal principles, and guided by a steady and capacious mind, the noble author has detailed his travels with such precision and ability, that the public cannot fail to receive the highest gratification from the intelligent information he communicates.

The causes which induced the Duke de la Rochefoucault Liancourt to leave his native country, are well known, and reflect the highest honour upon his character. A steady friend to rational liberty, he warmly supported the reformation of the old French government, and took an active part in all proceedings of the National Assembly, in conjunction with many other eminent persons, who, like him, experienced a bad reward. When obliged, after the affair of the 18th August, to emigrate from France, he employed his time and abilities in a superior way to most of his brethren. The native benignity of his temper, and love of his country, restrained him from joining in the measures used for restoring the old government; and occasioned him to travel into other countries, as a mean of instructing himself, and benefiting mankind.

At an early period, his Grace was fond of agricultural pursuits; and, when our countryman Mr Arthur Young visited France, for the purpose of ascertaining the state of husbandry in that country, he was received at Liancourt with open arms. These two celebrated personages were equally fond of one another's company; the Duke being as eager to receive information concerning the rural economy of Great Britain, as to communicate particulars respecting that of his own country. In this publication he has shown himself an adept disciple of the British tourist, and displays equal diligence, and probably greater discernment, in the inquiries which he made in the course of his travels.

After residing five months at Philadelphia, for the purpose of procuring the necessary information to guide him during his intended journey, and where he cultivated the acquaintance of several

several respectable gentlemen, many of whom were useful to him during his progress in the United States, the Duke set out on the 5th May 1795, in company with a young Englishman named Guillemard, who had been led to visit America to obtain accurate information of the country. They travelled on horseback, with one servant, which was certainly the best way of journeying, where roads are generally bad, and accommodation neither good, nor to be found so easily, as in many other countries. In this manner they proceeded up the Schuylkill, upon the banks of which a great deal of good land is to be found; and while the Duke attentively examined the farms, and inquired about the mode of their cultivation, his fellow-traveller appears to have been equally attentive to make mineralogical observations.

We make an extract from this part of the work, which will give a glimpse of the present state of husbandry in the province of Pennsylvania.

‘ I was desirous of being more accurately acquainted with the state of agriculture and husbandry about Reading, which, in Philadelphia, had been pointed out to me as the most perfect in all Pennsylvania, and I therefore wished to converse with one of the best informed farmers. Mr Evans had been named to me as such. He superintends and manages the farm of Angelico for Mr Nicholson in Philadelphia, who bought it three years ago of Governor Mifflin. This farm, which lies three miles from Reading, on the way to Lancaster, consists of nine hundred acres, four hundred only of which have hitherto been cultivated, and fifty of these lye in pasture. From sixty to seventy acres consist of the finest meadows, some of which are sown with clover. They are watered at pleasure, partly by the Angelico, a small brook from which the place takes its name, and partly by a very copious spring, which waters such parts as are not within reach of the Angelico. The grass is fine, strong, and bushy, and the only care taken of it consists in a slight irrigation. The rest of the land is under the plough, and produces wheat, rye, and buck-wheat, oats and Indian corn, but without any mixed rotation of crops. The land is of the best quality, being a rich clay, from twenty-four to twenty-eight inches deep. Some places are stony. More or less manure is laid upon the soil every three years. From four to five cart-loads of dung, about fifteen hundred weight each, are generally allotted to an acre; but the dung is far from being in a state to answer the intended purpose. The produce of the first year, after the ground has been cleared, is twenty-five bushels of wheat, forty bushels of rye, forty bushels of barley, eight bushels of oats, twenty-five bushels of Indian corn, per acre. It would produce considerably more, if the wood were felled in a more careful manner, and the ground some-
what

what deeper tilled. It is the custom, and consequently the general opinion, that the ground must not be ploughed deeper than four or five inches. I have conversed with Mr Evans on this subject, who could not help allowing that the above opinion is erroneous. He was entirely of my way of thinking; but it is the custom, and that has more weight than the clearest reasoning. Newly cleared land sometimes produces better crops, after the second and the third year's tillage, than at the first; and this generally happens when the ground has been cleared with sufficient care. The usual produce of this land is ten bushels of wheat, twenty of rye, twenty of barley, forty of oats, and eighty of Indian corn. This district has not suffered from certain insects, called *lice*, which occasion sometimes considerable mischief to the crops; nor had the Hessian fly much damaged the corn here. The ploughshare is of iron; it has but one broad side, bent toward the right. It is ill contrived, and turns up the ground very imperfectly. Two horses are able to draw the plough in a pretty strong soil. The work of the farm is performed by five men, six horses, and twelve oxen. Mr Evans's wife and children manage the business of the house, of a pretty considerable dairy, and of the poultry-yard, which is much better stocked with fowls than American farms usually are. The butter, which is not consumed in the house, is sent in Winter to Philadelphia; but in Summer, they make good cheese, which is sold for tenpence a pound. The corn is either sold in Philadelphia or Reading. Mr Evans fattens some oxen; but their number does not exceed eighteen, though he possesses seventy acres of meadow land: these oxen, together with his twelve cows and six horses, consume almost all his hay, for he sells very little. He keeps it in barns, and sometimes in stacks made after the English manner, but so very badly, that they generally tumble down. Every acre of meadow, if mowed twice a year, yields from three to four tons of hay; and the price of this article was, last year, fourteen dollars a ton.'

The great and valuable settlement in Genesee, state of Massachusetts, under the management of Captain Williamson, is amply described. The Captain appears possessed of eminent talents for rearing up an infant settlement, and rapidly bringing a waste country into an improved condition. Great progress is already made in this extensive undertaking; and we observe with pleasure, that the speculation (for a speculation it certainly was at first) will turn out advantageous to those concerned.

After examining the settlements betwixt the old cultivated lands and the lakes, the Duke proceeded from Niagara to the province of Upper Canada; the present state of which is fully described, and some speculations hazarded upon its future condition.

dition. General Simcoe, the Governor, received his Grace like a friend, and communicated much information respecting the plans he had in view for its improvement, in which, it would appear, he was rather crossed by the Governor-general Lord Dorchester. The bounds of this newly cultivated province include all the country westward of lakes Erie and Ontario, not within the limits of the old province of Quebec, or Lower Canada; and the two provinces contain about 170,000 souls. From what is said, it appears that these provinces hardly furnish grain sufficient for supplying the consumption of the inhabitants, and that their establishment is a very heavy burden upon Great Britain.

Being prohibited by the Governor-general from entering Lower Canada, his Grace was obliged to cross the lakes, and travelled by way of Oswego and Albany to Boston. During this tour, when passing Saratoga, he expatiates upon the scenes which took place there, in the most animated language. Massachussets he describes as being as much cultivated as France, and the country, within twenty miles of Boston, as a continued village.

Leaving Boston, his Grace visited the province of *Maine*, and was kindly received by General Knox, who possesses an extensive landed estate, known by the name of the Waldo Patent. An extract from the work will do justice to the General, who acted a conspicuous part under General Washington, during the American war.

“ In this territory, it seems to me that no person can fail to thrive, who possesses so eminently the qualities of intelligence, prudence, and activity, together with a sufficient capital to lay out in improvements.

“ These necessary subdivisions of his estate can only serve to make it all one scene of prosperous husbandry, and abundant population, sooner than the worthy owner could have otherwise expected. So much do I know of his character and talents, and so freely did he explain his plans to me, that I cannot but hope, as warmly as I sincerely wish, the happiest consequences to his affairs, and to the country, to result from them both. At the same time, it seems to be indispensably requisite to their success, that they be prosecuted with unwearied and unalterable perseverance. At the distance of Philadelphia, and amidst other business, it will be impossible to give the due attention to their advancement. A residence on the spot is absolutely necessary. But, with this, attention and activity cannot fail to surmount every obstacle; and the happiest event must infallibly ensue. General Knox is fully sensible of all this, and has therefore retired from that public business, in which he was engaged

for five and twenty years of his life, with great honour to himself, and to which he generously sacrificed a part of his fortune. He has even resolved to decline attending the Winter meetings of the Legislature of the State of Massachusetts. Thus, from a successful career in political life, he turns himself to augment and improve a fair estate; in consequence of which, he may probably leave immense wealth to his family. Can a man know a past life of more agreeable retrospect, in connexion with future prospects more fair and promising?"

After travelling through New Hampshire, and passing two days with Mr Langdon, a gentleman of great influence in that state, the Duke again visited Boston, and proceeded by the way of Rhode Island and Connecticut to New York. The numerous towns on this coast, and the husbandry of the adjacent country, are judiciously described; and, among other observations on the state of Connecticut, we find the following:—

“ Another law, long prior to the Revolution, obliges every seventy families in Connecticut, to maintain a common school for eleven months in the year. Reading and writing are appointed to be there taught. If the number of families be under seventy, they are then obliged to maintain their school only for six months in the year. Every town forming a regular incorporation, must keep a grammar school, in which English, Latin, and Greek, are to be taught. The different societies are to name, each, a deputation to visit and regulate the schools. For every *thousand* dollars of taxation to the state, *two* dollars are to be paid for the support of the schools. The teachers have salaries proportioned to the taxation of the districts to which they belong. Towns, or communities, entrusted with particular funds for the support of the schools, can receive no interest from those funds, while they delay to erect the schools for which it was destined; and lose the principal, if they shall attempt to divert it to any different purpose. Towns or parishes, having no *foundation* for schools, must either support their schools entirely out of the appointed tax, or must at least contribute one half of the means for the maintenance of these schools; while the parents, whose children are educated in them, pay the rest. In very populous towns, the support of the schools continues to be left to the inhabitants.

“ It is provided by law, that the select men shall in every town take cognizance of the state of the schools. Upon their reports, and in the proportions in which these declare the salaries to be respectively deserved, the towns make payment of the money which has been levied for the teachers. Where there are no schools, or but very bad ones, the proportion of the tax is withheld, in order that it
may

may be bestowed, where it has been better earned. There is, however, no instance of a town or parish remaining negligently without a school. Many communities maintain their schools for a greater part of the year, than they are, by law, obliged to do. The select men, and the deputations from the communities, manage the farms, and other revenues of the schools.

“ The teachers are commonly young men from the colleges, students of law, or theology. Their salaries are, at the pleasure of the different parishes, from two to three hundred dollars. Almost all those who now act a distinguished part in the political business of New England, began their career as teachers in these schools; a situation that is accounted exceedingly honourable. Sometimes, where the salary is small, women are chosen to be the teachers. Even these must, in this case, be well qualified to teach reading, writing, and arithmetic.

“ Every county must have a school for Greek and Latin. A fine of three dollars is exacted from parents neglecting to send their children to school. The select men have authority to levy it.

“ One natural consequence, from the careful observance of this law, is, that hardly a person can be met with in Connecticut, any more than in Massachusetts, who is not qualified to read, write, and perform the common operations of arithmetic; and that the general manners are better, the laws more faithfully observed, and crimes more rare, here, than in other places.”

Passing through New York and New Jersey, the noble author terminated a journey of seven months continuance; “ on which,” he says, “ I cannot reflect without pleasure, and, in the course of which, I found few things, but such as I have had occasion to mark with approbation.”

The journey through the southern states was delayed till the month of March: on the 24th of which month, the Duke took shipping at Philadelphia for Charlestown in South Carolina; and, during the passage, obtained much previous knowledge of the country from Mr Pringle, attorney-general of that state, who was his fellow passenger. After examining South Carolina and Georgia, he proceeded to the Spanish settlements of East and West Florida; a description of which concludes the performance.

The husbandry of these states is of a quite different nature from that of the northern states. Property is in much fewer hands; and farm-work is chiefly performed by negro slaves. Rice is the principal object of cultivation, though it appears to be not only hurtful to the health of the people, the ground

being always kept in a swampy condition, but also the least productive article in Carolina.

We cannot take leave of this work, without expressing the high opinion we have formed of the talents and abilities of the noble and worthy author. Born to figure in a different line than surveying the husbandry of any country, it must excite surprise, that his mind could, at once, accommodate itself to undertakings of this nature; and still more, that he was able to present to the public, a detailed account of the political, commercial, and rural œconomy of America, which few can equal, and which none will excel.

The preface by the English translator, though generally liberal, contains some things which we earnestly wish had been left out. Few persons will object to the performance, because the Duke constantly displays an ardent affection for his native country; nor will many be disposed to find fault, because he refrained from imitating the conduct of CORIOLANUS, when he was forced to fly from the land which gave him birth. He has certainly acted a much more noble part, by employing the years of his banishment in gathering materials for the present work; which, we trust, will hand his name down to posterity with renown, while the actions of many other persons in his situation, will be consigned to oblivion, or recorded without applause.

N.

PART

PART III.

AGRICULTURAL INTELLIGENCE.

THE year 1799 will long be distinguished in the annals of this country, as remarkably unfavourable to the operations of husbandry; and it is with much regret that we open this department of our work at such an eventful period. Circumstanced as we are, it is our duty to state facts, however distressing the narration may be; for a different conduct would not only be unproductive of the smallest advantage, but might lead the public into a listless and fatal security, and prevent the necessary measures from being timeously used for procuring additional supplies, and for supporting the industrious poor, who are unable to purchase provisions at the present scale of prices.

Before we detail the different articles of intelligence communicated to us, it appears very necessary to give a short view of rural economy during the last year. Imperfect as this hasty sketch must be, considering the variety of soil, climate, and practices of Great Britain, we judge it may be of some utility. If it does not add to the stock of information already in the possession of our readers, it must at least be acceptable; as it brings into a small compass the several circumstances which contributed to produce the present manifold distresses.

At the conclusion of the preceding year, a brighter prospect was seldom presented to the farmer. The fallows were completely wrought. The wheat fields, which were universally sown in excellent condition, were covered by the finest and closest braird. The ploughing for Spring grain was far advanced; and, in a word, every operation of husbandry had been executed in such a manner, as afforded good cause to expect they would be crowned with a rich and abundant crop. The first reverse of this pleasant prospect was experienced in the months of February and March, from a long and severe storm of snow, which was succeeded by rainy weather, and occasioned a large proportion of beans and oats to be put into the ground while it was in an unfavourable condition. Heavy rains about the first of May likewise retarded the sowing of barley, and in a great measure ruined the furrow drills of beans upon the wet and heavy lands.

Yet all these circumstances would not have occasioned a bad crop, though a later harvest than usual would necessarily have been the consequence. The dry weather, from the middle of June to the end of July, produced a most surprising alteration

alteration upon the fields; and, if it had continued another month, a plentiful return might have almost been insured to the farmer. We have seldom observed a better appearance of wheat upon the ground, than what was then to be seen. The greater number of fields were bulky, the ear was generally of a full size, and all that was wanting was a sufficient quantity of heat and sun to bring the crop to maturity.

These beautiful prospects, however, were soon over-clouded, and the fields, instead of a healthy vigorous colour, assumed a complexion which seriously affected every discerning mind. About the beginning of August, heavy rains, accompanied with cold easterly winds, reduced the summer-fallows and turnip fields into a perfect mire, half rotted a great part of the hay, stopped the growth of the second crop of clover, laid down all the strong corn, and effectually prevented the wheat from filling; as that grain cannot arrive at perfection, if loaded with moisture at that stage of its growth.

The month of September was, on the whole, rather worse: indeed, the strong corn lay soaking among water during the greatest part of it. Much of the wheat, from the excess of moisture, died at the root before the ear ripened; and the straw got a grey colour, from the perspiration of the stalk being prematurely stopped; and, when cut, had an appearance something like as if it had been kiln-dried. The people, in general, were by this time convinced that the grain would necessarily be of inferior quality; but few believed that it would be so defective, in every respect, as facts now unequivocally substantiate.

Oats, which are a hardy grain, suffered less under these unfavourable circumstances, and promised at one time to be generally a medium crop. This has turned out to be the case upon the dry sharp soils; but those of a different description did not escape so well; and, upon the high grounds, they were nearly destroyed by two severe nights of frost on the 16th and 17th October. Some beans are said to have been also injured at that time; but we believe that the loss of this grain will be very trifling, as they are usually sown upon deep rich lands.

We deem it unnecessary to enter further upon the subject, in this leading article; but shall proceed to detail the different communications transmitted to us. We only add, that we shall be much obliged to any gentleman, who has kept a register of the weather during the past year, who will be kind enough to favour us with a copy; and, if accompanied with monthly remarks on the state of rural economy, it must prove highly useful. Such a register will not only inform the present generation, but must also prove very interesting to posterity.

city. We need hardly say, that if similar information could be procured, concerning the causes which occasioned the scanty crops at the end of the 17th century, traditionally called the *barren years*, it would be acknowledged as a particular obligation.

Before we conclude this article, we must remark, that it gives us sensible pleasure to notice the great degree of attention shown to the distresses of the poor, not only in the capital and other large towns, but also in many country parishes. While we heartily commend these philanthropical exertions, and wish them extended over the whole island, it cannot be improper to suggest, that the most successful method of assisting the poor, is by selling them meal at reduced prices, the reduction to be in proportion to the size of their families, and their ability to work. If donations of coals are added, the poor might pass through this calamitous season without suffering more than they undergo every Winter, provided meal, which is the solid national food of Scotland, is afforded them at ordinary prices.

EXTRACTS FROM PRIVATE CORRESPONDENCE.

SCOTLAND.

Edinburgh, 12th November 1799.—Old Hallow Fair was numerously attended this day, the greatest part of farmers in the adjoining counties, from the lateness of the harvest, being still unprovided with their Winter stock. Lean cattle were inferior in numbers to the demand, and of course sold at higher prices than they have brought for some time past. Few fat beasts were presented: but a new set of purchasers appeared, who seemed, from the choices made, to be little versant in the business. These were people of the place, who wanted to lay in their *marts*; a practice which, though anciently very common, has for several years been in desuetude. We are very apprehensive, from the quality of the beasts generally purchased, most of them being only fit for the straw-yard, as well as the ignorance which must necessarily prevail respecting the salting of beef, in a sufficient way for preservation during the Winter months, that this new class of customers at Hallow Fair will not make their appearance next season.

The shew of horses was below mediocrity; and, as usual, the inferior ones were quite a drug. Good horses still bring a full price; but, from the wetness of the season, and bad food lately received, there is cause to believe, that those of the first description will not be so plenty for several years.

Sheep were rather lower, though the fall upon them is less than upon cattle. Good Highland sheep, fit for laying upon turnips, may be considered from 1s. to 1s. 6d. lower than last year. The *dead* market is overstocked with inferior kinds, and will be so for a little time.

Inverness, Dec. 10.—The harvest in the northern counties has been backward and unfavourable; but, upon the whole, I believe we have been fully as well off as the south of Scotland, and the greatest part of England. The wheat crop with us may average seven bolls per acre, and weighs from 52 to 58 lb. Linlithgow fir-*lot*. Barley will not be much short of an average crop in point of quantity, but the quality is far from being so good as usual; and as for oats, they are defective in every respect, and will hardly be equal, in my opinion, to the consumption of the county. Wheat sells here just now at 38s. and 40s. per boll. Barley 28s. and 30s.; in other places, 21s. and 25s. I do not imagine any oats or peas are yet sold in the neighbourhood at positive prices: but oat meal has not exceeded 24s. per boll of 9 stone Amsterdam weight. Lean cattle have been lower since last September, than at any period for ten years back. They rather seem now on the rise, but none can be drove sooner than the Spring months. Beef and Mutton, of the best quality, sold lately at 2½d. per lb. in quarters; principal pieces at 3d.; but is now advanced 1d. the lb. weight, and will probably soon experience a further rise. Hay sells at 1s. per stone, and, if the Winter continues open, I hardly think it will exceed that price.

Edinburgh, Dec. 10.—The Magistrates of this city have given notice, that, after various conferences with the incorporation of bakers, they have resolved, with the approbation of the Lord President, and other Lords of Session, to dispense with setting any assize from and after this date, till further intimation is given.

This resolution of the Magistrates deserves the thanks of every well-wisher of the community, as being the only method, under the present circumstances, to procure the inhabitants a regular supply of good wholesome bread. Every person of common discernment will acknowledge, that a pound of bread, baked from the produce of this year's crop, is of much less value than the same quantity manufactured from that of the preceding year. The suspension of the assize will therefore place matters on their natural footing; for the comparative value of the staff of life, like every other commodity, ought to be ascertained in direct proportion to its quality.

We also observe, that standard wheaten bread, such as is sold in London, is advertised by our bakers, the present price of which is 1s. 2d. per quartern loaf.

Edinburgh, Dec. 14.—The first PUBLIC KITCHEN, for the Poor of the city and suburbs, was opened this day; and we are happy to hear that a second Kitchen is in preparation. A considerable sum of money has been raised by subscription, for promoting this benevolent

nevolent object ; and it gives us pleasure to add, that the Concerts given in the Assembly Rooms, George-Street, for the same purpose, were remarkably well attended. The Sieur Herman Boaz has likewise given an exhibition of his wonderful performance, for the benefit of the fund, at which twenty guineas were collected.

By letters from Glasgow and Perth, we are informed that subscriptions have been opened in these places for the importation of corn from abroad.

Dunfermline, Dec. 21.—A considerable quantity of corn in the district of Lammernmuir still remains in the fields, and, it is to be feared, will be of very little value. Indeed, the crop, in general, in this county, does not promise to have great effect in keeping down the markets.

Glasgow, Dec. 21.—American wheat is selling here at 57s. to 58s. per boll. Dantzick, 56s. to 60s. New north country wheat, 42s. Barley, 30s. to 32s., but poor in quality ; and oats of this country growth, from 22s. to 26s.—all per Linlithgow measure. Old beans, 36s. to 38s. New ones, 28s. to 30s. per Stirlingshire measure. Oat-meal, 30s. to 32s. per boll of 8 stone Dutch or Amsterdam weight. The quartern loaf of bread is 1s. 4½d.

The Clyde being already shut, and every appearance that the canal will soon be frozen up, gives us small prospect of a decline of prices for some time hence.

Haddington, Dec. 27.—The weather, during the past quarter, has been unfriendly to every object of rural work ; and the operations of the farmer have not, in the memory of man, been carried on at greater trouble and expence. It was near the beginning of October before a general harvest commenced ; and many farmers had last year finished, by the time they this season put a sickle in the crop.

Notwithstanding these disastrous circumstances, there is cause to believe, that a great part of the district has escaped as easily from the consequences, as any other in the kingdom. Wheat, however, is worse, both in quantity and quality, than was ever known, being small in the grain, thick in the husk, and much of it unsound. Perhaps it is not equal, in point of consumption, to the half of crop 1798, and 15 per cent. at least inferior to the crop 1782, which encountered a season something similar to the last.

With respect to barley and oats, they have often been known, upon good lands, in former years, as defective as the present crop ; but it is upon the high exposed situations where these grains (chiefly the last) are most below an average. Wherever they were not fully ripened when the frost set in, they are worst, and the extent of the deficiency is in direct proportion to the stage of their growth when the frost took place. The wet weather in April, which happened immediately after the generality of oats in the low districts were sown, prevented those in the high districts from being

put into the ground till near the end of the month; and this circumstance, together with the unfavourable condition of the ground when they were sown, contributed to throw them very late, and in the way of meeting with the injury which afterwards befel them.

Peas, taken by themselves, may be viewed as no crop. In many places, they are not worth the expence of thrashing, and few farmers will have a return exceeding the quantity sown. Tares are equally defective; but beans, especially where they were free of peas, and not damaged by the wetness in seed time, may be considered as approaching to something like an average crop.

Oats, from what is already said, may be considered as mealing very unequally. The very best do not exceed meal for corn, and very few come that length. The generality of low country grain, properly got, may be stated as yielding 14 pecks, or 7 stone Amsterdam weight, per Linlithgow boll: Farther south, they yield much less; some not more than 6 to 8 pecks of meal to the boll of oats.

The weight of grain upon a farm in the lower district, taken this week, is,

Good white wheat	-	59 $\frac{1}{4}$ lb. Avoirdupois.
Ditto red	- -	58
Barley	- -	70
Oats	- -	61
Beans	- -	57 $\frac{3}{4}$

Last year, upon the same farm, the weight was,

White wheat	.	63 $\frac{1}{2}$ lb.
Red ditto	- -	66
Barley	- - -	79
Oats	- - -	63

Prices have been, and still continue, vastly diversified. Indeed, it is a difficult affair to say, what is the comparative value of a good deal of grain; and this diversity will prevail through the year, though it must lessen after the corn is sufficiently dried. New wheat sells from 30s. to 50s. per boll; very little old now to be got. Barley, 25s. to 34s. Oats, 18s. and 31s. Of peas and beans little can be said, as very few of these grains have as yet been offered for sale. A correct state of yesterday's market, given at the conclusion of this article, will place the scale of prices in a clear light.

Turnips, upon the whole, are indifferent. Indeed, half a crop is this year accounted a good one. The greatest part are not equal to a third of an ordinary crop; and, upon lands not in high condition, they are worth very little. Potatoes are still worse, yielding not only little produce, but are inferior in quality. The best soils have scarcely given a third of the usual quantity, and, upon

upon wet lands, the crop was, in many places, not worth the taking up. They are already felling at 14s. per boll of 16 pecks, 26 lb. Amsterdam weight, each; and apprehensions are entertained, that there will be a scarcity of healthy feed for the next year's planting.

Hay is scarce, and already felling from 16d. to 20d. per stone. A very great part of the crop was consumed, during the Autumn, by farm horses, as green food was in many places not to be had, and the peas and beans were so late. Straw is likewise advanced to double price; but little of this article, from the nature of the leaves, can in ordinary cases be sold.

Lean cattle, which were low at Falkirk, rose much at the after markets; and a smaller quantity than usual is wintered in this county. The crop being, on the whole, of less bulk than common, and the fodder bad, are the causes why a smaller number are taken into the straw yard.

The market has been fully supplied with fat stock for some time past, but a good part has rather been of an inferior quality. The failure of turnips, and the stoppage of the distilleries, necessarily brought a great number to sale, which would otherwise have been put to the stake; but this extra quantity being now in a great measure removed, there is a probability that a scarcity will soon be felt.

A very small proportion of wheat has been got sown, perhaps not the twentieth part of what was intended; and if the Spring months are not very dry, few farmers upon the clay lands can sow a peck with advantage. Many of the Summer fallows remain undunged, and ploughing was never farther behind. The working horses, from wet weather, heavy work in bringing home the crop, and badness of food, are generally in a worse condition than usual, and, from the expence of *keep* it is highly probable, that they will not much improve during the Winter months.

On Wednesday se'ennight, the weather materially changed, and we have since had some heavy falls of snow, attended with frost, which has in a manner stopped all operations in the field, unless it be the driving of dung. A few people have ploughed, but they have done more hurt than good, by touching the land in such improper condition.

Haddington Corn Market, Dec. 27.—We had a pretty full market of wheat this day, for the season; there being 350 bolls exposed, which, since the new crop appeared, have been fully adequate to supply the demand. Last year, during the Winter, we seldom had less than 500 bolls, one day above 700 bolls; but such a quantity would, at this time, scarcely find purchasers. Whether this circumstance proceeds from a reduced consumption, or from the West-country dealers receiving supplies from other quarters, we cannot ascertain, though probably both contribute to lessen the usual demand.

Of the above quantity, 260 bolls, by the market list, were only sold; but it is suspected that some may be sold, and not entered in the clerk's book; and that a part of what is originally *set up*, is sold privately after the conclusion of the market. The prices were:

2 bolls old	62s.	6 bolls	38s.
3 bolls ditto	60s.	8 bolls	37s.
6 bolls new	48s.	14 bolls	36s.
10 bolls	47s. 6d.	6 bolls	35s.
9 bolls	45s.	9 bolls	34s.
5 bolls	44s.	5 bolls	33s.
9 bolls	42s. 6d.	9 bolls	32s. 6d.
46 bolls	42s.	10 bolls	32s.
16 bolls	41s.	11 bolls	31s.
33 bolls	40s.	9 bolls	30s. 6d.
8 bolls	39s.	26 bolls	30s.

The average price of the whole was 11. 18s. 6d., being 1s. 3 $\frac{4}{12}$ d. lower than last market day.

The utility of a market list is universally acknowledged, and Haddington is the only place in Scotland, where the *real* price of wheat can be fairly calculated. It would be a desirable measure, were the Magistrates, or the Justices, to extend the appointment to the other markets, which might be attained by an additional clerk, or by having the markets at separate hours.

Barley may be said to have remained stationary for some weeks; prices were from 27s. to 33s. 6d. Oats sold well, especially those of good quality, which indeed are not numerous. Best price 31s. 6d.; but a great many of bad quality have lately appeared in the market, which of course have been sold at various prices. Old peas were as high as 36s., and new peas and beans were sold from 20s. to 30s.; but a full supply of this article has not yet appeared.

Mid-Lothian Quarterly Report.

From the long continued course of inclement weather, previous to the last quarter, it was anxiously hoped, that it would have proved more favourable to agricultural operations; and thus, in some degree, have counteracted the preceding ungenial season. In this, however, "the hope of the husbandman has failed" as completely as before. The month of October was occupied by the farmer almost wholly in cutting down, and gathering in, under every unfavourable circumstance, the scanty product of a greatly damaged crop; while the *wheat-seed*, and the *early fallow*, were unavoidably postponed to an opportunity better adapted to these works. November followed with the same forbidding aspect; and now December, clothed with snow, puts a finishing hand to the operations of the year, leaving, at the least, two thirds of the *wheat-land* unaccomplished, while a portion (not inconsiderable) of the crop in the muirlands is still exposed to the Winter storm.

The prices of grain, hay, and straw, have of course been strongly affected with these untoward circumstances, and have reached to a height, particularly the last, unparalleled in modern times; and, as we have every reason to believe that this has arisen solely from the calamity of the case, it must render the most rigid economy, in the use of the necessaries of life, together with the utmost possible exertion to procure a supply from abroad, more urgently necessary now, than at any period for a hundred years gone.

The following have been the average prices of good grain, &c. for the last three months:

		October.		November.		December.	
	Bush. 1000 parts.	s.	d.	s.	d.	s.	d.
Wheat per boll	4 114 *	38	0	36	6	42	0
Beans ditto	do. do.	25	6	32	6	32	8
Barley ditto	5 962	26	6	29	6	32	0
Oats ditto	do. do.	25	0	26	0	28	0
Oat meal per peck of 8 lb. Dutch		1	11	2	0 $\frac{1}{2}$	2	1 $\frac{1}{2}$
Potatoes per peck, about $\frac{1}{4}$ cwt.		0	10	1	0	1	0
Best beef per lb. of 17 $\frac{1}{2}$ oz.		0	5 ^x	0	5	0	5 $\frac{1}{2}$
Hay per stone of 22 lb. avoird.		1	1	1	4	1	9
Oat straw per kemple of about 15 stone hay weight		12	0	14	0	15	6
Wheat straw ditto for litter		8	0	10	6	10	0

From a Mid-Lothian Farmer.

December 28.—I consider that a comparative view of crop 1799, with that of the preceding year, may be arranged as follows:

Wheat, as one third deficient.
Barley, ditto.
Oats, three eighths ditto.
Bran and Peas one half ditto.
Potatoes, two thirds ditto.

Wheat will weigh, upon an average, per firlo, 56 lb. Barley 66 lb. Oats 57 lb. There is not one third of the usual quantity of wheat sown, and ploughing is much behind.

The produce of what we call good oats for the season, will be from 11 to 13 pecks of meal. Oat meal sells at 2s. 2d. Peas ditto 1s. 7d. Bear ditto 1s. 6d.—all per peck of 8 lb. Dutch weight.

We have just received from London a copy of Sir John Sinclair's Proposals for establishing a Joint-stock Company of 1600 shares of 50l. each, for the purpose of carrying on Experimental Farming,

* This is the average of OLD and NEW together; the best old being about 20s. higher than average.

Farming, and planting waste lands. Want of room prevents us from inserting the proposals in this Number, but they shall be given in our next, together with some observations from a correspondent. Such a public-spirited establishment deserves every encouragement; and we trust it will meet with the same liberal support as Sir John's patriotic plans have hitherto experienced.

ENGLAND.

Doncaster, October 23.—Our harvest is in a sad state, most of the wheat and barley have been badly carried in; and as for the oats and beans, they are too green to admit of an idea of ripening, though they are cutting them in order to get them off the ground. The Summer fallows are in a most wretched condition; and much of the flat land towards Hull is under water. Wheat is considered as the worst of the grains; and the general opinion is, that three bushels will not produce more flour than two did last year.

Stafford, Nov. 4.—The oldest person in this county does not remember such a bad harvest; many of my neighbours have not yet finished, and what they have got in is mostly spoilt. Upon the estate where my farm is situated, we used to be all over by the end of August; and, this year, it was the middle of October before we got done. I had many acres of barley on the ground for two months; and as it rained the most part of the time, you may easily judge what condition it is in. Grain of every kind, that is good, is now sold at most extravagant prices. Last market day, wheat sold at 15s. per bushel, barley 7s. 6d., oats 6s., beans 12s. Our measure is 38 quarts to the bushel.

The hay harvest was equally bad. I had one meadow of fine hay carried off by the floods. Turnips have failed, which will be a bad affair for stock.

Lincoln, Nov. 12.—The harvest in this county is nearly completed, and the prices of grain are rather lower than when I wrote you last. Oats are from 15s. to 34s.; barley 30s. to 44s.; wheat 50s. to 80s.; beans 36s. to 48s. per quarter of 8 strikes or Winchester bushels. Our crops of wheat are much lighter than usual, and so are oats; but barley is tolerable, and may produce three quarters per acre on an average; beans about two quarters. Upon the whole, I think our crop is one third less than usual.

Turnips are but a small crop, though full as good as previous appearances led us to expect. Fat cattle reduced in price; and beef sells from 3s. 6d. to 5s. per stone of 14 lb. avoirdupois, according to quality.

You may be assured every assistance in my power will be given to the Farmer's Magazine, which promises to be an useful work. The chief improvement practised in this county is, embanking and draining low lands, and marling or claying wild sands, or loamy

loamy grass lands. Particulars concerning these improvements, I shall send you afterwards.

Pontefract, Nov. 18.—Fat cattle have been plentiful for some time past, and the markets dull; but within these few days a considerable advance has taken place: They are selling now from 5s. 6d. to 8s. per stone, sinking the offal. Sheep not rotten, but a great deal of them very poor. Our corn crops very indifferent. Wheat presents a bad sample, being mostly sprung. Barley and oats no better, and all very deficient in quantity. Prices fast rising. On Saturday last, old wheat sold here at 15s. per bushel, new 12s. 3d. Old oats 6s. 3d., new 4s. 3d. Barley 5s. 6d. Beans 10s. A prospect of bacon being very high; at Malton, it sells, green, at 6d. per lib.

Stafford, Nov. 30.—The weather, for this fortnight past, has been more favourable, and I have got my wheat seed completed; though many farmers round me, from the extreme wetness of their lands, have not sown a bushel. We have now begun to feed our cattle on turnips, to save the hay; and they are turning out better than I expected; but, after all, they are not above half the size of last year's growth. Markets for grain still keep up. Seventeen shillings per bushel was asked at our last market for new wheat, but none would give it. I hope it will soon be lower, though, I assure you, this has been a most trying and expensive season to the farmer. Cheese has also risen to an extravagant price, and the Government factors are busily purchasing. Beef, mutton, and pork, fell from 4d. to 4½d. per lb.

Lynn, December 3.—Harvest here has been ill got, some barley still in the field; but, generally speaking, the crop is supposed not to be so unproductive as was at first expected. Never was so great a disproportion known in prices as this year. Wheat sold yesterday from 64s. to 100s. per quarter. Barley 28s. to 51s. Oats 18s. to 38s. No beans. The turnip crop has improved greatly of late, and there is now favourable weather for sowing wheat.

Wakefield, December 13.—Our markets for corn are very high, though they have rather declined for these two weeks back; but unless we have a large importation from abroad, it is the general opinion they must soon advance. The best informed merchants differ, whether any considerable quantity of foreign grain can be procured. One principal house in London writes in the affirmative; while another, equally respectable, gives a direct contrary answer. Barley is so much injured by the rains, that it will not malt, which has caused old malt to sell at 9s. per bushel. The farmers are still sowing a little wheat, and a tolerable proportion has been got into the ground; but it has been harrowed so extremely wet, that I suspect a large proportion will perish. Prices at our market this day—Wheat 70s. to 96s. Barley 35s. to 48s. Oats 28s. to 50s. Old beans 84s. 6d., all per quarter of 8 bushels.

Northumberland

Northumberland Quarterly Report.

The failure of the wheat crop is general in this county; and most of the samples that have been presented at market, are not so good as the hinder end or light grain of last year. The produce per acre does not exceed one half of what it ought to be, and, in many places, it is unsound or sprouted.

Barley, upon dry soils, is a tolerable crop; but upon moist ones, it perished by too much wet. The maltsters complain that a great deal of it will not malt.

Oats, upon the vales or low grounds, are a medium crop. Upon the hills or moors, they are very bad; never ripened, and are nothing but husks. Many of them were still out in the last week of November and first of December. Some still remain in the fields at this date.

Peas, abundance of straw, but little or no grain.

Beans were very late, but would have been a medium crop, had not the uncommon hard frost, on the 16th and 17th October, injured them. A field of beans, near Belford, is still to cut; but the generality were got in during the last week of November.

Turnips, upon good dry soils, are a fair crop. Upon moist soils, very bad; in many places, absolutely worth nothing; the consequence of which is, that decent ones are letting from 7l. to 9l. per acre.

Our cabbages are scarce any thing but leaves; few of them have a core much larger than a man's fist; the cold and wet entirely prevented them from cabbaging.

Of potatoes, that staff of life to the poor, the account I have to give is still more melancholy. They have not only failed in produce, but are bad in quality, and are now selling at three times their usual price. Many were damaged by the frost.

The prospect for next year, in my opinion, is serious and alarming. In many places, scarce an acre of wheat is sown upon the Summer-fallows, nor likely now to be sown, unless a favourable season happens in the month of February.

Prices.	s.	to	s.	
Old wheat	16	to	18	} per bushel Winchester.
New ditto	8	to	11	
Barley, new	5	to	6	
Oats, ditto	4	to	5	} very little of either to be had.
Old peas	8	to	10	
Ditto beans	7	to	9	

The price of live stock depressed considerably in October last, but fat is now getting up. Beef and Mutton 5½d. to 6d. per lb. avoirdupois, and expected to be scarce in the Spring.

Lynn, Dec. 19.—The weather is now set in severely, but, of late, it has been good, for the season of the year; and the sowing of

of wheat is finished, a full quantity of which grain is got in. Last year's crop of wheat is not supposed to exceed two thirds of an ordinary one. Barley is by no means deficient in quantity, but so extremely injured by the rains, that scarcely one third of it will grow when put into the steep-stone.

Oats are not bad, but few are sown in this county, and they are ill got this season. Wheat sells at present from 46s. to 90s. per quarter. Black or stained barley 18s. to 37s. Bright ditto 40s. to 60s. Average weight of wheat 55 lib. per bushel. Last year it was 59½ lib. The price of a quarter loaf of bread here is 13½d.

Lean sheep have been much reduced in price; but mutton sells at 6d. per lib. All sorts of stock are, however, rapidly rising, and are expected much higher in the Spring, as it is probable there will be a short supply. Potatoes are a bad crop; but there are not many planted in this county. Hay sells at 90s. per ton.

Rape-feed is the smallest crop ever remembered; and we conceive that 1000 quarters would clear this county. The early got, is of fair quality; but the late crop is much injured.

From the great improvements in this county, by drilling, setting, and hoeing of corn, our crops are now so free of weeds, that they are less subject to hurt from bad weather than formerly; and when the open airy situation is taken into account, it is expected that our produce will be equal in quality to any other district in the kingdom.

Stafford, Dec. 21. The difference betwixt this crop and the preceding one, will be fully one third as to the quantity, independent of the great inferiority of the several grains. I think my wheat crop may average 20 bushels per acre: but the measure we give, in this county, is 38 quarts; a practice sanctioned by custom, which supercedes all law. Some of my barley, which was got in before the wet season, may yield 40 bushels. With regard to oats, we have not thrashed any. Prices are rather on the decline. Wheat sold last market from 14s. to 15s. per bushel. Barley 7s. 6d. to 8s. Oats 5s. 6d. to 6s. Beans 13s. to 14s. As for peas, few will have a sufficient quantity for seed.

The weather has been favourable of late for sowing of wheat; and the major part of farmers are finished. We have all been behind-hand this year in our labouring, at least two months farther back than last year. A part of the ground for Spring corn is ploughed, and some of the turnip fallows; but a change of weather has effectually stopped any more from being done for some time. I am fearful for the turnips; for, if they are injured by the frost, I know not what we will do with our cattle. Hay is selling at 9l. per ton. Butcher markets are raised a halfpenny per pound; and there being few fat beasts in the county, a farther advance is expected. Cheese is now three guineas per cwt. Butter 1s. 3d. per lib. Potatoes 2s. 4d. to 2s. 6d. per bushel, which weighs about 74 lib.

Yorkshire Agricultural Quarterly Report.

It is painful to report the harvest, as by no means likely to be over before the commencement of the new year; a circumstance almost unparalleled even in the coldest parts of the island. A considerable quantity of oats and beans have been but very lately, and very ill carried; and a great part of all sorts of grain, that have been so stacked, is in danger of being heated and spoiled. The thrashing has now generally commenced, with very unfavourable appearances; the wheat not yielding half the usual produce in many instances, and that of an inferior quality. The barley, though of greater produce, is much complained of by maltsters; and they have found some, on trial, utterly incapable of being malted. The oats appear to have by much the greatest deficiency. Of beans and peas, little have been thrashed; yet a few samples appear in the market, better than might have been expected. This article is, in some instances, tolerably productive, though by no means a good crop.

Wheat sowing, and fallows.—These are in an universally backward state on all soils. Some few pieces of clover, hay, &c. begin to look green, though the blade has sprung very slowly. Many of the fallows on clay soils are in a most foul condition for sowing; the bean and pea stubbles on those soils are of course in a similar situation. Many were still sowing wheat till the fall of the snow, and some with little prospect of success. Some of the wheat stubbles have received the Winter ploughing, preparative for the turnip fallow; the shortness of the days renders dispatch almost impossible; but other grounds are laid up for the Winter in ridges, (skerbalking), which may prove a good method, especially in a season like the present. This operation requires less time; the soil is completely open, and exposed to the influence of frost, &c.; and will be dry and fit for crossing in the Spring, earlier than after a full ploughing.

Turnips and fodder.—Of turnips, there are some good crops; but they are observed to be quickly consumed by the sheep on the ground: the deficiency of after-grass renders the recourse to them rather too early for the small stock of hay, &c. The latter crop of clover was of little value. If the Winter should be inclement, the sustenance of cattle will be a subject of anxiety.

Potatoes.—It is feared there will be considerable deductions from the scanty produce of this valuable root, caused by the many unsound ones among them, and their extreme moisture when stored.

Hoops, though not half a crop, will probably be found equal to the proportion of barley when malted.

Apples are plentiful and cheap, from the dearth of flour.

Prices

Prices of grain are declining, and perhaps may continue so for a few weeks. Best new wheat 12s. Barley and oats 5s. Beans 7s. per bushel Winchester.

Cattle.—Fat cattle sell well; but many half-fed ones are brought to market and slaughtered. Lean cattle are low. The same may be observed of sheep.

Horses.—These animals are scarcely convertible to money, at any rate, except those of superior kind, which command good prices.

December 19.

London, December 23.—Markets for grain have taken another turn, and, owing to the apprehensions entertained that the severity of the weather will prevent us from receiving foreign supplies, and that the navigation of the river Thames will be stopped, our demand for wheat and oats has been greatly increased. At the Friday's market, the former advanced full 8s. per quarter; and this day, very few samples were presented. Good oats are worth 50s. per quarter; but we have a great many very ordinary ones, which, unless upon a scarce day, can hardly be sold. Beans and peas maintain the high price lately obtained, though our supply is large: and as fine barley comes slowly in, and is much demanded, there is not any fall upon that article.

Seeds, from the bad weather when they were sowed, are vastly diversified in quality and price. Red clover from 46s. to 130s. per cwt. White 30s. to 120s. Trefoil 16s. to 72s. Rye grass from 30s. to 40s. per quarter. Turnip seed 30s. to 31s. per bushel. And rape seed from 52l. to 54l. per last.

The total return of wheat sold in Mark-lane, from the 9th to the 14th December, is, 7,164 quarters, and the average price thereof, 93s. 11d. The returns are given for the week preceding the time they are made up; though many of the newspapers, particularly the Scots and provincial ones, present them in such a way, as may lead the reader to think, they are the average of the last market day.

Average price of corn per quarter in England and Wales, for the week ending December 7th.

Wheat	94s. 2d.	Beans	64s. 3d.
Rye	56 7	Peas	57 4
Barley	45 5	Oat meal	58 8
Oats	38 8		

Beasts, this day, in Smithfield, 1800. Sheep, 5500. Several oxen sold at 100l. each.

Prices per stone of 8 lib. to sink the offal.

	s.	d.	to	s.	d.		s.	d.
Beef	3	0	to	4	8	Veal	4	to 5 6
Mutton	3	8	to	4	8	Pork	4	to 4 8

Average price of tallow, 4s. 1½d. per load of 8 lib.

The prize-ox purchased on Monday last, at the great price of 100 guineas, was exhibited to public inspection in Fleet-Market. He was fed in Buckinghamshire, and weighs nearly 300 stones, is 8 feet 11 inches long, 6 feet 7 inches high, and 10 feet 4 inches round the girth. At the Smithfield shew of cattle, he gained the first prize given by the Duke of Bedford and others.

Smithfield has been remarkably well supplied this last week with Christmas beef, some of which sold so high as 7s. 6d. per stone of 8 lib. One bullock was so fat, that he fell down on Blackfriars-bridge, where he was killed. Others were killed in the streets, being unable to walk to the place of their destination.

The shew of bullocks and sheep, was attended by the Duke of Bedford, Lord Somerville, and other amateurs. The Prize Society afterwards dined together: His Grace in the Chair.

*Extract of a Private Letter from a Man of Business in London,
dated December 23.*

I have had an opportunity, this day, of meeting with several farmers, from the different counties round London, who attend our market, and have received full information concerning the state of their crops, and the forwardness of their husbandry, which I herewith communicate.

The crop of corn, in general, in the five counties of Middlesex, Essex, Hertford, Surry, and Kent, may be reckoned a fair average of ordinary years, as to quantity; but the quality of barley and oats, from being late, is much inferior to what is usually produced. Wheat has been well got, and a great part is as fine as the growth of any year.

Middlesex—Wheat was well got, and of fine quality. Of barley, only a small proportion is fit for malting.

Essex—Part of wheat in the low country late, and not so well harvested. Barley as before.

Hertford—Wheats all well got. Barley generally damaged.

Surry—Upon the high lands, all the crops well got; but in the low part of the country very badly. In some cases, pigs were turned out to eat the barley in the fields.

Kent—Wheat in good order and condition. Barley but middling.

The oat crop in these counties was late, and indifferently harvested; but the quantity of that grain sown is but trifling. Beans, a good crop; but, from the wetness of the season, they are not fit for use till kiln-dried.

The general weight of wheat of this crop is about 56 lib. per bushel; ordinary 54 lib.; some fine samples are 60 or 62 lib.—The produce of fine-pickled samples, is nearly equal to last year's growth:

growth: Of middling and ordinary, the quantity of fine flour is much short—say from one eighth to one tenth. Good barley, about 48 lib. per bushel; best samples, about 2 lib. more; ordinary, 40 to 42 lib. Oats, on an average of sound grain, 36 lib.; fine samples, 41 lib.; ordinary, as low as 30 lib. The number of good samples have been small indeed.

It is the general opinion of every person conversant in the corn trade, that there is not a sufficient quantity of grain in the country to support the inhabitants till next crop, and that a considerable importation is necessary. Since the beginning of November, 70,000 quarters of wheat, and 50,000 quarters of oats, have been imported here: Only a few parcels of barley—say six hundred quarters. From the setting in of the frost, no more foreign grain is expected this season, except the cargoes upon the road. Considerable quantities are bought, which cannot be expected to arrive sooner than April.

Smithfield has of late been well supplied. The general price of beef, sinking the offal, 4s. 6d. per stone of 8 lib.; mutton, 4s. 10d. Retail prices—Beef and mutton, 6½d. and 7d. per lib.; veal, 7d.

The quartern loaf of bread is presently sold at 14d.; but, from the rise of wheat and flour this week, must be advanced to 14¾d. or 15d. Oat meal is worth 28l. per ton, which is equal to 14 bolls and a quarter, as sold with you.

The wheat seed is generally finished; though, in the wet lands of Essex and Hertford, some remains to be sown. Ploughing is much behind.

Hay sells from 4l. to 5l. 16s. per load, which is 18 cwt., or 90 stones, Scots weight. Straw from 1l. 18s. to 2l. 5s. per load of 13½ cwt. Potatoes and other garden stuffs are plentiful. The price of the former, from 5l. to 8l. per ton, which is from 15d. to 2s. per peck, according to your measure. The quality is not good.

We have a severe storm of frost and snow, which, if it continues, will soon block up the Thames. The corn markets, in consequence, experienced a considerable rise. Dantzic wheat sold on Friday as high as 110s. per quarter; and, this day, flour has risen 5s. per sack. Some remarkably fine cattle were last week shewn in Smithfield, in consequence of a premium being given by several noblemen and gentlemen.

ADDITIONAL SCOTS INTELLIGENCE.

Angus, Mearns, and Aberdeen Agricultural Report.

THIS district, in common with the rest of the kingdom, has experienced a most inclement season, and vegetation was at no time luxuriant. Our crops are therefore scanty, so far as trials have been made;

made; and as for the pastures, they remained short and open, without acquiring their usual close pile.

In general, hay may be considered as approaching to a medium crop; yet the price has advanced to an unusual pitch. The average may be stated at 1s. per stone of 20 lib. Dutch weight.

The wheats, at one period, had a full appearance, but were afterwards dashed to the ground, which prevented them from filling, and, in many situations, occasioned the grain to spring. Wheat is, I apprehend, the worst crop, and may be stated as one half deficient. There has been little brought to market; the price from 30s. to 45s. per boll of 4 Linlithgow firlots.

On the stripe of fine land which bounds this district with the sea, oats may be taken at nearly two thirds of the usual product, and bear and barley nearly in the same proportion. But when we go to the hill districts, they are much below what is stated; and the accounts are so various, that a conclusive opinion can hardly be formed. It is allowed, upon an average of the three counties, that oats will not yield 4 stones meal per boll. Those raised upon the coast lands may be from 5 to 6 stones; some have even come to 7½ stones; but the quantity of the last kind is too trifling to merit notice.

In Angus, the price of barley, by the firlot of 32 Scots pints, is 25s. per boll. At Aberdeen, by their measure of 34 Scots pints, 28s., and advancing. Beer, or bigg, 2s. to 4s. lower than barley. Oat meal, 30s. and 32s. per boll.

In all the hilly parts of these counties, and even in some parts near the sea, the oats were frosted, and consequently unfit for seed, which, I am afraid, will be an article much wanted.

Turnips and potatoes felt the effects of the bad season equally with other crops. The first were put wet into the ground, and in some places did not *braird*, and in others were cut off by the *fly*, or snail; for farmers have not as yet ascertained the name of the animal or insect that destroys this root. The quantity of turnip food does not exceed one third of last year's.

The lateness of last Spring reduced the condition of lean stock so much, that they never got forward during the after season; and prices have been from 15 to 30 per cent. below those of last year. We have little demand at this time; yet the spirits and expectations of our dealers are now much raised, and a buyer will pay 20 per cent. more than would have been demanded two months ago.

Fat cattle were lately 7s. 6d. and 8s. per stone; but they have now fallen a trifle. There are fewer than usual upon turnips; but every person is forcing forward to market as fast as possible. As is usual when turnips are small in size, there is a general complaint that cattle fatten very slowly.

 OBITUARY.

July 22d 1799.—At Athelstaneford, East Lothian, Mr JOHN THOMSON, farmer and flesher in that place.

Mr Thomson had arrived at the advanced age of 90 years, and, in the course of an extensive and complicated business, had uniformly preserved a fair and unimpeached character. He had risen, from small beginnings, to eminence in his profession; and, at one period, his undertakings were more extensive than any of his brethren out of the metropolis. Fifty years ago, under the patronage of the Gilmerton family, he set up a flesh market in the village where he resided; and his dealings as a middle-man, in the purchase of fat beasts, sheep, and lambs, which were resold to the Edinburgh and West-country fleshers, were widely extended over all the county of East Lothian. When old age arrived, he wisely contracted his business; but he retained his knowledge and accuracy to the last; and, from the natural strength of his constitution, there was cause to believe, that, old as he was, a succession of days awaited him, had not an unlucky fall in his room hurt him so much, as to hasten his dissolution.

Mr Thomson was much respected in society, especially in his own neighbourhood, which was a sure proof of the goodness of his character. When not engaged in business, his chief amusement lay in playing at whist, at which game he believed himself to be eminently skilful. In a word, he was a man, who had few or no enemies, and possessed more friends than most of his contemporaries.

At Little Harwood, Lancashire, Mr A. FRANKLAND, farmer;

At Waltham on the Wolds, Mr BURTON, senior, farmer.

At Crowmills, Leicestershire, Mr JOSEPH LEWIS, grazier.

At East Dereham, aged 73, Mr H. WELLS, a celebrated kitchen gardener.

At Ugstone, near Haddington, Mr THOMAS HOWDEN, an extensive and respectable farmer.

At Carniehaugh near Gifford, East Lothian, Captain JOHN CARFRAE, of the Breadalbane Fencibles, and farmer there. Captain Carfrae had, at an early period of life, entered into the military line, and served in Germany during the seven years war. He was the intimate friend of General Harris, the conqueror of Seringapatam, with whom he acted as an officer in the 5th regiment of foot, then commanded by Lord Percy. He afterwards devoted his attention to rural affairs till the year 1778, when he accepted, of a commission in the regiment raised by the Duke of Hamilton, and commanded by General Francis M'Lean. At the peace of 1783, he returned to his farm, which, during his absence, had been managed by his sisters and friends. Experienced officers being much wanted when the fencible regiments were raised in 1794, he was prevailed

prevailed upon to accept a company in the 3d battalion of Lord Breadalbane's regiment. In Ireland, the service was too severe for his constitution, which laid him under the necessity of visiting his native land, in hopes that a change of air might be useful; but, alas! it was too late.

Captain Carfrae possessed all the social qualities in an eminent degree, and was greatly beloved and esteemed by his numerous friends. He was a good neighbour, an excellent companion, charitable to the poor, and much respected by all who had the pleasure of being intimately acquainted with him.

At Edinburgh, Dr JOSEPH BLACK, one of his Majesty's physicians for Scotland, and professor of Chymistry in the University of Edinburgh.

The science of Chymistry being intimately connected with Agriculture, it gives us pleasure to learn, that an account of Dr Black's studies will be given by a near relative, thoroughly qualified to judge of what merits the attention of the public.

NOTES TO CORRESPONDENTS.

The Rural Inquirer, No. I. to be regularly continued, will be given in our next, together with *Letter Second from a Farmer upon a tour through England, to his friend in Edinburgh*.

Memoirs of *Mr Bakerwell*, the celebrated breeder of cattle and sheep, are in hand.

Materials are wanted for completing an account of *Scotish Husbandry* at the union of the two kingdoms. A publication of Lord Belhaven at that period, is said to throw much light on the subject. Any gentleman who has such a pamphlet in his possession, will confer a favour upon the publisher, by indulging him with a reading of it.

A valuable essay upon the most proper method of *winning hay*, will be inserted in our next number.

The publisher is exceedingly sorry that this number has unavoidably been delayed for a few days after the time fixed for publication. In future, every attention will be bestowed to serve the public regularly.

The Second Number will be published on Monday the 14th of April.

Several valuable articles of intelligence, &c. from our correspondents, are unavoidably left out of this number, for want of room, although an *additional half sheet* has been added.

It is particularly requested that the Communications for our Second Number may be forwarded at farthest by the 19th of March, and articles of Intelligence by the first of April.

THE
FARMER'S MAGAZINE:

MONDAY, APRIL 14TH 1800.

(No. II.)

PART I.
ORIGINAL COMMUNICATIONS

FOR THE FARMER'S MAGAZINE.

The Rural Inquirer, No. 1.

IT would be an ingenious and useful object, to investigate the ancient state of husbandry in this country, and to trace out the various causes which have contributed to promote improvements in that important and necessary science. Perhaps, the field from whence *facts* could be gathered for such an investigation, is too sterile for producing satisfactory information; which might occasion, in many cases, conjecture and tradition to be substituted for positive evidence and written testimony. Be this as it may, we do not propose to undertake such an arduous task; but mean to devote this number of our inquiry to a short sketch of the substantial and valuable improvements made in Scotland since the Union of the two kingdoms; which are more extensive than in any other nation with which we are acquainted.

VOL. I. NO. II.

Q

Before

Before we enter upon this sketch, a few words relative to the ancient state of Scottish husbandry may be necessary.

At a very early period, the Lowlands of Scotland were partially brought into a high state of cultivation, and all the ordinary grains now in use were successfully raised upon that portion of the ground then called *in-field*. The *in-field* originally comprised a small space of land immediately contiguous to the farm-steading, or mains; and was afterwards gradually extended, as population and luxury increased, or as the means of improvement lay within the reach of the possessors. Hence, all the dry coastside land, and the fields adjoining to great towns and villages, were earliest improved; while those at a distance from manure, were generally allowed to remain in their natural uncultivated state.

It may readily be supposed, that cultivation, in the first instance, would be solely confined to such fields as were apparently of the richest quality; which would be easily discovered by the deepness of soil, and its aptitude to produce the greatest quantity of grass, or other plants with which the surface might be covered. The *in-field* would therefore, in every case, be composed of the best land which the respective districts contained; and, as the whole manure raised upon the premises, was applied to the select spots which came under this description, it is not surprising, that, in the course of several centuries, their fertility should have increased to a very great height.

Under the management mentioned, it is obvious that the great body of land continued in a waste and unproductive state, being only ploughed for a few years, or as long as it would carry crops of oats, and then left to recruit itself under natural grasses and weeds. The first step to improvement was, the abolishing of *out-field*, and thereby bringing the whole land of each farm under a regular course of husbandry, agreeable to the quality of the respective soils, and the nature of the climate where the farm was situated. The greatest improvements made in Scotland have been upon these secondary lands; which, in former times, without manure, fallow, and artificial grasses, were only capable of paying a very trifling

trifling rent. Good land may produce rich crops under many impediments, of which the value of borough acres is a striking proof; but, upon the obdurate exhausted out-field, nothing to the purpose could be accomplished, without employing the most active exertions.

It is believed, that the above statement will apply to the situation of Scottish husbandry, till the conclusion of the 17th century; since which period, a great and thorough alteration has taken place.

The chief and primary means of accomplishing this alteration, was the introduction of *Summer fallow*, which was not practised north of the Tweed sooner than the time above mentioned. Without working the ground during the dry Summer months, it was impossible to clear the in-fields of the immense stock of annual and root weeds which had for ages been accumulated, or to reduce the coarse sterile out-field to a proper tilth for carrying good crops of corn or artificial grasses. This valuable practice, which at all times is absolutely necessary in the first stage of improvements, has generally been practised with as much effect as in any part of Britain: and, in no country whatsoever, is greater attention bestowed upon the several processes of ploughing, harrowing, rolling, and gathering grass roots, than what is usually bestowed on the working of fallows in the Lowlands of Scotland.

The *Grass Husbandry*, which has been assiduously practised upon a great scale since the middle of the 18th century, was also of material advantage in the improvement of Scottish husbandry; and, for thirty years back, a greater quantity of seeds have been sown in the Lowland districts, than in any part of England of the same extent. The usual practice has been, to manage grass lands according to the Norfolk fashion, which is found to be more beneficial than withholding the plough for a greater number of years, as is customary in all the midland and western English counties. The great advantage of artificial grasses, by enriching and refreshing the soil, are well known; and they are seldom sown in this country, except with the first crop after Summer fallow, or upon land which has undergone suitable preparation.

Turnips were cultivated in Scotland very shortly after their introduction into Britain; and Mr Cockburn of Ormiston, and other members of the *Society of Improvers*, raised them agreeably to the most approved rules. This valuable root, which is justly considered as deserving a marked attention from every farmer upon a light soil, has recently spread with rapidity over all Scotland, and is cultivated in a way superior to what is common among our southern neighbours. Mr Tull's system is uniformly adopted; which, for cleaning the ground, raising a weighty crop, and lessening the expence of labour, is undoubtedly preferable to the broad-cast, or hand method. The culture of this root is increasing every year; and it is now successfully practised upon many soils formerly considered as unfit for growing turnips. By employing a little attention, and sowing fields of different soils in the same season, there is not a doubt but that this branch of husbandry may still be further extended, which will serve to reduce the quantity of land hitherto kept under an unproductive fallow. The increased demand for butcher-meat holds out every encouragement for this extension; and another great inducement is, that the value of stock necessarily depends upon procuring a sufficient supply of green food for their support at every season of the year.

If turnips have produced important advantages upon the light, free soils, *Beans*, drilled and horse-hoed, have been found equally beneficial upon those of a different description. This pulse, which was but little sown in Scotland till the year 1770, unless upon the rich clays, has, since that time, been successfully cultivated upon all the heavy loams; and, in many farms, now constitutes a regular branch of rotation. With a few exceptions, beans are constantly drilled at intervals of 20 or 27 inches; the latter mode is most prevalent, which admits the ground to be ploughed with a horse, in the most sufficient manner. Very little hand-hoeing is given, nor is it required; as the kind of land most adapted for their growth, and upon which they are commonly sown, is not naturally disposed to the growth of annual weeds; and fine crops of wheat generally follow, provided due attention has been paid to working the bean crop. The
necessity

necessity of Summer fallow, which, under the present rate of rents, and value of labour, is an expensive affair to the farmer, is consequently much lessened; for, if land is once thoroughly cleaned, and afterwards kept in a regular course of leguminous and culmiferous crops, alternately, it will remain in good order for a considerable number of years.

The *Potato*, which, during the 17th century, was considered as an article of garden growth, has, for fifty years back, been extensively cultivated in the fields; and is now the chief crop employed, in the vicinity of great towns, for cleaning the ground. Though this root forms a principal part of the food of the lower ranks, and consequently deserves every mark of attention, yet the raising of it, in an agricultural point of view, cannot be considered as equally beneficial to the farmer with turnips and beans. It is only upon light soils that they can be cultivated with propriety; and, in such situations, the land is better cleaned by turnips, which are sown at a later period of the season. In fact, this esculent root can never enter into a regular rotation, as the demand is limited; but every farmer cultivates less or more, for the use of his family and servants.

Inclosing and *Draining* of land have also been of much advantage in facilitating improvements; and the advantages of both are evident to the most superficial observer. If a farm is not inclosed, the farmer can hardly be considered, in many cases, as being master of his possession; and, without the operation of draining, the full advantages of good ploughing and manuring cannot be attained.

In the progress of these important improvements, much assistance has been gained from the liberal system of connexion which has long subsisted betwixt the great majority of landed proprietors and the tenantry; which has contributed not only to promote the solid improvement of the country, but has also been attended with beneficial effects to those immediately interested. Long leases, free from arbitrary restrictive covenants, have formed a prominent feature in this liberal system; without which encouragement, notwithstanding of every other advantage, the husbandry of Scotland would not,

at this day, deserve to be distinguished as eminently improved.

The elucidation of these subjects will occupy the future numbers of the Rural Inquirer; and any hints or information, from persons versant in the practical husbandry of Scotland, will be received with pleasure.

R.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

Agreeable to my promise, I send you another Paper upon the Flax Husbandry, which, I trust, will be acceptable to your Readers. The climate and practice of Ireland being nearly allied to the climate and practice of this country, it is hoped that this communication will be found of greater utility to the Growers of Flax, than the elaborate, and in many respects valuable Report of Mr Consul DURNO, respecting the Prussian, Russian, and Polish Husbandry, inserted in your last.

I am, &c.

N.

On the Culture, &c. of Flax, from the Practice of Ireland.

A GOOD crop of flax may be expected from any strong clays which are fit for the growth of corn. Potatoes are generally the crop which precedes flax; but turnips, beans, or any manured crop, may be considered as good preparatives. It is essential that the ground should be in fine tilth, and as free from weeds as possible. Light stubble lands, especially such as have been long in tillage, may, by proper preparation, bring a crop; but are not proper for the culture of flax, as the crop seldom comes to maturity. The stalks, before they are fit for pulling, turn to a reddish colour, called *fring* in the north

north of Ireland; which disorder not only lessens the quantity, but injures the quality of the flax, in every process of the manufacture.

In this case, they are generally obliged to pull the flax at the first appearance of the blight. If this is neglected till a blotch is seen on the stalk, the crop is scarcely worth manufacturing, as no art in bleaching can bring the cloth made of it to a proper colour.

N. B.—No chalk in Ireland, and very little sandy soil. Such lands would probably be liable to this imperfection.

About two bushels of seed to the English acre is a proper quantity, except for the purpose of a very fine manufacture. For this purpose, the flax is to be pulled in a very green state; and four bushels to the English acre are in that case necessary. A sure method of trying the quality of the seed, is, by sowing some in a hot-bed. The most approved season for sowing, is the first fine weather after the middle of March.

The best mode of tillage is in beds about six feet broad, covering the seed about an inch and half deep, with what earth may be shovelled out of the furrows.

These furrows are useful in carrying off under-water, and in giving air to the crop during the growth. But the tops of the ridges should not be laid round, as that would carry off the Summer rains too quickly. Before the flax is five inches high, it should be carefully hand-weeded; and, if any part lodges, it should be turned over, as is often necessary with respect to barley. And, in general, during the growth of the crop, as much care as possible should be taken, to preserve the plants in an even state of growth, which will be found of great advantage to the manufacturer in every future process.

The produce may be estimated, on an average, at about seven pounds Sterling the English acre.

The crop should stand till the lower part of the stalk gets a yellowish cast, and the under leaves begin to wither, except when the flax is designed for an extraordinary fine manufacture, or a blight or firing has made its appearance on any part of the crop; in which case, it will be better to pull it in a green state.

It will be worth attending to, in the pulling, to take all the ripest and strongest grown flax first; and, leaving it in small handfuls across each other, but with the ends containing the seed towards the south, to proceed to pull that of an inferior growth. By this means, the crop receives a sorting, in the first instance, which will be conducive to the perfection of the manufacture in every future part of the process. The weeds must also be carefully taken out of the handfuls, and the dirt shaken from the roots.

Immediately after pulling, the flax may be steeped, (unless the seed is to be preserved; in which case, it is to be rippled, or dragged through a sort of iron comb, to take off the seed pods); and the quality of the water is so far essential to the perfection of the manufacture, as to deserve particular attention.

Turf bog water, which is not muddy, is found to answer very well for this purpose; but foul stagnate water gives a stain to the flax which can never be bleached out. Too pure a spring, or sharp running water, limestone waters, or those impregnated with a mineral acid (which is easily known, by their turning black with a mixture of galls), are equally injurious. The best water is that of a reservoir dug in clay, or the sides of which are lined with clay.

Such a reservoir, 4 feet deep, which it should not exceed, 6 broad, and 40 feet long, will contain the produce of an English acre. The water should stand in this reservoir about a fortnight before the flax is put in, which must be evenly stored, in sheaves loosely tied, that the band may not prevent the effects of the water on that part.

The root ends should stand highest, and the whole must be perfectly immersed, and kept down by bundles of straw, or hurdles, as all that is above water will be stained. The time it is to lye in the steep, depends on the soft quality of the water, and the state of the weather. In good water, and warm weather, four days produce the effect, which, in other circumstances, does not happen under twenty. But it is safest to examine the flax on the fourth day. After steeping, it should be spread, even and thin, on fine grass ground. For this purpose, *aftergrass* is much recommended; but, if the
grass

grafs grows through the flax, it must be constantly turned over.

It is not easy to ascertain the time the crop should lye in this bleaching state, which is intended to produce an even separation of the rind from the case of the stalk. It is best to have it examined, from time to time, by the flax-dresser, who is most concerned that it should come in a proper state to the beetle or break. It is observed, however, that a good exposure to the sun renders less fire necessary to prepare the flax for a future process: if it is not sufficiently dried on the ground, which is seldom the case in Ireland, it is then put over hurdles, and dried with a gentle fire till it is fit for beetling, skutching, and the other operations of the flax-dresser.

In consequence of the appointment of the Honourable Board of Trustees, we, the Surveyors of Flax-raising employed by them, having met together, and maturely considered a paper, containing an abstract of the rules practised in Ireland for the cultivation and dressing of flax, transmitted to the said Board by the Lords of the Committee of Council for Trade, beg leave to offer our report and opinion thereon, as follows:

1st,—*As to the Soil proper for Flax, and the Preparation for the Crop,*

We consider, and have found, from experience, that an open, black, loamy soil, enriched by having lain long in pasture, and broke up by proper tith, is preferable to a clay soil, or any other we are acquainted with; and that either on the first or second crop after pasture, which we have always found much better than after potatoes, turnips, or beans.

2^{dly},—*With regard to the best Mode of proving the Goodness of Seed,*

We agree with the writer of the paper, that the best method of trying the quality of seed, is by sowing some in a hot-bed. But it should be observed, that this is by no means a criterion that can be depended on, and therefore

fore it ought to be recommended with caution. For we find, that even bad seed, if not altogether damnified, will vegetate, and make a promising appearance in a hot-bed.

3dly,—Method of covering the Seed, and utility of laying the Land in six-foot Beds.

We are humbly of opinion, that the mode here recommended, may certainly be of great utility in wet boggy ground, for draining it and bringing it into tillage: But we cannot by any means approve of it for land on which flax is to be raised in general; because, in Scotland, and, as far as we know, in England too, the lands are generally laid out in ridges, from 12 to 18 feet wide; which method is much less expensive than the making of narrow ridges, and is better calculated for crops of every kind. It is also to be observed, that the frequency of drains, occasioned by these narrow ridges, must deprive the land too much of its proper moisture.

And as to the covering of the seed, we would recommend brush harrowing, followed by a complete rolling, in preference to the mode suggested in the paper, which we are afraid would be found much too expensive.

4thly,—Any part of the Flax not under Water will be stained, &c.

We have some difficulty in agreeing to the rule here suggested, that the root-ends should stand the highest; for this reason, that the crop end of the flax being composed of the smallest fibres, require more watering than the other ends; and it is well known, that as the water is warmest and softest near the surface, it operates the more forcibly. The general practice in Scotland is, to place the root ends undermost.

Lastly,—The more Sun the Flax gets, the less Fire necessary before Beetling.

In preference to the method here suggested, of drying the flax on hurdles, or any other way of applying fire to it, in order to prepare it for skutching, we would recommend

mend drying in an oven heated with the refuse of the flax, and so very moderately, that a person may easily stand in it. There the flax should be allowed to lye just long enough to take off the acquired damp; and in this way, the damp is removed more equally and safely than by any other means; and the flax is hereby rendered more fit for every after operation.

The foregoing are the only remarks which we have to offer, concerning the rules suggested in the foresaid paper. We consider those upon which we have not made any remarks to be unexceptionable, and that the publication thereof may be of utility to the raisers and dressers of flax in Great Britain. At the same time, we think it our duty to say, that, as a complete system of flax culture, we cannot look upon it to be altogether so satisfactory as it might be made.

All which is humbly submitted by, &c.

[Signed by four Surveyors.]

FOR THE FARMER'S MAGAZINE.

Hints to Farmers.

I REMEMBER to have heard a little story of the father of the present Envoy of Britain in America, that contains in it much of the cranibo of our employment. Mr Liston was a respectable farmer on the estate of Dundas in West Lothian, and very successful, by diligence in his operations. One day the Laird, walking pensively out of a morning, met and accosted his worthy tenant thus: "Robert, I see every thing right and thriving about you. How comes it that you succeed so well, paying a good rent, when I, who am laird on my own farm, and pay no rent, find it even a losing business?" "Why, Sir," said Liston (after some pause), "the difference between your honour and me is just this: When you go to bed at night, you say to your overseer, tell them to do this or that to-morrow; but I am first up in the morning, and I say to my lads, Come, sirs, and let us set on to purpose! I keep the key of
my

my barn under my bolster, and nothing is too small for my attention."

This is the first lesson to farmers, on which it is needless to enlarge.

I remember another story relating to farming. When Cockburn of Ormiston, Scott of Duninauld, and Lord Kames, had first set the proprietors in Scotland to think of scientific farming, and the learned Professor Francis Home had enriched the art with authentic principles in the philosophy of vegetation, a Scots laird, full of theory, but deficient in practice, was bragging to one of his principal farmers of his knowledge, and laying down with emphasis the chimerical analysis of soils and manures, and had at last come to the end of his harangue, with a—" Well, Sandy, what think you of this? how do you manage your farm?" " Why, really, Sir, and please your honour," said Sandy, " I am as ignorant as the child unborn of all that you have said. My only scheme has been, to make my farm dry; to make and keep it clean; to muck it well with good and clean dung; sow it at a right time with principal and *well liquored seed*; keep the vermin off my corn, and take it off the ground when it is perfectly ripe. Indeed, Sir, I have little more to say; your honour has inclosed all my land; I will never allow a gap in my fences, or a filthy weed to be seen in my land. I like a cann of good strong ale or cappy; but I hate whisky, and never loiter in public houses. I am sure your honour will not be angry at any thing I have said, as I am never a week behind with your factor at term-time."

This is the second lesson to farmers.

B.

(*To be continued.*)

(*The following Registers of the Weather, during the years 1782 and 1799, have been sent us by an intelligent and respectable Farmer; and, as the consequences attending these two fatal years have been nearly similar, we judge, a comparative view of the causes which occasioned them, will be interesting to our Readers. The further favours of this Correspondent will be highly acceptable.*)

FOR

FOR THE FARMER'S MAGAZINE.

Register of the Weather in 1782, taken monthly, by a Farmer in the Vicinity of Edinburgh, and written, without any intention, at the time, of being published.

January.

COLD rainy weather, with very boisterous winds from the S. W. Little snow.

February.

Either snow, cold rains, or boisterous winds, the whole month. Little work done.

March.

Excessive frost, much snow, or great rain, with cold E. winds from beginning to end. Labour far back.

April.

A very wet and cold month; wind constantly in the E. It was near the middle before the sowing was generally begun.

May.

Began very cold, and continued so till the 15th, when it commenced an excessive rain; and although the air became milder, labour was put a stop to for eight days. The 23d was heavy rain, beyond any thing in remembrance. The *bear land*, of course greatly damaged. Wind always E.

June.

Attempts were again made, in the beginning of this month, to sow the barley; but repeated floods rendered it impracticable till about the 16th. Our barley seed was finished on the 18th. Some people in this neighbourhood continued to sow till the 24th. Many fields were left for fallow. The 22d, 23d, 24th, and 25th days, were remarkably warm. The snow lay on the hills N. W. of Stirling till the 22d.

July.

Fine dry weather till the 27th; then mild showers till the end. Wheat shot about the beginning of the month.

Roses

Roses blown on the 5th. Peas bloomed on the 15th. Barley and oats *shot* on the 20th.

August.

Very inconstant weather, but generally cold and rainy. An exceeding high wind on the 25th, which, however, did little damage, the corns in general not being near ripe. Two or three days in the end were dry and warm. A small field of wheat cut down on the 28th near Stockbridge. Very few peas full, but many in full bloom by the end of this month.

September.

Tolerable good weather the first three days, then thick fogs succeeded by cold E. winds until the 15th, when a heavy rain came on, which lasted three days. From thence cold dry weather, with high wind from the W., and rain alternately till the end. Began to shear on the 5th; left off from the 14th to the 23d; and again, on the 28th. For want of ripe corn, had no oats cut all this month. Many farmers, within two miles of Edinburgh, did not begin to shear till the 19th; and at five miles distance, did not shear at all during September.

October.

In general dry, but cold weather until the 19th, when, after most boisterous wind, there were heavy rains, frost, or snow, to the end. On the 30th, the snow lay two inches thick all over Mid-Lothian; a circumstance, however alarming it might be to the country people, on account of the crop, at that time nearly all out in the fields, and much of it to cut down, was an occasion of exultation to the newsmen, who had all along prognosticated a crop; and who very sapiently remarked, that, by means of the frost and snow, the public might be assured of ripe corn, which otherwise, they now confessed, was very much to have been doubted.

November.

Very hard frost till the 14th; from that to the end, fresh and frost alternately. This was a very busy harvest month. Many farmers, even within two miles of Edinburgh, had a great deal to cut down. We were all
cut

cut down on the 6th, and *led in* on the 18th. Near a half of all the potatoes in the country were destroyed by frost, and a great proportion of the oats rendered unfit either for meal or feed. Many heated stacks. The wheat feed, however, was got pretty well through in the course of this month, and in tolerable good order.

December.

Began with hard frost, and was frost and fresh by turns during the whole month. The wheat feed finished by the end of the month in very good condition, there being no snow in the low part of the county.

Weather Register on the same Farm during the Year 1799.

January.

In general, mild fresh weather, with some heavy winds from the west, only seven days rain in all, but some hard frost in the end of the month. Labour carried on pretty well.

February.

The first eight days hard frost throughout. On the night between the 8th and 9th, a storm of snow came on from the S. E., which lasted with unremitting violence for twelve hours. It was utterly impossible to do any work in the fields, hardly practicable even within doors, as the snow drifted through every thing. Many sheep smothered in the snow. From this to the 16th, fresh and frost alternately; and from thence to the end, in general mild fresh weather, and the ploughing going on briskly.

March.

The first twenty days in general mild fresh weather, and a great deal of work done, particularly in the *oats feed*, which was nearly finished during this period. From the 20th to the 28th, exceeding cold damp weather. The last three days heavy snow and hard frost.

April.

April.

Began with frost, and continued almost insufferably cold to the 15th; on the 8th, there was a great fall of snow. From the 15th to the end, fair and foul by turns, but on the whole cold, labour far back, no vegetation.

May.

1st, A continued rain. 4th, Thick ice. 6th, Began to plant potatoes three weeks behind the usual time. 7th, and 8th, continued rain. 9th, fair. 10th, 11th, 12th, and 13th, uncommon heavy rain. *Bear land* and potato ground greatly damaged, the water in all the rivulets overflowing, a great *speat*. 18th, *Spring* appears now to be begun; from this to the end, in general fair but cold weather, few trees have yet the leaf out. Saw a swallow for the first time, on the 10th, being about two weeks later than usual. Heard the cuckoo for the first time on the 28th.

June.

1st, Very cold wind. Old snow still on the muirfoot hills. 4th, An exceeding rainy day. From this to the 9th, warm weather. 10th, Very cold; people again drawing to their great coats. The hay lands looking miserable; yet wheat and other grain not amiss, pasture very good. 15th, The whole gardens have still the *flourish* in full splendour, eight weeks behind the usual time. Snow on the hills N. W. of Stirling; from the 15th to the end, in general warm, with several refreshing showers. People sowing barley to the 15th; wheat in early places beginning to shoot by the 26th. The potatoes have failed in many fields, and of course given up to Summer-fallow or turnip; also many intended fields of *bear land*.

July.

In general, fine warm growing weather, with the exception of the 4th, 12th, 18th, 19th, 23d, and 24th, in which there was much rain, attended with great cold. Delivered *new* hay on the 11th, perhaps the first in the county. The crop appears, in the end of this month, to be much more forward than was expected, and also seemingly better, hay only excepted, which is very thin indeed, never having recovered the cold in April and May.

August

August.

A sad month this for the husbandman; there being not less than sixteen days of heavy rain, of which, that on the 17th, 18th, and 31st days, was almost beyond example excessive. The 23d was in an equal degree destructive, from the wind being tremendously high from the west, doing damage to every crop, particularly to the potatoes, which never recovered the shock. Very little appearance of harvest, and the crops greatly laid, and out of order, having been in a considerable degree luxuriant previous to this. Turnip land (unless in very dry soils) all gone wrong, as well as the fallows. Great accounts, however, of the crop in the newspapers, and, as usual, a bountiful prognostication of plenty!

September.

In general, pretty fair weather till the 12th; when it began to rain, and lasted, with little intermission, ten days. Sunday the 22d was an exceeding cold stormy day; but, from this to the end, remarkable fine harvest weather. All the neighbourhood of Edinburgh were shearing on the 23d, but very few before that; and a great deal of work was done. Shearers, although dearer than usual, were to be had in abundance. No shearing, however, in the muirlands all this month. It was universally remarked, that, however bulky the crop appeared, it was cut down with comparatively little trouble; the straw, being soft, gave little resistance to the hooks; and, in fact, was bound up into less bulk than its appearance indicated. The second crop of clover having very generally failed, many farmers were under the necessity of eating up, with their farm-horses, that stock of hay which would have otherwise gone to market; and several fields of peas went also to the same use; which was, in fact, only consuming fodder, as there was very little grain on that description of crop.

October.

1st, An uncommon fine day; 2d, fair till noon, then rain; 3d a stormy cold day, few of the shearers could keep the field; 4th, exceeding bitter cold blasts; 5th, a fine work day; 6th and 7th, rain throughout; 8th, 9th,

and 10th, fair; 11th, rain; 12th to 17th inclusive, fair; 18th, hard frost; 19th, fresh wind; from this to the end, good harvest weather, with the exception of frosty mornings. Very little wheat yet sown; the greatest part of the country being still in the throng of harvest. Corn turning very ill out in the barn-floor, and at the mill; wheat worst of all.

November.

In general fair, with frosty mornings, till the 20th; then raw damp weather, till the end; and the 30th, a day of rain throughout. Though this has been a very busy harvest month, yet it is not concluded; particularly in the muirlands, where they have still to *reap*, as well as to *lead in*. Very little wheat yet sown, and none in good condition. The prices are getting up fast, in proportion as it is more and more known that the crop is deficient. Even the newsmen are almost convinced that the crop is not *so very immense* as they predicted; but, in compensation for the error they have done every thing in their power to lead the public into on this subject, they are, from day to day, issuing out many sage advices to the farmers, how to manage their stacks of corn, how to save, and how to sow: all which will no doubt meet with the deserved attention.

December.

Dull heavy weather (though not much rain) till the 17th; when frost and snow set in, and continued with considerable severity till the end. Many fields of muirland corn still *unled*. Even within 3 miles of Edinburgh some barley uncut; but this not to any great extent, Very little wheat sown this month.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Sheep and Great Farms favourable to Population.

GENTLEMEN,

AFTER having heard so much clamour raised against the substituting of sheep for black cattle in the Highlands, and against great farms in general, as having an effect

effect to depopulate the country ; it is not a little curious, that the direct contrary is the truth, as now completely ascertained from the recent numeration of the people by Sir John Sinclair, in the Statistical Account of Scotland, compared with a similar muster by Dr Webster in 1755.

Thus, in the extensive Highland counties of *Argyle*, *Inverness*, and *Ross*, (the districts, of all others, wherein sheep have been more extensively introduced, the farms more enlarged, and from whence, on these accounts, the greatest clamour has been raised), the population in 1755 was 170,440; yet, in spite of the alleged depopulation, from sheep and great farms, the number of people, in 1792-8, is 200,226; being an increase, in the short period of about forty years, of 29,786, from a territory possessing almost neither towns nor manufactures, hardly even agriculture, strictly speaking; the whole being, in general, a pastoral country, applied almost exclusively to the rearing and feeding of stock.

In like manner, the counties in the south of Scotland, *Berwick*, *Roxburgh*, *Dumfries*, *Kirkcudbright*, and *Wigton*, where flocks of sheep have increased much, as well as the size of farms, the population has also been augmented considerably. Thus, in 1755, the number of people was 135,183; it is now 163,166. I do not here state the vast increase of population that has, in the same period, taken place in the counties of *Ayr*, *Renfrew*, and *Lanark*; as in these it has, in a considerable measure, been owing to the increase of towns and manufactures, neither of which have had much effect in the counties first mentioned.

But this is not all. *Population is on the DECREASE, where the farms are still small, and the number of sheep inconsiderable!* Thus, in the three contiguous counties of *Aberdeen*, *Banff*, and *Elgin*, still remarkable for small tenantry and diminutive flocks, the population in 1755 (exclusive of the city of Aberdeen) was 172,225; it is now only 163,261! Can any stronger evidence be required?

One would have thought the bare fact, that Scotland has increased in population, in the course of forty years, from 1,265,380 to 1,527,892, would have convinced

every impartial person, that the enlargement of farms, and the increased number of sheep, (which has only been remarked during the same period), have had no tendency to depopulate the country; a fact, of which every impartial person is convinced: But this, nevertheless, has not prevented the prejudiced or the ignorant from raising a great outcry against sheep and great farms; and, once prepossessed on the subject, it is possible they will continue to shut their eyes on every evidence offered to undeceive them.

How it came to be supposed, that sheep, which demand an unremitting attention, should yet require fewer people to manage them in the Highlands than black cattle, which roam at large on the hills, for several months together, uncared for, or at least unattended to, is not to be accounted for. The fact, however, that the country has increased in population, in proportion as the sheep have increased in number, (affording more employment, as well as more food), appears to be completely ascertained. The same beneficial consequences appear also to have ensued from enlarging the farms, (to the limited extent in practice in this country); for although the number of actual farmers has thereby been diminished, yet more people have been employed in the works of husbandry, from the more improving system of operations which takes place, (which also sends more food to market); while, at the same time, the labourers themselves are, in a greater proportion, *married* people; as the man who farms on a large scale always finds it his *interest* to employ such, in preference to young men or boys, the usual population on little farms.

February 20th 1800.

H.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Premiums offered by the Board of Agriculture, for 1800.

No. I.

To the person who shall draw up, and produce to the Board, the best, simplest, and most practicable plan,
for

for ameliorating the condition of the labouring poor of this kingdom, by alterations in the poor laws, of easy execution, and without materially increasing poor-rates
 ———*the Gold Medal.*

To be produced to the Board on or before the first Tuesday in March 1801.

No. II.

To the person who shall build on his estate the most cottages for labouring families, and assign to each a proper portion of land, for the support of not less than a cow, a hog, and a sufficient garden——*the Gold Medal.*

Accounts of the expences of building—land assigned—culture, if any—live stock, and state of the families, with the rent paid—verified by certificates, to be produced to the Board on or before the third Tuesday in April 1802.

No. III.

Doubts having been expressed by some persons concerning the expediency of cottagers keeping cows, except on rich soils, the Board will give to the person who shall produce the most satisfactory account, verified by experiments, of the best means of supporting cows on poor land, in a method applicable to cottagers——*the Gold Medal.*

Accounts to be produced of the soil—articles cultivated—produce—stock kept—and every material circumstance—verified by certificates, on or before the first Tuesday in May 1801.

No. IV.

To the person who shall make the most satisfactory experiments tending to the improvement of the culture of each of the following plants, respectively, viz. wheat, rye, barley, oats, peas, beans, tares, buck-wheat, turnips, cabbages, roota-baga, potatoes, carrots, parsnips, clover, lucerne, sainfoin, chicory, hemp, flax, hops——*the Silver-Medal.*

Accounts, verified by certificates, to be produced on or before the second Tuesday in May 1802.

The same Premium for 1803.

No. V.

To the person who shall draw up, and lay before the Board, the best memoir on the means of obviating the objections which have been made to a general inclosure act, in such manner as to facilitate such a measure, whenever it may be had recourse to——*the Gold Medal.*

To be produced on or before the third Tuesday of January 1801.

No. VI.

To the person who shall draw up, and produce to the Board, the most satisfactory memoir on the best means of preventing future scarcities——*the Gold Medal.*

To be produced on or before the second Tuesday in March 1801.

No. VII.

To the person who shall build and describe to the Board, the cheapest cottage, being at the same time durable and comfortable——*the Gold Medal.*

A plan, elevation, and account of the materials and expence, verified by certificates, to be produced on or before the first Tuesday in May 1801.

No. VIII.

To the person who shall invent and execute, in a manner applicable to a common use, the best and cheapest substitute for leather, in the shoes of the labouring poor, being an improvement on any that may at present be in use——*the Gold Medal.*

A pair of shoes, with an account of the materials and expence, to be produced on or before the first Tuesday in December 1800.

No. IX.

To the person who shall, through the entire Summer of 1800, keep the greatest number of cattle in stalls, houses, or confined yards, and fed entirely in the soiling method, with green food——*the Gold Medal.*

Certificates of the number of cattle, and acres of food, and forts eaten—the quantity of dung made, with other circumstances of the experiment—to be produced on or before the first Tuesday in December 1800.

The same Premium for 1801.

No.

No. X.

To the person who shall improve, and bring to the annual value of not less than 10s. an acre, the greatest number of acres heretofore waste, not less than 50—*the Gold Medal.*

Accounts of the improvement, verified by certificates, including the state of the land before the experiment, and of the cultivation, expences, and produce, to be laid before the Board on or before the first Tuesday in March 1803.

Notice of the intended improvement to be sent to the Board.

No. XI.

To the person who shall lay before the Board the most satisfactory account of Mr Elkington's drainings—*the Silver Medal.*

The soil and state of the land before draining, the method and expence of the improvement, with a plan, and the result of the operation, to be produced on or before the second Tuesday in December 1800.

No. XII.

To the person who shall, by a series of the most satisfactory experiments, ascertain the comparative advantages and disadvantages of folding sheep—*the Gold Medal.*

Accounts, verified by certificates, to be produced on or before the first Tuesday in April 1803.

No. XIII.

To the person who shall, in a country where irrigation is not generally in practice, water the greatest number of acres, and in the completest manner—*the Gold Medal.*

Accounts of the old and new state of the land and value, the method, expence, and produce, verified by certificates, to be laid before the Board on or before the third Tuesday in January 1802.

No. XIV.

To the person who shall make, and report to the Board, the most satisfactory experiments on the comparison of horses and oxen, in the general business of a farm—*the Gold Medal.*

The account, verified by certificates, to be produced on or before the last Tuesday in April 1803.

No. XV.

To the person who shall, from authentic documents, and actual enumeration, report to the Board the most satisfactory account of the houses, and the present and past population, of any hundred, district, wapentake, or division of country in Great Britain, containing not less than ten contiguous parishes——*the Silver Medal.*

To be produced on or before the last Tuesday in April 1801.

No. XVI.

To the person who shall give the most satisfactory account, verified by experiments, of the effect of ploughing in green crops for manure——*the Gold Medal.*

Accounts, with certificates, to be produced on or before the first Tuesday in March 1802.

No. XVII.

Potatoes and wheat, in constant succession, being the course of crops which affords the most abundant food for man, the Board will give to the person who shall make and report the most satisfactory experiments, on not less than five acres cultivated in that course during four years——*the Gold Medal.*

Accounts of the soil, culture, produce, application, or price, verified by certificates, to be produced on or before the first Tuesday in May 1804.

The same Premium will be given (but not to the same person) for the same account of six years.

Accounts to be produced in May 1806.

No. XVIII.

To the person who shall lay before the Board the most satisfactory account, verified by chemical experiments, or other sufficient authorities, of the nature of manures, and the principles of vegetation——*the Gold Medal.*

To be produced on or before the first Tuesday in December 1800.

No.

No. XIX.

To the person who shall lay before the Board, the most satisfactory account of the application and effect of manures, verified by practical experiments, on not less than one acre for each sort of manure——*the Gold Medal.*

To be produced on or before the first Tuesday in December 1802.

No. XX.

To the person who shall lay before the Board, the most satisfactory paper on the means of ascertaining the probable state of the weather, so as to furnish useful information to the husbandman——*the Silver Medal.*

To be produced on or before the third Tuesday in May 1801.

No. XXI.

To the person who shall give the best account, with drawings, of the various instruments of husbandry——*the Gold Medal.*

To be produced on or before the first Tuesday in April 1801.

 GENERAL CONDITIONS.

1. The Board reserves to itself the power of withholding any premium, when the communication or communications are not deemed sufficiently important to merit the reward.

2. The MS. &c. sent in claim of Premiums; to remain the property of the Board.

3. All memoirs, &c. sent in claim of Premiums, to be without names; with a mark or number; and accompanied with a sealed letter, on which is written the same mark or number, and containing the name and address of the claimant; not to be opened unless the Premium is adjudged to that mark or number.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Query concerning the Quality of Straw.

GENTLEMEN,

WHETHER is the straw of a thoroughly ripe crop, or one win in the juice, the best fodder for beasts? Some affirm, that the weather productive of full corn, must be productive of feeding straw; while others, reasoning from the similarity to hay, argue for straw made in the sap.

The 1798 and 1799 brought forth straw of these opposite descriptions, and should, by the contrast in their nutritive effects, conclusively decide the point, if farmers have accurately compared the different condition of beasts fed upon straw for these years. Yours, &c.

H.

Remark by the Conductors.

The above query appears very fairly put, and we apprehend, there can be but one opinion respecting the answer, viz. That the straw win in the juice must be the best fodder. We cannot, however, consider the quality of the straw produced in 1798 and 1799, as competent evidence to determine the point; as both ripe and green straw, of the latter, were essentially different from that of the former year. The straw of 1799 never possessed equal substance with that of 1798, because it had not the benefit of so much sunshine, and, from the severity and wetness of the weather, was deprived of the greatest part of its juices long before it was ripened.

N.

FOR THE FARMER'S MAGAZINE.

Letters from a Scots Farmer, during a Tour through England, to his Friend in Edinburgh.

LETTER II.

AFTER enjoying a good night's rest at York, we set off at five o'clock, in a fine June morning, for *Tadcaster*. We passed through a delightful country, inclosed on every hand. The sun shone bright; the air was mild and serene; and every circumstance contributed to render the time employed in travelling this short stage exceedingly agreeable.

Tadcaster is not a large place, nor does it contain any manufactures; but the soil of the adjoining country is mostly of excellent quality, which is in general kept under good cultivation. We only halted here for a few minutes, and then proceeded to *Ferrybridge*, where we breakfasted.

Betwixt these two places, lies the estate of a worthy nobleman, who justly considers the science of Agriculture as meriting equal legislative attention with trade and manufactures, and who wisely devotes a considerable part of his valuable time to the management of rural affairs. We saw several of his improvements, which were conducted according to the strictest rules of art, and received accurate accounts concerning those which did not come under our observation. Instead of trifling away his time in the cultivation of a few acres, he carries on his operations upon the great scale, and intends, at a future period, to arrange his estate in the shape of regular-sized farms; which was not the case when he entered to possession. Happy would it be for Britain, were all the great proprietors of land disposed to view the cultivation of the soil in a similar manner with this noble personage! Agriculture would then advance with hasty steps to perfection, and the capital stock of the country would be improved to its greatest height.

Ferry-Bridge, being one of the great stages upon the north road, is chiefly occupied by innkeepers. At this place, we received information concerning the *River-Aire-Navigation*, which is the most profitable undertaking of the kind in England. This navigation was originally planned and executed in the reign of Charles I.,

and

and has since been gradually extended, by the aid of canals, so as to admit of communication with almost every part of the kingdom. Yorkshire possesses the full advantage of water carriage. Indeed, without it, the valuable manufacture of the West Riding could hardly be carried on. It gave us pleasure to learn, that the adventurers were, upon the whole, handsomely repaid.

The soil hereabouts is all incumbent on limestone, and large quarries of this valuable mineral are wrought in the neighbourhood of Ferry-Bridge, which, after undergoing the process of calcination, is transmitted, by water carriage, over the whole of this large and valuable district. The husbandry of the county, respecting its application, appears, however, very imperfect; and I am inclined to think, that much of it is used, not from a conviction that it will produce beneficial consequences, but merely because the tenants are taken bound to lay on a certain quantity each time their land is fallowed. As two crops, or at most three, are only allowed to be taken after one fallow, and as the arable lands are generally kept constantly under the plough, it necessarily happens, that lime is often applied when the ground is exhausted, or when it is in an improper condition for receiving benefit from calcareous manures. The money, therefore, expended in the purchase of this article, must, in many cases, be considered as misapplied, which would not likely happen, were it left to the judgment of the possessors, how often, and to what extent, the soil required the application of such a stimulus.

It will be generally acknowledged, that the most beneficial mode of liming land, is, to give a sufficient dose at once, when the soil has been enriched by a quantity of dung, or has been recently refreshed, by remaining several years in grass, which precludes the necessity of a repetition for a considerable number of years. The old grass lands of Yorkshire would therefore be a fine subject for the operation of this article, which is justly regarded as the basis of good husbandry; while the lands presently in aration would be equally benefited by throwing them into grass. It is evident, however, that these things cannot take place, till the nature of the connexion betwixt landlord and tenant is materially altered; for, under the present system, it is highly improbable that any such improvements will be practised.

The errors of the Yorkshire *lime husbandry*, may justly be attributed to the restrictive covenants imposed by the proprietors, and not to any fault of the tenantry, who are seldom allowed the exercise of their own judgement in such matters. It is impossible that these covenants can be regulated with such propriety as to meet every case; therefore, it may safely be admitted, that when the tenant is taken bound to fallow every third or fourth year, and to dress that fallow each time with a certain quantity of lime, that the fallow is often repeated, when the condition of the ground does not require it; and that lime is often bestowed, when circumstances prevent it from proving in the least degree beneficial. The proprietors seem to consider the tenant as very ignorant of practical knowledge, otherwise they would not hedge up their management with numerous rules, mostly inapplicable to the present state of British husbandry, and consequently deserving to be proscribed as obsolete, and improper to be executed. I have heard many excuses for such instances of arbitrary interference; but few are of a nature calculated to produce conviction. If a farmer does not know when his land is to be benefited by the application of lime, he is not fit for the post he occupies.

Pontefract, which lies a few miles westward of the great road, is surrounded by fine fields of deep loam, wherein liquorice and nursery articles are raised to a considerable extent. A large corn market is held here, which is attended by a number of respectable farmers, and the grain presented for sale was generally of excellent quality.

This part of Yorkshire makes a respectable figure in husbandry; and very few of the fields appeared to be unproductive, unless it be those called common, or not held in severalty; of which more afterwards. Not much plain fallow is to be seen, and turnips are cultivated upon the great scale. The broad-cast method is usually adopted, which I must consider as much inferior to the northern custom of raising them in drills, both in respect of expence, and in the degree of cleaning given to the ground, which are points of the utmost importance.

Doncaster was our next stage, which is a stirring bustling place, and has large common fields in its vicinity. Some of these fields contain as fine soil as ever I examined;

but

but their tenure and cultivation necessarily preclude a rent from being paid proportional to the intrinsic quality. Common fields have but lately come under my inspection, and to a Scotfman they certainly must be a matter of wonder and regret.

Sheffield, the staple place for cutlery articles, is situated above eighteen miles westward from Doncaster. And here a circumstance occurred, which strongly marks the character of English tradesmen. Wishing to see a few of its valuable manufactures, we had procured a recommendatory letter to a merchant in the place, who, we were told, was well acquainted with such matters; and having delivered it upon our arrival, he accosted us with—‘Pray, gentlemen, where do you come from?’ We replied, ‘From Scotland.’ ‘Sorry for it,’ says he, ‘for I can neither shew the manufactures to a Scotfman nor a Frenchman. You are come to carry off our inventions, I suppose.’ It was to no purpose we assured him that we were country farmers upon a tour, to see the husbandry of the kingdom, and that we only wished to gratify a little harmless curiosity. ‘It won’t do, gentlemen. You are Scotfmen! sorry for it: can’t shew you the manufactures. Good b’ye, gentlemen.’

From Doncaster to Newark-upon-Trent, the road is like a bowling-green for levelness; and no forty miles in England are travelled with greater facility. At Bautry we quitted Yorkshire, which, for magnitude, general value of territorial property, and extensive manufactures, undoubtedly surpasses every county in Britain.

Nottinghamshire was the next district through which we passed, and contains a great deal of what is called *forest soil*, very different indeed from what has lately come under our observation. The country upon the great road is more open, the fields more extensive, though, upon the whole, well cultivated, while wind-machines for grinding grain were working on all sides, which was a sure proof that circumstances were altered. A different system of husbandry seemed necessary than what was required in Yorkshire, and such was accordingly practised.

The husbandry of the upper part of *Lincolnshire* contained more disagreeable features than any we have hitherto examined; and the condition of an extensive common field near Grantham, was sufficient to provoke the most patient

patient agriculturist in the three kingdoms. To have such fine land lying in ridges and baulks alternately, the one half unproductive, and the other half waste, was such an instance of high treason against the good of the community, that the possessors deserve to be indicted as publick nuisances to the State. To see what may be called the capital stock of the country, so grossly mismanaged, while the inhabitants are starving for want of provisions, surely calls aloud for legislative interference, without which no effectual remedy can be provided.

But ought the blame to be solely placed to the account of the possessors? or rather, Is not the supreme authority of the country censurable for not using the means of rooting out the causes which necessarily produce such abject and deplorable economy? Individuals may wish to reform the radical defects which prevail in the legal polity of the country, respecting the tenures or conditions upon which property is held and possessed, but very often the means are out of their power. A decisive act of the Legislature is necessary for correcting those evils, which must be founded upon liberal and public-spirited principles. If the interest of individuals should, in some instances, be sacrificed in consequence of such a strong measure, this affords no weightier objection than what may be urged against almost every road or canal-bill, or other bills for promoting improvement.

If an act of Parliament was passed for limiting the growth of grain in England, it could not be more injurious to the public good, than what is sustained in consequence of such immense and valuable tracts of ground being left in a common-field state. It must be remarked, that they are usually of the best kind of soil where they are situated. And the reason is obvious; they were first cultivated, and people would undoubtedly take possession of the most fertile spots, before they attempted to meliorate and improve those of a more sterile and obdurate nature. I was told, that some of these fields had been cultivated in a similar way for five or six hundred years, probably for a longer period; and that no deviation could be introduced into the customary courses of cropping, established in the different townships, without the express consent of every person concerned, unless an act of Parliament is passed for dividing, inclosing,
and

and holding them in severalty. Such fields are therefore kept under a perpetual round of crops, except that broad clover may, for a single season, be partially admitted. You may therefore judge what kind of crops are usually produced under such management.

Many Scotsmen are ignorant what a *common-field* is. When you mention such a subject, they imagine it is a piece of barren, whinny land, depastured with the cows of the neighbourhood, without reflecting that the term applies to the best lands in England. This tenure bears some affinity to our old run-rig fashion in Scotland; only that, since 1695, it was in the power of any single proprietor, to force a division of the premises, by applying to the Sheriff of the county, upon whom the execution of the law for dividing commonities, was devolved. It is owing to the want of a similar law in England, that such grievances exist; for it is evident, that the present mode of division is so vexatious and expensive, that one half of the commons will continue in their present state for ever, unless such a measure as I am recommending, is passed into a law. Indeed, there are much stronger reasons for a general bill, than existed in Scotland; for, in that country, the lords of the manor never possessed any thing like the extent of rights that are held by their brethren in England; and the burden of tithes, which in the former country was previously done away, absolutely debars every step to procure a division in the other, unless a previous bargain is made with the owners.

The very customs of the different townships, and the obstinacy and prejudice of the possessors, effectually prevent any material improvement being made, except with the unanimous approbation of every tenant of the township; and when we reflect upon the general perverseness of human nature, it may easily be supposed, that such a consent is very rarely gained. Instances are known, where turnips have been sown upon the break customarily kept under naked fallow, and that the neighbours have turned in their beasts upon them, without being liable to damages; as also, where clover has been sown, instead of a corn crop, the stock of the township has destroyed it during the Winter months, without legal redress being procured. Experience so fully proves the impolicy of keeping land in a state of commonage,

that

that a wise Legislature would be justified in taking strong measures to annihilate such a tenure, however arbitrary the measures at first sight might appear.

As we advanced southward, we did not find husbandry practised in the perfect manner we expected, and common-fields were constantly occurring to our view, which were no better cultivated than those we had seen formerly. An old gentleman in company assured me, that he had travelled this road in 1751, and was not sensible of any alteration having taken place in rural economy since that period: The same remark will probably be made fifty years hence, if a division-bill is not passed. To observe a fine country so miserably managed, sickens the mind, and makes it turn from the scene with disgust.

At *Barnet*, we got into another climate, and the growth of every thing was further advanced than in any district we had passed through. Betwixt this place and LONDON, the hay crop was in hand; and the several processes of cutting, winning, and stacking, were going briskly forward. The crops in general did not appear weighty, not exceeding 150 stones per acre, and all of the kind called natural or meadow-grass. The smallness of these crops will not excite surprise, when it is considered, that the fields are so frequently cut, which as effectually scourges land, as the severest course of corn crops. Very little land under the plough is here to be seen; and what came within our view, did not appear carrying heavier crops than what may be found in other situations, where the means of improvement are not so plentiful.

We have now entered the *great city*, where we will continue for a few days; and my next shall contain a detail of some of the wonders which come under our observation, though perhaps rather incongruous with the general purposes of these letters: And I am, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

IF you consider what follows, as throwing any light upon your first query upon practical subjects, you are at liberty to make use of it.

The disease in wheat, called *smut* *, is perhaps more dangerous to that most valuable grain, than all other disorders united, to which, in this island, it is subject.

Though the cause of this destructive contagion will probably, like many other *arcana* in nature, for ever evade the feeble researches of mankind; the preventive, and even cure of the malady, is a simple process. A *complete* wetting with urine, or with a strong pickle of salt and water, and a drying with quicklime, I can, from twelve years *experience*, assert are a certain preventive.

A person, in whose accuracy and veracity I have every reason to confide, has assured me, that, by repeated washing with the above mentioned liquids, he, in one season, completely cured a quantity of wheat for seed, full of balls, and deeply infected with smut. I have also been informed, by that enlightened agriculturist, JOHN ERSKINE Esq. of Marr, that a gentle kiln-drying of wheat intended for seed, and driving it twice through the fanners, immediately on being taken off the kiln, will prevent smut. The fanners must be driven smartly, and none of the light grain used for seed. This mode of prevention, Mr Erskine assured me, was successfully practised in the county of Clackmannan. Both these ways of treating seed-wheat are pretty generally known in North-Britain, particularly the former.

Unless wheat is sown within an hour and a half after being wetted with urine, it ought immediately to be spread thin upon the floor of a granary till quite dry, otherwise the powers of vegetation may be destroyed. If this precaution of spreading and drying be taken, the grain may be

* The miserable quackery and vague conjectures often attempted to be imposed upon the agriculturists of this country, as the origin of *smut* in wheat, and *scurl* in potatoes, shall afterwards be submitted to the public.

be preserved for several months in perfect safety. This method of preserving wheat for seed, after being pickled and prepared for sowing, was communicated to me by an agriculturist, eminent in his profession, and who had personal experience of the practice. I am, &c.

J. S.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Drilling Beans.

GENTLEMEN,

As I observe you wish to receive communications respecting experimental agriculture, I do myself the pleasure of transmitting you the result of the first attempt made by me to cultivate beans according to the drill system, which was executed at a time when that important branch of husbandry was but recently introduced into this country, and, consequently, imperfectly understood.

I marked off an acre of ground, the soil a light free loam, which had carried a crop of oats the preceding year. It was deep ploughed in Winter, and received dung previous to the seed-furrow, which was given as shallow as possible, in order that the plants might have sufficient soil to strike down their roots. I divided it into three parts. Part No. 1. was drilled with intervals of 27 inches, or, in other words, the harrow followed every third plough. No. 2. was drilled after the second plough, which reduced the intervals to 20 inches, or thereby. No. 3. had intervals of the same breadth as No. 1.; but two rows stood together, or in each furrow, which gave me about the same number of drills as stood on part No. 2., and about one third more than part No. 1. They were sufficiently harrowed immediately before braiding, carefully hand-hoed afterwards, and, finally, bulked up with a neat double-moulded board plough, which performed the work in a very perfect manner. The crop at harvest was good; but, when cut, the stalk was smaller, and the pods not so well filled, upon those which occupied No. 2., as upon the other two divisions, where the intervals were wider, and

consequently a freer admission given to the air, which I have since found to be necessary in the culture of every article of the leguminous kind. When the crop was thrashed, I had one firLOT more beans upon No. 1. than upon No. 2; and No. 3. only returned me the same produce as No. 1, though it contained several more drills: besides, owing to the double rows, it was nothing like so well cleaned. The inferences which I drew at the time, and which have since guided my conduct in this branch of husbandry, were, 1st, That a certain portion of air was required to bring beans to perfection; and that the quantity to be procured, when the intervals were only 18 or 20 inches, was not sufficient for that purpose. 2d, That intervals less than 27 inches would not admit the full benefit of ploughing, which is a chief object in the drill husbandry: And, lastly, That double rows, with wide intervals, were not advantageous, as they neither returned a greater produce, nor allowed the ground to be so well cleaned as single rows.

I have, since the above trial, uniformly drilled beans upon a great scale, according to the first mentioned method, with this single alteration, that the hand-hoe is laid aside, and the whole operations performed by horse labour. The different ploughings are given with one horse, and are repeated according to the nature of the soil, and the dryness of the weather. This is the cheapest and most effectual way of cultivating beans: and indeed it is now very generally practised. I am, &c.

A Rural Economist.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Loose Hints on the Principles and Practice of Rural Science.

GENTLEMEN,

AGRICULTURE is an art generally practised with so little attention to principles, that a superficial observer may be led to conclude, it is incapable of being regulated by
any

any thing like fixed and precise rules. If we turn our eyes upon the cultivators of the ground, we will discover, that the great body of the profession are rather influenced by custom and prejudice, than guided by rational motives; while, on the other hand, many scientific and enlightened men are as often defective in the practical department of this important art. The first class generally view theoretical knowledge with contempt; while the other is ready to place too much dependence upon it, and to neglect the solid and useful information to be learned in the school of experience.

I am inclined to think, that the conduct of both classes equally deserves censure; and that a good farmer must necessarily be intimately acquainted both with the principles and practice of rural science. Unless he is acquainted with principles, it is impossible for him to search after improvement; and, if he is unacquainted with practice, his knowledge can be of little, or no real utility. It is evident, that every art will advance in direct proportion to the means of information possessed by those who are concerned in carrying it on; and experience fully proves, that, in every part of Britain, improvements have gone hand in hand with the progress of knowledge. Hence, the scientific farmer, if he bestows suitable attention to practice, will necessarily make a greater figure in his profession, than one whose knowledge is altogether limited to the operative branches of husbandry.

It is unquestionable, that a very great change has, within these few years, taken place in the character and conduct of British farmers; which promises to be of important service to the cause of agriculture in general. Instead of being taught to hold a plough, to drive a cart, or to sow (which, in former times, were considered to be the only qualifications necessary for a farmer), we notice, that a liberal education has, of late, been given to those intended for that profession; which must necessarily expand their minds, and remove every prejudice. In those districts where such advantages are not enjoyed, little or no alteration has taken place in the practice of husbandry; which continues in a stationary position, without any attempts being used to keep pace with the great improvements in other sciences.

Perhaps, Lord Kames's *Gentleman Farmer* was the first publication of the kind which proved really beneficial to the Scottish farmer; as opinions are therein constantly subjected to the test of rational principles. His Lordship followed the plan laid down by that prince of philosophers, Lord Bacon; and formed his theory from facts; which is directly the reverse of the ancient, or Aristotelian system. If every landed gentleman in Scotland possessed his Lordship's knowledge, and every farmer was as attentive to practice, then might we expect, that improvements in rural science would advance with rapid strides; and that, in process of time, every part of the country would be cultivated like a garden, without a single spot being left in a waste or unproductive state. I am,

Yours, &c.
A Friend to Improvements.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Papers concerning the Introduction of Barley Mills into Scotland.

GENTLEMEN,

THE following curious and interesting papers were lately communicated to me by Mr Andrew Meikle, the ingenious mechanic who invented the thrashing machine now in common use; and, as they afford authentic information respecting the introduction of the barley mill into Scotland, I trust you will consider them as worthy of being handed down to posterity through the channel of your Magazine. Mr Meikle is the only surviving son of James Meikle, who went to Holland in 1710, agreeable to the articles of agreement entered into with Mr Fletcher; and he authorises me to say, that his father, along with the materials for the barley mill, brought over a winnowing machine, or what is commonly called a pair of fanners; which identical machine, or, at least, a part of it, remained at Salton barley mill a few years ago, and probably is used at this date. It is only necessary to add, that Andrew Fletcher, Esq., styled in the articles

articles of agreement, *Laird of Salton*, was in Holland in the year 1710; from whence, it is probable, he had written to his brother to send over James Meikle. One of his letters, dated *Hague*, 18th June 1710, is sent you, as a proof of the above circumstance. Mr Meikle, after having perfected himself in the barley making art, returned safe to Scotland, with the necessary materials, and the mill was immediately erected, and, for a considerable number of years, was the only machine of the kind in the British dominions.—I am, &c. N.

*Articles of Agreement between HENRY FLETCHER and
JAMES MEIKLE.*

IT is agreed, betwixt Henry Fletcher, brother to the Laird of Salton, on the one part, in the name of his said brother, and taking burden upon him for the said Laird of Salton, and James Meikle, wright in Wester Keith, on the other part, that they shall keep and perform to one another, according to the tenor of the following articles, *viz.*

1. That the said James Meikle shall go to Holland with the first fleet that sails thither, after the date of thir presents, and learn there the perfect art of sheeling barley; both that which is called French barley, and that which is called Pearl barley; and how to accommodate, order, and erect mills for that purpose, in so far as he can, with his uttermost industry, and recommendations given him.

2. That, as soon as the said James Meikle shall find himself sufficiently instructed in said art, he shall return with the first fleet, or man of war, he can have safe passage in, for Scotland or Newcastle. That, in the mean time, if he shall be forced to wait, he shall endeavour to instruct himself in any other useful trade or manufactory.

3. That when he returns to Scotland, he shall be obliged to communicate the arts he has learned, to *Salton*, or any whom he shall appoint, and shall communicate them to no other person, but by *Salton's* permission.

4. That *Salton* shall pay all the said James Meikle's expences in going and coming, and in learning said arts.

5. That the said James Meikle shall be master of the sheeling-mill, if he think fit, and shall have a proportional allowance for it, according to the profit it yields; or a yearly salary, according as two honest men, chosen for that end, shall determine. But if the said James Meikle shall not think fit to employ himself in this manner, but can do better otherwise; then he shall be obliged to teach the art of sheeling French barley and Pearl barley to any whom *Salton* appoints, he being paid for the time he employs therein. And besides, in this case, *Salton* shall give him a handsome reward for the pains he has been at, and the art he has taught, he then going out of *Salton's* service, and not profiting any more by the mill. And then the said Meikle shall renew his obligation, not to make use of this art himself, nor teach it to any other.

6. That if it shall happen, that the said James Meikle shall be taken prisoner, either going or coming, *Salton* shall be obliged to relieve him, and pay all his expences.

7. That if it shall happen, that the said James Meikle shall die abroad in his voyage, then *Salton* shall be obliged to give his wife and children 100 merks.

8. That the said James Meikle, from the time he parts from his own house, to go to the ships, till he return, shall be allowed every day two shillings Sterling; to wit, one shilling for his entertainment, and one shilling for his work; and shall give a receipt for any money he gets with him, or any letter of credit he gets, and account for them accordingly when he comes back.

Both parties oblige themselves to keep the foresaid articles, under the penalty of 500 merks, by and attour performance. In witness whereof, they have subscribed thir presents, written by the said Henry Fletcher, at *Salton*, this 17th of April 1710.

H. FLETCHER,
JA. MEIKLE.

*Copy of a Letter from Andrew Fletcher Esq. to
James Meikle.*

JAMES,

Hague, 18th June 1710.

I RECEIVED yours of the 14th, and doubt not but you have got the barley before this comes to your hand. As for these big pieces of iron work you speak of, which will be necessary for setting up a mill for sheeling barley, pray cause make them; and let them, and every thing else, which you think necessary to buy in this country, be ready as soon as may be. As for the time of your sailing, it is uncertain; but you must be at Rotterdam by the time the ships fall down, which I shall have timeous advertisement of, and come to bring you away. I believe you may expect me about Friday or Saturday, the 27th and 28th of this month; so, let all be ready against then; and advise with Mr Morison, if you find difficulty in any thing.

I am,

Your assured Friend,

A. FLETCHER,

P. S. If you want money for paying for the things that are to be bought or made, Mr Morison will furnish you. Tom is well again, and I have writ to tell your wife that you are so.

FOR THE FARMER'S MAGAZINE,

Account of the Introduction of Summer Fallow into Scotland; with some particulars of John Walker who first practised it.

IT is a curious circumstance in the annals of Scottish husbandry, that notwithstanding *Summer fallow* had been prevalent in England since it was under subjection to the Roman

Roman government ; yet this radical improvement was neglected in Scotland, till the conclusion of the 17th, or beginning of the 18th century. From the intimate connexion which subsisted betwixt the two nations after the accession of James VI., it excites surprize, that this and other improvements did not immediately cross the Tweed ; and that the different practices of our enlightened neighbours were not earlier imitated by the Scottish agriculturists. As we are, however, certain this was not the case, we must suppose, that some very cogent reasons operated to prevent the introduction of Summer fallow, which was the only method then known for cleaning the ground in an effectual manner. It is more than probable, that the general division bill, passed by the Scottish Parliament 1695, contributed to promote this and many other improvements ; for, before the enactment of this salutary law, a considerable part of our best lands remained in *run-ridge*, or in a state something similar to what is still customary in many of the richest English counties. As it is found impracticable, under common-field tenure, to introduce the turnip and grass husbandry, without the special consent of all the persons concerned, we are inclined to believe, that the same circumstance would operate in retarding the reformation of the Scottish customary practices. If Summer fallow had not been practised in England previous to the establishment of common fields, it is certain, that the like difficulties would have attended its posterior introduction, as are at this day experienced in the other branches of husbandry above mentioned.

Be these things as they may, it is undoubtedly true, that Summer fallow was not practised in Scotland earlier than the conclusion of the 17th century ; for, in a book intituled, "*Husbandry Anatomized*," published at Edinburgh in 1697, and supposed to be the most ancient treatise upon rural oeconomy in Scotland, we find the fallowing of land recommended in a manner, which shows that it was not then known in the country. The author had served in Flanders during King William's wars, as an officer of the Earl of Angus, or Cameronian Regiment, and attained perfect knowledge of this fundamental improvement among the *Flemings*, whose practice he fully describes.

The first person who actually fallowed land in Scotland,

land, or, in other words, prepared it for a crop by repeated ploughings and harrowings during the Summer months, was JOHN WALKER, tenant at Beanston in the county of East Lothian. Mr Walker was a respectable character in his profession, and was chief of a family long distinguished among the cultivators of that district. He was the intimate friend of the celebrated Sir William Bennet, Bart. (to whom the honour of writing the *Gentle Shepherd* has been generally attributed), who usually spent a good part of his time at Beanston; and this intimacy affords a strong presumption, that Mr Walker had received a liberal education, and possessed a larger stock of knowledge than was then common among the generality of his brethren.

The circumstance which induced him to attempt this beneficial improvement, as we are informed by one of his descendants, proceeded from a conversation with some English travellers on a tour through Scotland, with whom he spent an evening, and who communicated the necessary information respecting the method used by our southern neighbours in the fallowing of land. Resolving, in consequence of their suggestion, to try the efficacy of Summer ploughing, he next year left a field unsown, consisting of six acres of heavy loam, immediately to the westward of the present stack-yard of Beanston Mains; and the attention of his neighbours was immediately fixed upon what they considered to be a newfangled and foolish experiment. Some of his sapient friends concluded that his mind was deranged; while others, of greater prudence, sagely conjectured, that poverty was the real cause, and that money was wanting for purchasing seed. Mr Walker, however, went on coolly with his operations; and the field, after being dunged, was sown with wheat, and produced a crop which effectually silenced the observations of his neighbours.

The next year, he successfully increased the size of his fallow break; and the practice, in a short time, rapidly spread over all the county of East Lothian. From Maxwell's Collections, we learn, that so early as 1724, it was commonly practised upon all the strong soils in that county every fifth or sixth year; and to its introduction may, in a great measure, be attributed the ac-
knowledge

knowledgeed superiority which that district early attained in the different branches of rural science.

The late Lord Milton, who had the best opportunity of knowing every circumstance relative to the introduction of fallow, was eager to procure the erection of a pillar to the memory of Mr Walker, upon which a full detail of the different particulars was to have been inscribed; but the hurry of public business, in which that eminent personage was constantly engaged, prevented this laudable proposal from being carried into execution. Sir Francis Kinloch, Bart. who was contemporary with Mr Walker, and who resided within half a mile of his farm, also earnestly advised the family, after his decease, to record this important matter upon his tombstone. It is, however, unnecessary to dwell upon these things, as the different circumstances attending this first attempt to renovate the husbandry of Scotland, and the success which accompanied it, are so well known, as to render further observations unnecessary.

Mr Walker was likewise the first person in Scotland who sowed wheat upon what was then called *out-field* land, which, previous to the introduction of fallow, could not have been effected with profit. By the gradual extension of this practice, the low lands of East Lothian have, for a considerable number of years, been kept under a regular course of corn crops, which formerly was only practicable upon the in-field or crop grounds.

In a word, the merit of this eminent and distinguished farmer deserves to be transmitted to posterity with marks of applause; and, if Swift speaks truth in his celebrated adage, he conferred greater benefit upon mankind, and performed more essential service to his country, than the whole race of politicians put together.

N.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Danger attending Trees about Corn Fields.

GENTLEMEN,

I have read your First Number with great pleasure, and I hope it will answer your intention of being both useful and entertaining to the public.

If you think the following observations deserve a place, you may insert them when convenient. I am one of many who have suffered severely, this last harvest, in consequence of my corn fields being surrounded with high trees and hedges: A more distressing situation to the husbandman can hardly be conceived. What must he suffer, to see a great portion of his produce going to destruction, which cannot be saved by any exertion, or additional expence on his part? How much more fortunate is he, whose corn fields are open to the free circulation of air, which is equally beneficial to the health of plants and animals? It is only in open fields you find grain alike in colour and size, well ripened and completely plump; whilst grain, raised on inclosed fields, will be found ill-coloured, small, and unequal. In short, a corn farmer, who has his fields surrounded with high trees and hedges, has to encounter great difficulties every season of the year.

I have mentioned his woful situation in Harvest: In Spring, the high shelter prevents his grounds from drying; of course, he is kept back from ploughing and sowing: In Winter, when the snow drift is blowing, the trees and hedges prepare a resting place for large quantities of snow, which frequently remain all Winter, and stop his Spring work: In Summer, his corns are liable to mildew, and to many other diseases, for want of air; and how much does he suffer from large flocks of small birds eating the crop? But he who has his fields inclosed with hedges without trees, and properly divided in a due proportion to the extent of his farm, may enjoy all the advantages of restoring his exhausted land by rest and pasture, and, when in a corn rotation, he can cut down his hedges, and secure a free circulation of air. A moderate portion of shelter, when
grounds:

grounds are in pasture, may be useful; but if inclosures are very small, and trees and hedges very high, the loss of ground is considerable; besides that the quality of the grass under the branches of the wide spreading trees, although not less in quantity, will be very inferior in quality: And how much are cattle hurt by the swarms of vermin that are bred from, and come forth in the months of July and August, and render those two months of little value to the graziers?

We are told by good authority, that Britain, in the best of seasons, cannot grow enough of corn to supply her consumption; therefore every impediment to the growth of that useful and necessary article should be removed: But, to accomplish these advantages, in many instances, I must appeal to the feelings of all warm-hearted patriotic landlords, who may have their tenants bound to plant and rear trees, where trees should never grow—on corn fields. If they are real lovers of their country, they will cheerfully allow those trees, that are doing so much harm, to be rooted out and destroyed, and they will be fully rewarded, by increasing the value of their ground, and in giving the pleasure of seeing the fields richly covered with full crops of healthy yellow corn.

Hedge-row trees are often to be seen in a very unthriving state, in which case, they are disagreeable objects; and when they happen to thrive, in process of time, they prove the destruction of the hedge.

I am, &c.

VERUS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the New Mode of Drainage.

GENTLEMEN,

I remember having observed, some years ago, a dispute in the public papers concerning the new mode of drainage, the merit of which was claimed by two respectable and scientific gentlemen, viz. Dr James Anderson and Mr Elkington; but I am inclined to believe, that the
chief,

chief, and perhaps the real utility of this improved method of draining, had been previously ascertained by a worthy farmer in the county of East-Lothian, to whose grandfather Scotland is indebted for the introduction of summer-fallow. The reason which influenced him to try the effect of *pitting*, was, that in attempting to drain a field by the ordinary method then practised, he had missed the *spout* or burst which occasioned the wetness, and, in order to catch it, was induced to dig down in a circular form, till a bottom of sand appeared, when the water sprung up with inexpressible force. It then occurred, that by filling up this pit or well with land stones, and making a communication with the leading or main drain, that the object intended would be effectually accomplished. This was done accordingly, and the spot of ground which required draining, was immediately laid as dry as the other parts of the field. The same person afterwards repeated the trial upon several other fields, and was equally successful as in the instance above mentioned.

A certain gentleman, now deceased, who was characterised by Mr Wight, in his *State of Scottish Husbandry*, published in 1778, as a "farmer of the first rank," witnessed the trial, and was perfectly satisfied respecting its utility. I may only add, that the experiment was made in 1750, at which period it is probable Mr Elkington was not in life, and long before the time when Dr Anderson communicated his sentiments to the public, relative to the new mode of drainage.

If this information appears of any importance, I hope it will procure a place in your next Number.

I am, &c.

A Friend to Merit.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE

On the Advantages of Agricultural Publications.

GENTLEMEN,

As a friend to British Agriculture, which I consider as one of the chief pillars of the State, I beg leave to express my hearty approbation of the design in which you are engaged, being convinced that important advantages may be derived from such a Publication. I have long wished to see a regular Agricultural Pamphlet, and remember well the attempt made by Mr Auld, to publish something of that kind about twenty-five years ago, which failed for want of correspondents and public countenance. I approve so much of your First Number, that I shall be very glad to contribute any aid in my power to the success of the undertaking; trusting that, under the direction of practical men, agriculture may be rescued from the hands of specious theorists, who have, in many instances, seized upon a science, which evidently belongs to professional people.

The only opinion or advice which I can think of hazarding at present relative to your work, is, that care should be taken not to admit papers liable to mislead the practical farmer, or to serve the purposes of those vulgarly called *jobbers*. In Mr Auld's Scots Farmer, many papers were inserted totally inapplicable to the husbandry of Scotland, and consequently useless to his readers: A want of arrangement was also constantly discernible: And I have reason to believe, that these and other defects proceeded from the editor being ignorant of the art proposed to be elucidated in the course of the publication.

With respect to one grand point of improved husbandry, the use of the *Drill Plough*, I should be glad to see facts and consequences well sifted and examined, in your Magazine; being of opinion, that, properly attended to, it may be of the most important benefit to agriculture, and to manufactures, by increasing and cheapening every produce of nature, applicable to the food of the people. Likewise, I should wish to see much attention paid to every kind of labour, and every species of economy capable of being adopted with advantage in our British Georgics; by which means, and those

those only, Great Britain may be enabled, in spite of most adverse circumstances, with her capital, skill, and dexterity in the arts, to come, on advantageous terms, in competition with foreign markets, in the new condition of things that is fast approaching in Europe, owing to a general spirit of improvement and adventure.

I particularly approve of the full account of markets, and state of rural economy given in the last branch; and hope that the greatest exertions will continue to be used to make this part of the work as full and complete as possible. I am, &c.

Agriculis.

FOR THE FARMER'S MAGAZINE;

Abstract of the Proposals for Establishing, by Subscription, a new Institution, to be called The Plough, or Joint Stock Farming Society; for the purpose of ascertaining the Principles of Agricultural Improvement; submitted to the consideration of the Friends to Agricultural and other Public Improvements.

By SIR JOHN SINCLAIR, *Bart. M. P.*

IT can hardly be doubted, that the art of *Agriculture* can never be brought to any high degree of perfection, unless by means of experiments, accurately tried, and persevered in for some time. We have hitherto, in general, relied too much on vague opinions and assertions, which have not been warranted by sufficient authority; whereas, nothing but accurate and repeated experiments can thoroughly improve the agricultural art, and ascertain the principles on which it ought to be conducted. On these, and other grounds unnecessary here to dwell on, Mr ARTHUR YOUNG, Mr MARSHALL, in a recent, and in former publications, Dr FRANCIS HOME, and other distinguished agriculturists, have repeatedly urged the advantage of having farms established for that special purpose. The importance of such farms to the different districts in which they were respectively placed, has been put beyond all question, by the authors above

alluded to; and I trust it will appear, in the course of the following observations, that no measure can be suggested, more likely to be attended with advantageous consequences to the inhabitants of the metropolis, or of any considerable and flourishing town, than that of having an *Experimental Farm*, on a great scale, in its immediate neighbourhood.

I. From the increasing population of London, and of the other large towns in the kingdom, it is impossible they can be supplied with provisions at a reasonable rate, unless the agriculture of the country is brought to a high degree of perfection; which can only be done through the medium of *Experimental Farms*, the only sure means of ascertaining the principles of improvement. At present, the nation is under the necessity of depending on foreign industry and cultivation for a part of its subsistence; and we are periodically visited with a scarcity of food, which increases the expences of living to every family in the kingdom, and loads the rich with heavy additional burdens to maintain the poor, and to preserve them from the miseries of famine. A small portion of that sum, the exaction of which thus becomes so frequently necessary, were it properly applied to the improvement of agriculture, would soon enable this country to feed itself, and indeed would put it in the power of the farmer to supply the public with provisions at a reasonable rate. Hence, it is evident, that every man who pays 15d. instead of 9d. for a loaf of bread, or 10s. per pound, instead of 2s. for poor rates, ought to consider himself essentially interested in promoting agricultural improvements, and ought for his own interest, to support any measure calculated for that purpose, as far as his circumstances will admit of.

II. It is well known, that there is scarcely any part of the kingdom, where greater quantities of waste and unproductive land are to be found, than in the neighbourhood of London; or ground, in many instances, more capable of improvement. It is to be hoped that the *General Bill of Inclosure* will soon pass, in consequence of which, those wastes will be divided. But that will be of little avail, unless the means of improving them are ascertained. When *Enfield Chase* was divided, many persons expected to make considerable profit, by purchasing

chasing and improving portions of that waste; but, from ignorance how to go about it, the greater part of these undertakers suffered by the attempt; whereas, had the principles of improvement been accurately ascertained, by means of Experimental Farms, no error of any great magnitude could have been committed; and the purchasers of Enfield Chase would have improved the land they purchased, greatly to their own, and to the public benefit.

III. There are numbers of persons in the city of London, and in other large and flourishing towns, who accumulate considerable fortunes by Commerce, by the Law, by the practice of Medicine, and other lucrative professions, whose ultimate object is, to retire into the country, and to reside on an estate purchased by the profits of their own industry and exertions. But, after having purchased an estate, how can they manage it to advantage, or carry on the improvement of their property, without having previously acquired the knowledge necessary for that purpose? Many have attempted it, but have severely suffered by it; whereas, were there an Experimental Farm in their immediate neighbourhood, which, as subscribers, they had it in their power occasionally to visit, the books of which would always be open for their inspection, they would be enabled to acquire, in fact, without expence, (for their subscriptions to the Experimental Farms will ultimately be repaid, with compound interest), much knowledge and experience in the best modes of managing landed property, and of carrying on every species of improvement, of which they may avail themselves with peculiar advantage, when they are enabled, from the profits of successful industry, to purchase estates in the country.

LASTLY, Many of the inhabitants of London are led, for the sake of recreation or health, occasionally to spend some time in the country. At present, many of them leave town without having any particular object when they make such excursions; but if accommodation were provided for those who wished to visit the Experimental Farm, and plots of ground allotted in its neighbourhood, where cottages or villas might be erected by the subscribers, what an advantage would it not be to the promoters of the proposed institution? In that case, when

they went to the country, they would have an opportunity of directing their attention to the most important inquiries, and of collecting information on a subject, in which, in various respects, they must feel themselves deeply interested. Such an advantage ought certainly to be restricted to those who are subscribers to the proposed institution; and must appear, to every intelligent person, a circumstance of the highest importance to any individual residing in the metropolis, in the adjoining villages, or in any considerable town in the kingdom.

Explanation of the Manner in which the proposed Plan is to be carried into Execution.

THOUGH a capital of 80,000*l.* would be necessary to carry the proposed measure into complete effect; yet, from 10,000*l.* to 20,000*l.* will be sufficient to give the plan a fair beginning, either with an Experimental Farm, or an extensive Plantation, or with both, in the neighbourhood of the metropolis. It was never intended to let the measure drop, if the whole capital could not be raised at once; for, however desirable it might be to carry a great scheme into execution, because it commands the attention of those who take a concern in its management, and must necessarily produce more public good; yet the important object certainly is, to lay a solid foundation, which may afterwards be extended, as circumstances will admit of.

As soon as a proper farm can be established near the metropolis, accompanied with an extensive plantation, the profit of which must at least insure indemnification to the subscribers, there will then be a model held forth, which every county in the kingdom may adopt, that approves of such an idea; and it is, without doubt, much to be wished for, that several Experimental Farms and Plantations were established in various parts of the country, as branches of the same institution; not only for the purpose of comparing the result of the same experiments, carried on by different people, and in a diversity of soils and climates, (by which a spirit of emulation would be excited among the managers appointed to conduct them), but also as it would have the happy effect
of

of directing, with greater force, the attention of the public to an institution, which, instead of being confined to any particular district, extended its beneficial influence from one end of the island to the other. Unless, however, the money necessary for that purpose, is in a great measure advanced by the proprietors and farmers, where such farms and plantations ought to be situated, and the management of them overseen by committees of gentlemen residing in their immediate neighbourhood, who would undertake that trouble, and who were interested, as subscribers, in the success of the undertaking, it would be in vain for any institution formed in London, to endeavour to carry such a plan into execution, upon the extensive scale suggested in the original proposal.

As in various parts of the kingdom, however, particularly in the western and midland districts, in the counties of Durham and Northumberland, in Wales, and in Scotland, the establishment of Experimental Farms has long been a favourite object, there can be no doubt, that, by exertion and perseverance, the measure of having a number of Experimental Farms, conducted under the auspices of the same institution, will ultimately be accomplished.

Answers to some Objections which have been urged to the proposed Institution.*

FIRST OBJECTION. *That no Experimental Farm at all is necessary.*

It is supposed by some, that no Experimental Farm at all is necessary; and that the principles of agricultural improvement will be brought to a sufficient degree of perfection without such an establishment. That grain may be raised, and cattle bred, without the aid of

T 3

Experimental

* We were promised by a Correspondent, some observations upon the proposals originally circulated; but we are since informed, that the judicious manner in which the objections to the proposed institution are answered in this abstract, renders the performance of his promise altogether unnecessary.

Experimental Farms, may be safely acknowledged; in the same manner, as, in early ages of society, manufactures were carried on for domestic purposes, without the aid of much machinery. But, no sooner had the population and commerce of a country increased, than it became necessary to improve the art of manufacturing even the most common articles, by means of new inventions; and it is equally necessary to improve the art of agriculture, so as to produce more grain, and to feed more cattle on the same extent of ground, otherwise it will be impossible to furnish food to the increasing population of a country. Without Experimental Farms, this cannot be effected: Without such establishment, it is impossible to ascertain what practices ought to be avoided, and what ought to be pursued. The former is as important to be known as the latter; yet they are seldom communicated to the public, because the farmer is in general ashamed of acknowledging his want of success; and indeed, where his experiments answer, they are frequently concealed, lest others should avail themselves of such discoveries. The object of an Experimental Farm, however, is to ascertain facts, and to publish them; and as much credit would be acquired by an intelligent and public-spirited Society for their exertions in detecting errors, as in proving facts likely to be useful.

SECOND OBJECTION. *That there are many Experimental Farms now carried on by individuals, which will answer the same purpose.*

It is said, in the second place, that there are many distinguished characters, who carry on experiments for their own amusement and information, by whose means every important fact will, in process of time, be ascertained. No man is more disposed to do justice to the merits of the respectable personages above alluded to, than I am; nor can be more convinced, that their example is of infinite advantage to those who have the means of examining the progress they make. Their farms, however, are more properly to be accounted *pattern farms*, for the advantage of their own immediate neighbourhood, than experimental ones, in the strict sense of that word. In order to render, indeed, Experimental Farms generally useful, the farms must be open to the inspection of the public; the account of each experiment must be regularly published; and

and every experiment, likely to affect the cultivation of any part of the kingdom, must be tried with the utmost precision. It cannot be expected, that persons of high rank, and whose attention is necessarily directed to other objects, can renounce every other pursuit, and devote themselves exclusively to the conducting of experiments; whereas, when an Experimental Farm is once established, it will soon be proved, by the evidence of facts, 1. What is the best mode of rendering arable land productive, and the proper rotation of crops to be adopted in all soils and situations: 2. What is the best system for the management of grass land: 3. What are the most useful implements of husbandry: 4. What are the most profitable breeds of animals, and the best and cheapest mode of rearing, of feeding, and of fattening them: 5. What is the best plan for rendering waste or barren land productive. These are points of infinite consequence, which never have yet, and indeed never can be ascertained, unless by means of farms appropriated for that special purpose. It will require, it is true, the unceasing attention of an intelligent manager; and the experiments, in order to be relied on, must be made with almost mathematical accuracy and strictness: The expence also must be considerable; but the ultimate advantage to the public must be so great, as amply to compensate for any trouble or cost which may attend the execution*.

THIRD OBJECTION. *That it will be difficult to find Managers.*

It is an obstacle to this measure, in the apprehension of some, that it will be scarcely possible to find managers qualified for that purpose. It certainly will be attended with some difficulty; but it would be libelling the agricultural skill and integrity of the country, to suppose that such men could not be found. I know some, myself,

T 4

self,

* For instance, if the question is—what is the best breed of cattle? their food must be accurately weighed, and a regular account preserved of the whole quantity they eat during the course of the experiment. If the question is, to ascertain whether large or small animals pay best for the food they eat, the experiment must be begun from their birth, and continued till they are slaughtered. In short, almost every experiment of great consequence requires a degree of attention and perseverance, and a duration, in point of time, which can only be expected from a public institution devoted exclusively to that purpose.

self, who would carry on the undertaking with zeal and energy; who would take some shares in the proposed undertaking, as a security for their good behaviour, and a pledge of their being interested in its success; and who, in every other respect, would, I am persuaded, be found perfectly adequate to the task. And here, I beg to remark, that it is hardly possible to suppose any person placed in a more desirable situation than the Manager of such an Experimental Farm, if he felt a zeal in the cause; nor more likely to be detected, if he was either negligent of the duties he had to perform, or was guilty of dishonesty. He would lye under the necessity of making regular weekly reports of all his transactions; the books of the farm would be constantly liable to inspection, and the farm itself open to the examination of the subscribers, and perhaps, at stated times, of the public. A man, placed in a situation so peculiarly ostensible, must be both honest and diligent. If he succeeds in his management, he has the credit of accomplishing one of the most important objects that any individual could undertake; and, if he is detected in acts of negligence or dishonesty, his guilt could not be concealed: it must necessarily become public, and he is ruined for ever. With such inducements to act well, and such serious grounds of apprehension, if he should act otherwise, it is scarcely possible to suppose that any human being, of common understanding, could be deficient in his duty.

In regard to the particular plan of experiments to be pursued, the following measures may be adopted. As soon as a farm is taken, an accurate plan of it should be obtained, distinguishing the different soils, and every other circumstance connected with it. Every assistance will then be procured from the most skilful practical farmers in the kingdom, to draw up a regular course of experiments, and a rotation of crops best calculated for the different fields; and such a plan must be rigidly adhered to by the manager, unless the committee of management give directions to the contrary. Thus, the manager will only be accountable for the strict execution of the orders he receives; and, as those orders will be given in consequence of the most mature consideration, hence the whole system, it is to be hoped, will be carried on with the utmost regularity and correctness. There would not then be a single principle in agriculture, that
might

might not thus be ascertained in the space of a few years; and farmers, in future, would have an invariable standard to go by, which they might rely on with certainty.

FOURTH OBJECTION. *That the Profits of the proposed Plantations are overrated.*

It is evidently impossible to foresee what will be the value of timber 30 years hence, as that must entirely depend on the quantity brought to market, on the demand, and on the state of credit, and the quantity of money in circulation at the moment. As the price of every article, however, is progressively rising, is there not reason to imagine, that it will also be the case with timber? But even if that should not be the case, should timber only sell at its present value, the following circumstance will sufficiently prove, that the calculation of profit given in the original proposals, is *greatly underrated*. The circumstance alluded to is this:—In the neighbourhood of Edinburgh, there is a considerable wood, amounting to above 300 acres, called the Forest of Culrofs. It consists of Scots firs, 43 years old. An exact survey has been taken of it, and an estimate of its value drawn up. It is stated in the advertisement, that there are 3500 cubical feet of measureable timber, the upset price of which is 6d. per foot; and 6000 running feet of pit-timber, at one farthing per foot. The value of both, per acre, would then be as follows:

1. 3500 cubic feet, at 6d. per foot	L. 87 10 0
2. 6000 running feet, at one farthing per foot	6 5 0

Total, per acre,	L. 93 15 0

It is well known, that the value of larch, at 30 years of age, is equal to that of fir at 45 years. There is reason therefore to hope, that the 5000 acres of land, proposed to be planted with larch, would be worth 90l. per acre, which, for 5000 acres, would amount to 450,000l. instead of 218,000l., at which the sale of the timber, the ground, &c. was originally estimated. What the timber in Culrofs Forest will really sell for, is not yet known; but there is every reason to believe, that the price must be higher than 6d. per foot, and that the calculation of profit from the proposed plantations, originally stated at 218,000l., will be found greatly underrated.

On the whole, I hope it will appear, that though there is no plan, of so extensive and complicated a nature, to
which

which ingenious men may not discover objections, yet, that none can be urged against the present proposals, which may not be satisfactorily answered; and that, even if some difficulties should remain, they ought not to stand in the way of carrying a measure into effect, of such infinite public importance, which would lay the foundation of rendering this country superior to every other for agricultural skill, and consequently the most likely to reach the summit of power and opulence.

The following Particulars will explain the Nature of the proposed Institution.

I. *The proposed Capital.*

1600 shares, at 50l. each - - - L. 80,000

It is also intended to admit half shares at 25l. each; but the persons holding them, though they will have a right to partake in the pecuniary advantages of the proposed institution, are not to be entitled to vote in the choice of the directors. The number of shares, which each person may hold, not to be restricted. The directors to be annually chosen in London, and to meet there. The books of the Society to be always open to the inspection of the subscribers.

II. *Proposed Expenditure.*

1. To the expence of establishing eight experimental arable and grazing farms, in the neighbourhood of London, and in different parts of the kingdom, at 4000l. each, on an average - - - - - L. 32,000

2. To ditto for two upland farms, for improving mountain sheep, at 1500l. each - - - 3,000

3. To the expence of purchasing 5000 acres of land, inclosing, and planting them with larch, fir, and other trees, and other expences attending the same - - - - - 35,000

4. To a contingent fund, reserved for incidental and unforeseen expences - - - 10,000

L. 80,000

III.

III. *Ultimate Return.*

1. Sale of stock, crop, and implements on the Experimental Farms, at the conclusion of 21, or of 30 years, or any other period that may be fixed on by the Society *	-	-	L. 35,000
2. Value of 5000 acres of land, the buildings erected thereon, and of 1,250,000 larches, fir, and other trees, at the conclusion of 30 years			218,000
3. Principal of the contingent fund, on the supposition that the interest will defray all expences of management, &c.	-	-	10,000

	Total	-	L. 263,000

which is about thrice the original capital. According to the calculations of some experienced nurserymen, the return will be still greater, and will exceed the produce of the capital laid out, at compound interest, at 5 per cent. Without pretending to ascertain what must depend upon the value of timber, and a variety of other circumstances at the moment, it may be sufficient to remark, that the proposed institution must not only be productive of infinite public benefit, but must ultimately be a concern sufficiently profitable, to entitle it to the cordial support of those who are friends to public improvement.

In addition to the ultimate return, the subscribers will, in the *interim*, enjoy the following advantages, namely :

1. The advantage of having an account of the proceedings of the Society annually transmitted to them ;
2. The privilege of visiting the Experimental Farms, either in their own neighbourhood, or wherever they are established by the Society ;
3. The right of nominating persons, to be instructed at the different agricultural academies proposed to be erected at each Experimental Farm ; and,
4. A division of the annual profit that may arise from the Experimental Farms.

It is also intended to keep up such a connexion with the Board of Agriculture, and the various societies formed

* The Experimental Farms might be given up at the end of twenty-one years, and that part of the property divided. The plantations, probably, had better be retained for nine or ten years longer.

formed for agricultural purposes in the kingdom, as cannot fail to be attended with the most important advantages, both to the Society itself, and to the farming interest in general.

Conditions of the Subscription.

1. That no subscriber shall be compellable to pay his subscription, or shall incur any expence whatever, unless the purposes of the institution are actually carried into effect.

2. That the capital of 80,000*l.* shall not be increased, without the consent of a majority of the subscribers, and for the manifest interest of the subscribers, and of the public.

3. That the Society shall be established by charter, or by act of Parliament, or by deed enrolled, so as to prevent the possibility of any demand beyond the sum subscribed.

4. That the shares shall be transferable from the time that the Society is established, and that the sums subscribed shall be payable by such instalments as may be determined on at a general special meeting of the subscribers, and issued solely under the authority of directors, or trustees, appointed by the Society for that special purpose.

Farther particulars, regarding the proper institution, will soon be published, and may be had of Messrs G. and W. Nicol, booksellers to his Majesty, Pall-Mall. And subscriptions will be received by William Devaynes Esq., treasurer to the Society, and by all the principal Bankers in London.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE,

GENTLEMEN,

IF you think the following observations on the management of *Hay* deserving of notice, they may be inserted in your next Number.

The treatment of *Hay* is a subject of high importance to the agricultural interest of Britain, not only as a valuable article of produce, but as constituting a bulky and essential part of the food of our domestic animals, upon
which

which their health and usefulness in a great measure depend.

Where such a valuable interest is at stake, we might naturally expect to see experiments made, and a suitable degree of attention paid, to form a regular system of management. It is much to be regretted, that in many parts of the island, no such attention has been paid; and the treatment, especially in many parts of North Britain, is slovenly in the extreme, and very ill calculated to secure and preserve, in the highest degree of perfection, that flavour, and those nourishing qualities, without which, neither hay, nor indeed any description of herbage, can be valuable.

The first consideration in the treatment of hay, is, the period at which it should be cut, and the weather most proper for that operation. The time most proper for cutting the different kinds of grain, together with every step of the after-management, are points well understood, and for the most part strictly observed; every farmer being sensible that any neglect of, or deviation from these rules, will, by impairing the quality both of the grain and straw, be productive of much trouble and loss to himself. It is somewhat surprising, that the same kind of reasoning should not have been applied to the management of hay; as any diminution of its value, arising from improper treatment, must be equally prejudicial both to the grower and consumer of that article, as to the grower and consumer of grain.

The practice of many farmers in North Britain is, to allow their hay, not only to attain its ultimate growth, but even to make some progress towards decay, before it is cut: To obtain a bulky crop, being their chief object, every other consideration is disregarded; and neither the period of growth at which the cutting ought to commence, the weather most proper for that operation, nor indeed any step of the after-management, are regulated by first rules. In place of cutting the crop during dry weather, and when it is free from every other but its own natural moisture, it is very often cut in a wet state, and on that account must remain in the swath a considerable time before it is fit for being put into cocks, during which it requires to be frequently turned and exposed to the sun and atmosphere, for the purpose of
drying

drying it: In that way, a considerable proportion of its natural juices are dissipated; and by the time it is dry enough for putting into the stack, it has lost not only its flavour, but a great part of its most valuable properties; an evil that is farther increased, if much rain happen to fall either immediately after the cutting, or at any period before it is put into cocks: In that case, a still greater loss of its nourishing properties, and a consequent diminution of its value, must happen.

The consequences of this management, are felt in a variety of shapes, in every district where it prevails. In the lower districts, the mischief is comparatively small, owing to the mildness of the Winters, the great quantity of rich foggage every where to be met with, and the abundance of corn straw, and other wholesome articles of food, with which these parts abound. In the hilly and upland districts, however, the case is very different; and the loss arising from the neglect and mismanagement of their hay is great, almost beyond calculation. In these elevated regions, the Winters are, for the most part, of uncommon length and severity; little straw is produced; sown grasses, turnips, and potatoes, are equally scarce: In that way, the chief dependence of the farmer, for Winter food to his stock, falls upon the hay, which, when the quality is bad, and other articles scarce, induces debility and disease to such a degree, that a great part of the stock either die, or are reduced to a state of extreme weakness during the Winter; and when the Spring arrives, the green food has such an effect upon the bowels of those who have survived, that many of them die also.

The greatest part of the hay grown in these parts, is the produce of the wet swampy grounds, and the plants, of which it consists, are of a nature that requires much judgement and attention to cure, in such a manner, as to unite every advantage that might be expected from their use. When cut at a certain period of their growth, there is perhaps no species of herbage sweeter, or more tender, or that contains more nourishing juices, or is more palatable to the animals fed with it, than meadow hay. It has already been observed, that, under the present system of management, the period most proper for cutting hay, is less an object of attention than it ought to be. Experience proves, that the greatest perfection of the herbage is met with, either immediately before
it

it comes into flower, or as soon as the first flowers blow: At that period, it is in no shape exhausted, either by blowing a multitude of flowers, or forming seeds, and contains all the useful qualities of which its nature is capable: After that period, it daily diminishes in value, becomes tough, sapless, and unpalatable, and is not chewed without considerable difficulty. This rule applies to every species of herbage that is meant to be dried for Winter food; but to coarse hay, the produce of wet or marshy grounds, it is strongly applicable; for, as we have already observed, most of the plants which grow in these situations, when they are in full vigour, are as tender, and contain perhaps as great a proportion of nourishing juices, as any other description of hay; and, when cut at that stage, and properly managed afterwards, form a valuable article of food both for sheep and cattle; but when the cutting is delayed, as indeed it very often is, till an advanced period of the season, when the plants have not only reached their ultimate growth, but begun to decay, this description of herbage becomes at once the coarsest and least nourishing of all food.

This opinion does not proceed upon theory, but upon the solid ground of experiments carefully made upon many different kinds of herbage, at different periods of their growth, the result of which establishes a fact that cannot be too generally known, viz. that plants of all sorts, if they are cut when in full vigour, and afterwards carefully dried, without any waste of their natural juices, either by bleaching with rain, or exhalation, contain, weight for weight, a quantity of nourishing matter nearly double what they do, when allowed to attain their full growth, and make some progress towards decay.

Hay of all kinds should certainly be cut at the period we have mentioned, and, if possible, during dry weather; and, in place of being suffered to remain in the swath for days, as is commonly done, women with forks or rakes should follow the cutters, and spread it in such a manner as to allow the sun and air free access to the whole. If this operation is properly performed, and the weather favourable, the hay that was cut in the morning will be ready to be put into small cocks by mid-day, where it may remain for two or three days; at the end of which, if the weather is dry, they may be thrown down early in the morning, and, after being exposed
to

to the sun and atmosphere for a few hours, put up into ricks of at least forty or fifty stones each, where it may remain with perfect safety, till it is convenient to stack it. By such treatment, every valuable quality is preserved, the hay is of a fine green colour, and possesses so agreeable a flavour, that the animals eat it with the greatest relish. Before stacking, some attention will be necessary, to render the whole as uniformly dry as possible, especially if much rain has fallen, and the wind continued for any considerable time in one quarter after the hay has been put into ricks; when that is the case, one side will be found damp, while that which is exposed to the wind is perfectly dry; the remedy consists in turning the ricks round, which is done with great ease, by placing six or eight people, at equal distances, round the rick, with directions to thrust their hands as far as they can under the bottom, at the same time grasping a handful of the hay: When the whole are ready, let them lift at once, and move round in the direction intended, till the damp side is opposed to the wind: In that way, ricks of fifty or sixty stones may be turned with ease and expedition, and the whole rendered uniformly dry in a short time:

It has been contended by many, that there is no great necessity for being so solicitous to have hay thoroughly dry before it is put into the stack, as it will keep perfectly well even with a considerable proportion of moisture; and, should any apprehension be entertained to the contrary, all danger will be prevented, by mixing it with salt; a practice strenuously recommended by many intelligent writers.

Trials carefully made, and upon a scale so extensive as to occasion very considerable loss to those concerned, prove, beyond a doubt, that the addition of salt to damp hay is no preservative against its heating; on the contrary, if moist weather follow immediately after it is put into the stack, the addition of salt, in place of being useful, will prove hurtful; it being a well established fact, that salt, and every thing impregnated therewith, greedily attracts the moisture of the atmosphere, and occasions a degree of dampness that would not otherwise have taken place. The experience of persons who build houses with stones taken from the bed of the sea, is an undeniable proof of this; as the walls of such buildings are always damp and uncomfortable, even if
the y

they should stand for centuries, have we any reason to suppose that the case will be different when salt is mixed with hay? Either in a damp or dry state, if it is put into the stack damp, the salt will very effectually prevent its farther progress in drying, with this disagreeable addition, that if wet weather follow, the salt, by attracting an additional quantity of moisture, will increase the evil.

The case is not materially different, when salt is mixed with even the driest hay, especially in situations where the climate is moist, and the winters long; for, if the quantity of salt employed is considerable, the continual attraction from the atmosphere during the Winter months, if it does not destroy it entirely, will at least have the effect of rendering it musty and unpalatable.

But though we thus disapprove the practice of salting hay when it is put into the stack, whether in a moist or dry state, there is every reason to believe, that it will be highly salutary and useful, if applied with judgment at a subsequent period. The beneficial effects of meadows or marshes that have been overflowed with salt water, upon the health of sheep and cattle, and the high relish they have for such pastures, are well known; the preference given by the animals is strong and decided: Is there any reason to suppose that an equal preference would not be given to hay tinged with salt?

In bad seasons, when hay has been much injured by the weather, it is not only tasteless, but disagreeable to the animals in the Spring, who eat it only from necessity. When that is the case, it becomes an object to mix with it any article that can remedy these defects; for that purpose, nothing is better calculated than salt, which, along with its giving the hay an agreeable taste, has a medicinal effect upon the bowels of the animals; a matter at present too much neglected, while they are feeding upon dry food. The most proper time for applying the salt, seems to be a day or two before the hay is used. At that time, a quantity sufficient for two days consumption should be taken from the stack, and laid either in a shed or barn; a thin stratum should first be spread upon the floor, and lightly sprinkled with water from the rose of a watering-pan; a small quantity of salt should then be equally scattered upon it; after which another stratum of hay should be added; and the same operations of

watering and salting repeated, till the whole quantity is gone through; it should then be well turned and mixed with a fork, and allowed to remain in a heap for one night; after which, it will be fit for use.

It is necessary to observe, that the quantity of water applied should never exceed what is necessary to damp the hay; and the proportion of salt should be confined to what will give it an agreeable flavour: a superabundance of either, in place of being useful, defeats the purpose for which they are applied. If there is too much water, it runs off, carrying the salt along with it; if too much salt, it renders the hay bitter. The salt made use of should be of the smallest kind, for the purpose of sprinkling it equally; and every possible means should be taken to prevent one part of the hay from getting more than another.

It is worthy of notice, that though the salting of hay a day or two before it is used, is in general attended with advantages, we beg leave to be understood as meaning only the coarsest kinds, or such as may have been injured by the weather; for, in every instance where it has been cut at the proper season, and well managed afterwards, the taste and flavour will be such as to recommend it to the animals, without any addition whatever; but, in unfavourable years, when the quality is much impaired by the weather, especially if the hay is coarse, and treated in the manner commonly practised in the hilly and upland parts of the country, the operation of watering, with the addition of salt, will, by softening and giving it an agreeable taste, induce the animals to eat it with advantage, in many instances when it would otherwise be rejected. It is perhaps in such cases only, that salt can be useful, unless it be meant as a medicine; and it is very apparent, that the hint of using salt at all, originated in the preference given to salt marshes over other pastures, by both sheep and cattle.

In treating of an article of such value and importance as hay, it is worth while to inquire, what are the most advantageous and economical modes of using it.

Every good farmer is now sensible, that when any considerable quantity either of hay or other fodder is given to horses, sheep, or cattle, at once, the effect of their breath blowing upon it, joined to other causes, renders it so disagreeable, that they soon loathe and refuse to eat it;

it; in that way a considerable part of it is lost. On the contrary, when it is given frequently, and in small quantity, it contracts no disagreeable smell, and the animals eat up the whole. Farmers of a certain description will no doubt object to this mode of feeding, on account of the trouble with which it is attended. With them, it is a maxim, that if the animals are fed once, or at most twice, in the twenty-four hours, it is sufficient; and that if they are hungry, they run no risk of starving, while they have food so near them. They do not, however, reflect upon the injury which the fodder thus used sustains, by being breathed and trod upon, and impregnated with dung and urine. Let such men consider, for a moment, how they would relish the remains of their dinner served up for supper, after being kept within a yard of their nose during the interval, upon the same plates, with the same knives and forks, without any washing or cleaning. There are few people, indeed, who would not nauseate and reject such a meal.

The case cannot be very different with any of our domestic animals, when they have a quantity of hay or other fodder given them, sufficient for a whole day's consumption; having it constantly in their sight, and being blown and trod upon, impregnated with urine and otherwise injured, it becomes loathsome beyond description; and, in place of being eat up, which it always is when small quantities are given at a time, and frequently repeated, a great part is rejected. It ought therefore to be a rule with all farmers, to give little at a time, and repeat it frequently, always taking care that what was last given shall be consumed, before they receive an additional supply. By such management, no part of the fodder will be lost, and the animals will at the same time derive more benefit from the use of it.

Another economical practice remains to be mentioned, namely, the mixing of straw with hay. From many trials in different parts of the country, it appears, that where good straw can be had in plenty, it may be mixed with hay to great advantage. Some farmers are in the habit of mixing straw with cutting grass, the benefit of which will be afterwards noticed. When straw is mixed with hay, the process of curing may be accelerated, and the quality of the hay at the same time improved,

proved, by leading out the straw to the field, mixing it intimately with the hay immediately after it is cut, and putting the whole into small hand-cocks, as soon as it is mixed. It is well known, that when moist and dry bodies are brought into contact, the former begin to give out a part of their moisture, which is as greedily absorbed by the latter, and continues to be so till a balance is established between them; or, in other words, till both contain an equal proportion of humidity. This is precisely what happens when dry straw is mixed with green herbage. Immediately after they are laid together, the straw begins to absorb a part of the juices, and continues to do so as long as the grass will part with any. In that way, every part of the natural juices is effectually preserved; and the straw, from the absorption of what would otherwise have been either evaporated by the sun, or washed away by the rain, is rendered nearly equal in value to the hay. Where this practice is followed, and due pains taken in the mixing, very little exposure to the sun or atmosphere is necessary, and the hay will be fit for putting into the stack in half the time that is required where no straw is used.

In place of leading out the straw to the field, it is customary, in some parts of the country, to mix it with the hay in the stack, by laying alternate stratum of each, a practice that answers pretty well, but is much inferior to that above recommended. It may, however, be very useful in unfavourable seasons, and be the means of preserving hay that could not be cured otherwise.

When straw is mixed with grass for present use, a quantity sufficient for several days consumption should be cut at once, and, after mixing, laid up in pretty large heaps, and allowed to remain in that state for a couple of days at least; at the end of which, the straw will be found much softened and impregnated with the juices of the grass. When a fair trial is given to this practice, several advantages will be found to arise from it: The *first* is, the conversion of a considerable quantity of straw, which would otherwise have been of little value, into a wholesome and nourishing article of food; the *second*, that grass, so mixed, has not that purgative quality it is known to possess in its simple state, and seems to keep the bowels in a medium state, preventing alike
the

the extremes of scouring and costiveness, circumstances of much importance to the health and strength of the animals.

It has been recommended, and to a certain extent practised by some farmers, to mix old and new hay. Upon this point, we have simply to observe, that if old hay has been well got, and properly secured in the stack, it will be found for many purposes superior to the new; it certainly contains a firmer and more concentrated nourishment than new hay can possibly do; and for all animals that are employed in constant and severe exertion, it is infinitely preferable. There is a period, however, beyond which, even the best old hay will, by being excessively dried, begin to be impaired in its quality, and be eaten with much less relish. In such cases, a mixture of new hay will be useful; as the old, by the absorption of the new juices, will recover a part of the moisture and flavour it had lost by long keeping. The same thing will happen, if the hay of the former year has been of an inferior quality, owing either to its having been allowed to stand too long before cutting, or to its being bleached with rain after it is cut. In either of these cases, the defect will be in some degree repaired, by mixing it with new juicy well-flavoured herbage.

A. Z.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

IT will be obliging, that you give a place, in your next Number, to the following queries, respecting the size of the measures of capacity used in England.—I am, &c.

A Merchant.

QUERY I.

Whether the returns made from the London market, of the price of grain, are ascertained by the quarter, raised from the corn gallon kept in Guildhall, which contains as follows :

Gallon	272 $\frac{1}{4}$	} solid inches ;
Bushel	2,178	
Quarter	17,424	

or from the legal Winchester bushel, according to the standard in his Majesty's Exchequer, by which the duties on malt, &c. are charged, which is as follows :

Gallon	268.8	} solid inches ?
Bushel	2,150.4	
Quarter	17,203.30	

QUERY II.

Is not the former quarter considered as the standard for measuring corn, salt, coals, and other dry goods in England, under the title of Winchester measure ?

PART

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

General View of the Agriculture in the County of Perth, with Observations on the means of its Improvement. By JAMES ROBERTSON, D. D. Minister at Callander, in the County of Perth. Drawn up for the Consideration of the Board of Agriculture and Internal Improvement. 575 pages, 8vo. Printed at Perth, and sold by Morrison and others—1799.

AGRICULTURE was long neglected by the inhabitants of the Northern parts of Scotland; and it is only of late that this useful science can be considered to have been practised among them upon any thing like rational principles. It gives us great satisfaction to learn, that rural knowledge is now extensively disseminated over the most distant districts, and that the northern division of the island promises, at no very distant period, to rival our southern neighbours in practical husbandry, which has long been their favourite profession.

Many causes might be assigned for the supineness and inactivity of former times. The Feudal System, which was not abrogated in Scotland till 1748, enervated the faculties of the farmer, and kept him in a state of the most abject dependence; while a general want of capital retarded every species of improvement whatever. Since the period above mentioned, these difficulties have gradually vanished; the condition of the tenantry has been meliorated, and a spirit of enterprise excited amongst that body of men, which has contributed not only to enlighten their minds, but likewise to throw a degree of capital into their hands necessary for promoting a flourishing agriculture.

The intelligent work now before us, affords the most satisfactory proof that the circumstances which long obstructed improvement are now generally removed, and that every branch of rural science is making a rapid progress in the centre of North Britain, where hitherto it was imperfectly understood. From the indefatigable and judicious exertions of the Reverend Gentleman, who, under the authority of the Board of Agriculture, has drawn up this work, the state of husbandry in Perthshire is clearly elucidated, and the most interesting information communicated.

In reviewing such a meritorious publication, wherein we find little to blame, and a great deal to praise, want of room prevents us from analysing its various parts with that minute attention which their value deserves. We will therefore try to seize upon some of its most prominent parts, and endeavour to convey to our readers a slight idea of the masterly manner in which the husbandry of this extensive and complicated district is detailed.

Passing over the introduction and preliminary observations, wherein much good sense and knowledge of mankind are displayed, we notice, in the first chapter, that the county of Perth contains 5000 square miles, or 3,200,000 Scots statute acres; in which there is certainly some mistake, as that number of miles ought only to return 2,500,000 acres. The natural divisions are said to be Highland and Lowland; eighteen parishes being situated in the first, and fifty-nine parishes in the second division. The climate, notwithstanding its numerous varieties, cannot, upon the whole, be considered as unfavourable to the general purposes of husbandry; and as for the soil, so much information is communicated respecting what has been called "the capital stock of the country," that the section well deserves the attentive perusal of those interested in its prosperity.

Limestone appears to be plentiful in the Highland district, though, from the want of coal, the inhabitants cannot partake of the full advantages accompanying the application of this beneficial article. This suggested to the fertile genius of Lord Kames, a scheme for having the stone reduced to powder, to compensate for the want of materials for accomplishing calcination; but unfortunately the machine erected by the Commissioners of the

Forfeited Estates, upon his Lordship's suggestion, was swept away by a flood, before the benefits of the process were sufficiently ascertained. It certainly would be worth while for the proprietors, locally deprived of the assistance of lime, to erect another, or more machines, as few doubts can be entertained respecting their utility. Unburnt limestone, when reduced to powder, though it has not the same activity as that which has undergone the action of the fire, is a valuable article, and, in particular situations, even more useful than quicklime.

The second chapter contains the *State of Property*, wherein justice is done to the characters of the Noblemen and Gentlemen of Perthshire, who "are regarded as the fathers and friends of every person within their domains." The following passage deserves the greatest praise, being dictated by strong good sense, and founded upon just views of human nature :

"While the supercilious landlord, who, with an air of disdain, keeps his tenants at a distance, or does not know them at all, scarcely receives the cold salute and ceremonious bow which is due to rank ; he who bends a little, and exchanges a few kind expressions, receives the respectful salutation of esteem, accompanied with the affectionate language of gratitude. The most beloved, and the most successful generals, were those who knew their soldiers personally. No man is less dignified for being beloved ; and it lessens no man's consequence in the world, to have the confidence of those around him. Hence, the generality of proprietors, who are resident on their estates, lead their tenants by the hand, in the road of improvement, and of wealth ; and have found the true secret of promoting their own interest, while they promote the interest of their people."

The *Size of Farms*, and character of the possessors, are well described. We observe two notes upon this section by a Mr Samuel Fieldhouse, Cavendish Street, London, and Mr Bailey at Chillingham. The first asserts, that if landlords had confined farms to the size of fifty acres, the increase of their wealth (rent) would have been much greater than it now is ; while the other, with greater reason on his side, maintains, that upon a large farm, "more hands are employed, more produce raised," and consequently, that such are more beneficial to the landlord, and

to the public. Though it is evident, that many circumstances must be taken into consideration, before the proper size of a farm can be properly ascertained; and that, at the best, it is but an abstract question; yet, in a general point of view, the assertion made by Mr Fieldhouse will be found contradicted by common practice. A farm of fifty acres English measure, which must be what is here meant, cannot, in ordinary years, return a produce exceeding 250*l.* in value; of which, the rent and public burdens will at least require 75*l.* One half of the remainder will be consumed upon the premises, while a sum, not exceeding 85*l.*, is only left for paying servants wages, defraying interest of capital stock, supporting tear and wear, purchasing grass seeds, and answering that complicated account called incidental expences. The fact is, that, in the present state of things, 50 acres of land cannot be managed with the least degree of advantage, unless the tenant work the farm himself; and, in such a case, from instances which have come under our observation, his condition will not be superior to that of a hired servant, while his toil and trouble will be far greater. The matter will not be mended, by saying, that the labour may be performed by the farmer's family; for they will be found still more expensive than hired servants.

Where facts can be adduced, it is unnecessary to have recourse to argument; in the present case, the former decidedly contradicts the unqualified assertion of Mr Fieldhouse. If any person, who has examined the husbandry of Britain, is called in evidence, his testimony will prove, that those parts of the kingdom, where extensive farms prevail, are uniformly best cultivated, and consequently capable of making the greatest returns to the proprietors: instance, Northumberland, Norfolk, Suffolk, Essex, and Kent, where the farms in general are of considerable extent; they are cultivated in a superior manner to the midland and western counties, where the size of farms is much contracted. We might, in fact, as well suppose, that a petty weaver carried on his trade with equal success as a large manufacturer, who was provided with hands for every department of business, as think that a fifty acre farm could be managed with greater advantage than one of larger extent, where the husbandry practised, affords constant employment to all concerned, and gives

a division of labour according to the respective talents of each individual.

We notice Mr Bailey's note repeated, p. 387, and an answer subjoined by Dr Robertson, which does not favour of his usual ingenuity. Mr Bailey does not enter upon the question, whether an acre of land, employed in producing beef and mutton, will feed as many mouths as the same quantity employed in raising grain? which we certainly think it will not: He only means, that a certain quantity of land must be devoted to grazing, and that it is immaterial, whether the farm be large or small, as butcher meat must be had, in either case, proportioned to the demand. Dr Robertson's answer, however, proceeds upon the supposition, that a large farm must be in grass, otherwise his argument is untenable.

Dr Robertson is a friend to the granting of *leases*, without which, he, with great justice, thinks it vain to expect that the husbandry of any country will be improved. His arguments under this section are strong, decisive, and incontrovertible. We are not however certain, if he is altogether so *orthodox*, respecting the nature of the clauses, or covenants, which should bind the farmer; but we must acknowledge, that he offers weighty reasons in support of his opinion. What he says, p. 433, &c. upon this subject, may be read with advantage, both by proprietors and farmers.

Under the article "Expence and Profit," we are presented with a detailed account of the returns from a farm of 74 acres in the Carse of Gowrie, which, if correct, would be a better argument in favour of small farms, than any we have heard instanced. The rent is stated to be 3l. per acre, and yet a profit of 31ol. 6s. 2d per annum appears, which is very near four guineas per acre. We are under the necessity of offering a few remarks on the different articles, being convinced that such details are very injurious to the tenantry of the kingdom, not because they disclose the *real* profits of husbandry, but because they present false and mistaken views of the business, and contribute to impress superficial inquirers with a belief, that farming is a much better trade than it really is. Indeed, if every person made such handsome profits as the owner, or tenant, of the

the farm in question, (who is held up as a model of correctness), it would be the best trade in the kingdom.

1st, The feed-wheat is charged 5s. 6d. per boll less than the produce sold. This might actually happen; but the casual rise of markets is not a fair statement of rural profits; the reverse might happen in another year.

2^{dly}, The same observation applies to the barley crop.

3^{dly}, The whole expence is charged only at the rate of 40s. per acre; whereas the charge for ploughing, or what is included under the expence of horses and ploughmen, would amount to that sum, independent of incidentals, harvest-work, thrashing, &c.

4^{thly}, The different crops are all excellent, and much greater than any average will warrant, while no allowance or deduction is made for light grain.

5^{thly}, The prices are much higher than what the fairs of Perthshire will allow; their average for wheat, from 1780 to 1796, being about 22s. 3d., which includes one year, viz. 1795, when grain was extraordinary high; whereas 27s. 6d. is stated for nearly the whole of the crop. It is needless to examine this account of expence and profit further, as we believe the dullest of our readers will be satisfied that it is very erroneous. Indeed, when the rent of a farm is 3l. per acre, it is a handsome return if 20s. per acre of profit is made, after interest of stock, tear and wear, and all other expences, are paid.

The Carse of Gowrie is perhaps as regularly managed as any district of similar extent in Great Britain; and we cheerfully bestow every manner of praise upon the rational and judicious husbandry there practised. Mr Arthur Young, in his Agricultural works, often feelingly laments the general bad cultivation of clay soils in England: but were he to visit this valuable tract of land, he certainly would rejoice that there are some farmers in the kingdom who understand the management of clay soils. A better rotation than *sixes* cannot be devised for such a soil, provided the fallow break is sufficiently wrought and manured, which, we believe, is seldom neglected.

Chapter 7th contains very judicious remarks upon that necessary step to improved husbandry, viz. *levelling of ridges*. Indeed, the different sections of this chapter incline us to believe, that Dr R. is intimately acquainted with the management of arable land; for tillage, fallow-

ing,

ing, and the rotation of crops, could not have been more judiciously explained by the most distinguished agriculturist. The information communicated respecting the different processes of rural economy, from the ploughing of the ground, to the reaping and ingathering of the crop, are more amply detailed than in any other survey that has come under our consideration. This chapter may be read with pleasure by the best, and with profit by the unexperienced husbandman.

In the section concerning *hay harvest*, it is said, p. 218, that, in 1786, Mr Paterfon of Castle-Huntly “ had 6000 stoncs of hay from a field of 13 acres,” or nearly 450 stoncs per acre, which is 130 stoncs more than the greatest crop ever known in our practice. We remember of a certain person, who once vaunted that his hay crop turned out 500 stoncs per acre: “ Pray,” said a shrewd sagacious neighbour, “ did you measure the ground?” “ No, I only computed it.” “ Did you weigh the hay?” “ No, I counted the cart loads, and estimated the produce.” So much for a great crop of hay! We acknowledge, at the same time, that we have seen heavier crops of clover-grass in the Carse of Gowrie, than in any other district of the kingdom; and are far from calling in question the veracity of the account here given.

The chapter upon *Woods and Plantations*, constitutes an important department of the work, and deserves the attentive perusal of the landed proprietors, who are chiefly interested in this branch of rural improvement. Dr R. says, “ there are more oak woods, and of greater value, in Perthshire, than in all the rest of Scotland:” but it appears, that a great deal of moorish lands might be advantageously employed in growing Scots firs and larches, which is corroborated by several judicious, and apparently accurate calculations.

The *Live Stock* of the county is amply described in the 13th chapter; and we give Dr R. great credit for the judicious remarks which he makes upon this subject. We decidedly coincide with him in opinion, that “ sheep are the most profitable, the most useful, and the most inoffensive of all the browsing animals;” and “ that, upon any given extent of pasture, their returns are nearly one-third more than that of any other stock.” We observe a degree of apprehension, however, that the sheep system may be carried too
- far;

far ; but this, under the increase of consumption, gives no real cause of alarm. While Dr Robertson is rather partial to the raising of black cattle, he gives, in our opinion, the best of all reasons why sheep ought to be kept. To do the subject justice, we shall extract two paragraphs from pages 310 and 311, which meet with our unqualified approbation.

“ This rage for a sheep stock is still going on ; and the cattle must necessarily travel down to market, whose place is annually occupied by sheep. If we suppose sixty or one hundred farms to be every year changed to the sheep system, the cattle from these will help to support the numbers at market. This propensity to stock with sheep must be gratified ; but when fully gratified, it must have an end ; for beef must be had at any price ; and when the time comes, that the tables are to be turned against the sheep system, in favour of black cattle, they who discern the approaching change, and are prepared for it by breeding cows, will reap the fruits of their discernment.

“ In accounting for the numbers of black cattle at present brought to sale, we ought by no means to forget the improvement occasioned by the sheep themselves. They enrich the quality, and enlarge the quantity of grass within their walk, more than any other species of animals : they never deteriorate the soil ; they render it always more and more productive ; and wherever their numbers are increased upon a certain extent of land, they help to support the increase of their own numbers, by producing an increase of food. The ground is not only made green, and the heath extirpated by the enriching quality of their manure, but the finest grasses spring up spontaneously, where it had formerly been scanty and coarse ; and when this powerful top-dressing of our whole hills with sheep dung and urine has been completed, there is little doubt, that, in a few generations, the Grampians will be as verdant as the Ochils ; and that the Ochils had once as forbidding an aspect as the Grampians.”

We defy any person to display the benefit of the sheep-husbandry, in stronger terms than here expressed. With the diseases of sheep, the Doctor appears intimately acquainted.

We observe the same reasons of complaint against the administration of the statute work, as have occurred to persons in other districts ; nor is it surprising, that the evils necessarily attendant upon a defective system, should have

have been perceived by every man who has thought upon the subject. "The thing (the law) itself," as the Doctor wisely remarks, "is an error;" and "attempts to ingraft partial remedies upon what is radically wrong, generally increase the evil they are meant to correct."

The obstacles to improvement are stated to be, *1st*, *Townships*; by which is meant a number of plough-gates in one village, or several tenants about one plough. *2dly*, *Ruurig*, or a mixture of property. *3dly*, *Uncertain boundaries of estates*. *4thly*, *Servitudes*; the evils of which are described in animated language. *5thly*, *Thirlage*. *6thly*, *Shortness of leases*. *7thly*, *Distance from manure*. And, *8thly*, *Commons*; which undoubtedly may be removed by the exertions of individual proprietors. We are sorry that the limits which we can assign to this article, prevents us from saying more upon those obstructions to improvements, than simply mentioning them.

The conclusion contains an animated picture of the advantages attending agriculture; upon which, most assuredly, men of all ranks, from the highest to the lowest, depend more than upon any other of the arts. The necessity of personal experience to make a good farmer, is likewise shown in a satisfactory manner. A quotation from Cicero is given, which is very applicable to the subject:

"Of all the sources of wealth or pleasure, none is more sure than agriculture, none more productive, none more delightful, none more worthy of man, none more becoming a gentleman."

An Appendix is given, containing, among other interesting papers, an accurate topographical description of the district surveyed. Such a valuable addition to the plan of the Board, must be highly advantageous to persons unacquainted with the county of Perth, though perhaps it would have appeared with greater propriety in the body of the work.

In a word, the Survey of Perthshire deserves to be classed amongst the most respectable of the works offered to the public, through the medium of the Agricultural Board. The author, in every page, displays an intimate knowledge of the human character, and a marked desire to promote the real welfare of his country. He is eminently versant in the sciences of rural and political economy, and, if we are not mistaken, possesses

possesses a thorough knowledge of the several branches of practical husbandry. None of these works have yielded us greater satisfaction; and few of them have shown such instances, either of diligent research, or accurate detail.

N.

General View of the Agriculture of the West Riding of Yorkshire. Surveyed by Messrs Rennie, Brown, and Shirreff, in 1793. With observations on the means of its improvement, and additional information since received. Drawn up for the consideration of the Board of Agriculture and Internal Improvement. By ROBERT BROWN, Farmer at Murkle, near Haddington, Scotland. 8vo, 428 pages. Watson, Edinburgh; Nicol, &c. London, 1799.

(BY A GENTLEMAN IN YORKSHIRE.)

IT must be confessed, that the present grievous scarcity of the necessaries of life, may appear, in the eyes of the common people, a bad comment on the labours of the Board of Agriculture, and all other public institutions affecting these objects; but, alas! they possess no controul over physical causes, no means of supplying the want of sunshine, or of tempering the excess of cold and moisture, by which, in spite of every endeavour of the most judicious, the varied products of the soil are liable to injury and diminution. Perhaps, we shall be under the necessity of concluding, that the Board of Agriculture has done what can be done in existing circumstances: and much praise is due to its late able and indefatigable president, Sir John Sinclair, for the pains he has taken, in the acquisition of a mass of most useful information and instruction on the general rural economy of the island. This has clearly ascertained what are the real obstacles to more extensive improvement; and it is now left to the Government, and to those called the leading interests of the country, where alone the power resides, to remove those obstacles as speedily as possible. It is a most weighty responsibility,

and

and they would do well to take it under their immediate and serious consideration.

The subject of this general view, the West Riding of Yorkshire, is a district of very considerable importance. Though but a frithing, or third part of a county, it may vie with many of the most flourishing counties in the kingdom, in wealth and population, and in industry, rural and mechanical. Its soil, though various, is rendered generally productive; yet there is much room for improvement, the natural means of which it eminently possesses within its own limits; lime, &c. for manures; an agriculture tolerably enlightened and active; extensive trade and manufactures; the powers of which, on the improvement of the soil, require nothing but the fostering hand of legislative encouragement, for their complete development, with effects almost incalculable. The abundant supply of coal, wood, and other materials, essential to the leading manufactures of this district, in wool and iron, added to all its other advantages, cannot fail to render it an object of survey peculiarly interesting; and the candid reader of the revised work, now published, will allow, with us, that ample justice has been done to it.

In the introduction, the editor says, "Under the authority of the Board, my friends Messrs Rennie and Shirreff, and I, surveyed the *West Riding of Yorkshire*; and, during our progress, scarce a difference of opinion occurred respecting the matters which underwent our examination. We remained about five weeks in the district; and, during that time, used every means in our power to gain an intimate knowledge of the different modes in which husbandry was carried on, as well as the general and local impediments to its improvement."

Though inhabitants of a distant part of the country, and entire strangers to the district in question, before the present occasion, the surveyors have performed their task with a degree of liberal impartiality; and, though practical adepts in agriculture themselves, have evinced a disposition so candid and unobtrusive, in their remarks on defects, and in their recommendations of better practice, that this work cannot fail to insure the approbation of those competent to judge, among all classes of the people of the Riding, into whose hands it may fall; and surely it behoves every one of common intelligence,

connected with the interests of this Riding, either by inhabitancy or property, to peruse the work with that attention which the importance of it demands, and which all are persuaded will not be found defective of those circumstances of amusement and instruction, which constitute the pleasure and advantage of reading in general.

We are informed by the editor, that this is rather to be considered as a revised survey, or second edition of the work, containing, with additional matter of his own, such farther remarks as he deemed proper for selection, from the correspondence and notes written by various individuals on the broad margin of the first quarto edition, a number of copies of which were previously circulated among the cultivators of the district for that purpose, in pursuance of the general plan of the Board of Agriculture. This was perhaps justly concluded by that Board, the best means of obtaining real and authentic information on the rural œconomy of every part of the island. We are further informed, that the editor has ventured to proceed, in the execution of his part of the plan, on principles different at least from that recommended by that veteran Colossus of agricultural science, the celebrated Arthur Young; yet the defence of his conduct, in that respect, is perfectly satisfactory.

A useful table of contents is prefixed, containing, in fact, a brief analysis of the work, which is divided into eighteen chapters, with sections; and a valuable appendix, of some length, concludes the whole. In chapters 1st and 2d, are given the geographical state and circumstances, tenures, &c. in a compendious way. The surface of the Riding contains 2450 square miles, or 1,568,000 statute acres; and is divided into 9 wapentakes, 175 parishes, containing 28 market towns, with a great number of populous villages. Chap. 3. presents important practical matter to the agriculturist. The inconvenient situation of farm-houses, crowded together in villages, is very properly the subject of animadversion; an inconvenience resulting from the feudal system, and riveted by long habits, which could not now be broken through without some difficulty. A sumptuous pile of farm-buildings, executed in a superior style of convenience, by Lord Hawke, at Towton, are here noticed; but we cannot suppose that such costly patterns can meet many imitators, though some parts of this may
be

be well worth the attention of a farm-builder. On the proper situation and distribution of a farm-house and offices, several judicious observations are given.

The salutary practice in Scotland, of paying the married farm-servants partly in necessaries, instead of wholly in money, as in England, is recommended to the attention of the West Riding farmers. In Scotland, they receive certain quantities of oats, barley, and peas, have a cow kept, and a piece of ground for raising potatoes and flax. This recommendation is very properly supported by the notes of correspondents; as it has an undoubted tendency to preserve the morals of the labourers, and to diffuse the blessings of a comfortable subsistence among their families; objects most shamefully neglected in many parts of England.

In chap. 4th, the *Mode of Occupation* is considered; and the writer notices the general inadequacy in the size of farms in the district, to an improved system of corn culture. It is true, that on a farm of less than 150 or 200 acres, the occupant feels himself shackled with a number of heavy horses, without constant employment for them; but, if the working of oxen were resorted to, the case might be very different; for, notwithstanding the arguments of many practical men against the utility of draught oxen, it remains a fact, that they will perform as much work, if properly attended to, as the clumsy cart horses usually kept by the farmers of Yorkshire, and many other parts of England. Whatever becomes of the question of large or small farms, small grass farms are much wanted almost every where; and it is remarkable, that grass farms bring a much higher rent than arable ones.

The discouraging custom of *tithes in kind*, is not forgotten; and some hints are given, of the necessity of its removal, before any great additional improvement can be attained to; but, on this subject, the hands of the surveyors have been in some degree tied up, by the injunctions of the Board of Agriculture. Such is the prospect of good from that Institution, that one of its primary mandates is, the prohibition of discussing an abuse, or grievance, which has long been sucking the heart's blood of English agriculture. The *poor's rates* are here considered, and perhaps justly, as inadequate to their professed end. A

paragraph is quoted, as containing information on this subject, and that of the tithes, not generally known :

“ Previous to the period when the Reformation took place in England, the poor were supported at the monasteries, and other houses of the irregular clergy ; it being then understood, that this was one of the purposes for which tithes were paid to these houses ; and, after the suppression of the monasteries in 1543, great clamours ensued over the whole kingdom, in consequence of this support being withdrawn. The poor continued in a deplorable state till the 43d year of Queen Elizabeth’s reign, when the laws for regulating their support were first enacted ; and, whatever were the motives which operated on the minds of our Legislators to enact such laws, experience has proved, that the salutary consequences which they expected from them have been totally unfounded. ”

Leases are strongly recommended : They are perhaps essential to real improvements, unless some other security could be devised for the encouragement of the spirited and well informed occupant. Of the effectual utility of this mode of letting land, the prodigious improvements made by the tenants on the Duke of Norfolk’s estate, at, and in the vicinity of Sheffield, are adduced as instances in proof. Yet much may be said on both sides : Perhaps the land-owner is generally more a gainer by letting his property on lease, than he is aware of, every thing considered ; and let the tenant be cautious how he takes a long lease, at a high rent, and subject to all increasing taxes in “ existing circumstances. ” The remarks on covenants and restrictions in leases are liberal and enlightened ; which having excited a discussion between the editor and a gentleman of the district, we may observe, that the arguments of the former have a decided superiority.

In chap. 5th, the *usual implements* are examined, and some improvements are, with great judgement, suggested in ploughs, carts, &c. Light carts, for one or two horses, are recommended to attention, in lieu of the heavy lumbering tumbrils usually drawn by three. The practice of yoking horses for ploughing in pairs, without drivers, is commended and enforced ; but the West Riding is too justly accused of glaring defects in the construction and management of their ploughs and wheel-carriages.

This

This chapter is chiefly occupied with a particular and valuable account of that important acquisition in the agricultural art, the thrashing mill, the merit of which invention appears due to North Britain.

Chap. 6. The *enclosing of lands*, both in wastes and fields, is ably recommended;—the question, as affecting population considered, and clearly decided in favour of this mode of occupation. The following paragraph contains a sound, if not a new observation:

“Another thing which has escaped the notice of these gentlemen is, the number of people who receive employment from the hides and skins of the animals depastured on grass land. While they examine the field, they perhaps do not see a single person amongst the bestial: Hence they set down at once, that the grass-system is destructive to the population of the country. But let them consider the number of carriers, shoemakers, wool-combers, and other manufacturers, who are thereby provided in work, and they will allow, that an acre of grass affords employment to as many people as an acre of corn land. This point is so clearly elucidated in the Hereford Survey, that we beg leave to refer the candid inquirer to it for a full proof.”

In fine, the whole reasoning on this point is supported by incontestible arguments.

In chap. 7th, on *arable land*, sect. 2. the question of Summer-fallowing on clay or strong soils, of late so much agitated, comes again under discussion; and the author has to combat the opinions of those great authorities, Marshall and Kent, who have advanced many ingenious theoretical arguments against the practice, which, though confessedly specious, must yield to the sound and practical proofs adduced by our author in favour of it. The hints here offered by the surveyors, for conducting the operation of a complete Summer-fallow, are highly deserving of the attention of every farmer; and we are decidedly of opinion, that, in the districts in question, this business is too generally performed in a careless and slovenly manner.

In section 3. are given sketches of the usual *rotations of crops*, &c. on several farms of various extent in the Riding. We cannot withhold from our readers that of a farm in Marsh-land, as it affords an instance, almost peculiar, of the employment of such a number of hands and horses, and succeeded by such abundant and useful products.

“ The rotation of crops pursued upon a Marsh-land farm, consisting of 432 acres of arable land :—The soil where the principal part of the potatoes are grown, is a good warp ; the other part, on which potatoes are also cultivated, a mixture of warp and sand ; the remainder of the land, clay, with a small portion of warp, but too strong to grow potatoes, except about 70 acres, which is tolerably good potato land, but at too great a distance from the river. Grass land only sufficient to keep two milch cows, and horses necessary for working the farm : 69 acres of the best warp land, divided into three equal parts : 1st, fallow with from 16 to 20 loads of manure *per* acre ; set it with potatoes ; after, sow wheat ; and then fallow again : 3 acres of the same kind of land, that is liable to be damaged by sparrows, when sown with corn, is set with potatoes every year, with about 10 loads of manure *per* acre each year : 84 acres of the lighter land is divided in the same manner, one third fallow, with 10 loads of manure *per* acre ; set potatoes, and then sow wheat ; and fallow again : 42 acres of land, lately an old pasture, divided into three parts ; one-third flax, then sown with rape, and, after they come off, plough and harrow the land three or four times, and lay upon it about 20 loads of manure *per* acre, which will make it in great condition ; after which, set potatoes, then sow flax again, and rape after : 150 acres divided into three parts ; 1st, fallow ; 2d, wheat ; 3d beans, drilled at nine inches distance, hand-hoed twice, at 6s. *per* acre ; fallow again, &c. : 80 acres of land that was lately in old grass, divided into four parts ; fallow, wheat, beans drilled, and oats ; then fallow again, &c. The remaining four acres thrown to any of the crops that are likely to fail. Rent 25s. *per* acre ; assessments, 5s. *per* acre.

Distribution of crops for 1795.

	Acres.	Average prod. of an Acre.
Wheat - - - -	121	from 3 to 5 quarters.
Beans - - - -	70	from 3 to 6 quarters.
Oats - - - -	20	from 6 to 10 quarters.
Flax - - - -	14	from 45 to 55 stones.
Rape - - - -	14	from 4 to 5 quarters.
Potatoes - - - -	68	from 60 to 100 sacks.
Fallow - - - -	121	
To be thrown where a crop is likely to fail - - - -	4	
	432	

Servants, horses, and cows, kept upon the farm :

- 4 Labourers,
- 16 House servants,
- 26 Horses,
- 2 Milch cows.

“ The above is an account of a farm, belonging to the best manager in Marsh-land. We must observe, he fallows his land very often ; yet he is well paid by his superior crops. The last year (1795) he had 100 sacks *per* acre off most of his potato land ; and sold them from 8s. to 12s. *per* sack of 14 pecks. All their corn is sold by the quarter of 8 Winchester bushels, though I believe their measure rather overruns.”

(To be concluded in our next.)

PART III.

EXTRACTS FROM AGRICULTURAL PUBLICATIONS.

Extracts of the Evidence given before the Committee of the House of Commons, appointed to inquire into the Scarcity of Provisions, &c.

Examination of Mr CLAUDE SCOTT, Corn Merchant.

WHAT is your opinion, from the best information you have been able to obtain, of the produce of the last harvest, as to wheat ?

In general, I understand the produce turns out to be unusually defective ; on the whole, I question whether the produce will turn out more than half a good crop ; for in the most productive counties, such as Essex, Kent, and Suffolk, I understand the medium produce is not more than two quarters *per* acre ; the quality, however, is good. In other counties, particularly the northern counties, the harvest has been less productive, and the quality unusually bad.

What prospect do you conceive there is of a supply of wheat from foreign countries ?

I think, generally, the supply will be moderate; the crops in general abroad have not been very productive; and, in some parts, where we usually look for supplies, the exportation has lately been prohibited. Our principal source of supply may be looked for, this year, from the Baltic, and chiefly from Poland; for the produce of the harvest, in the Prussian provinces bordering on the Baltic, has been unusually bad, and the quality very light and inferior. The King of Prussia has already prohibited the export of all other grain but wheat; and it is apprehended, that prohibition may be extended to wheat, particularly in the event of a further advance in the prices in Great Britain, which might create an alarm in those countries. Some quantity of wheat may also be expected from Russia, but I have no means of ascertaining how much. The exportation of corn is strictly prohibited from Holland, Flanders, and France. By very recent information from Havre de Grace, I am informed, that the crop of wheat in France is one third less than the preceding year; the prices one third higher: but, compared to the price in other countries, they are very low. With respect to America, by the last advices, which came yesterday, dated Philadelphia, 25th December last, and by previous advices, the produce of the crop in America, last year, exceeds that of any year for the last seven years; but far short of what has been the produce preceding that period: the reason is, the devastation committed by the Hessian Fly, which has discouraged the growth of wheat. The prices of flour, including all charges of freight, &c. would stand in about 90s. *per* sack; and of wheat, about 100s. *per* quarter. I understand, likewise, that a quantity may be expected from Canada; but I have no information what quantity, or at what prices.

Do you conceive that there are any means, and what are they, of economizing the quantity of wheat now in the country?

From the opinions I have collected from all persons concerned in the corn trade, and which coincide with my own, I do not know any better means of economizing the consumption of wheat, than by recommending to the public not to eat any bread until it has been baked a certain number of hours.

Do you conceive, that prohibiting the millers from making more than one sort of flour would or would not lead to any economy of that article?

I do think it would not, because I believe that nearly the whole produce of the wheat is consumed directly for human food, and indirectly so in the support of swine and poultry; a small part is likewise used for horses.

From your own experience, do you know whether coarse flour or fine flour will keep longest without damage, and will bear best the water carriage?

Most undoubtedly fine flour will keep longest in any situation; and that, I think, is proved by the American flour, which is the finest in the world, keeping in good condition much longer than any other flour of the best sort in Europe. The greater the mixture of bran in any flour, the greater tendency there is to fermentation.

What do you mean by a good crop of wheat?

That which, of itself, is sufficient to supply the consumption of the country.

As half the supply necessary for the consumption of the country is deficient, how do you suppose that deficiency will be made up?

I consider there was a great surplus, at the commencement of this harvest, of the produce of the last year, perhaps two months consumption of the country, and also a quantity of foreign wheat, that was in different parts of the kingdom; nevertheless, I am clearly of opinion, there will be no possibility of obtaining a quantity of wheat, sufficient to supply the quantity usually consumed of wheaten bread.

Do you know what has been the state of the crops of barley and oats?

I believe they are, in point of quantity, pretty good, but badly harvested, and in quality exceeding bad. I speak of the southern parts of England.

Can any considerable supply of these articles be expected from foreign countries?

Some oats may be expected, but less in quantity than in any year I remember. With respect to barley, I believe, the importation will be much less. We import very little barley at any time.

Examination of Mr ARTHUR YOUNG.

HAVE you any information respecting the produce and quality of the last crop of wheat ?

I have had letters from most parts of the country, the purport of which is, that the deficiency of the crop generally amounts to one third ; but from various persons, I had second and third communications correcting their statements, as they advanced in thrashing, which makes the deficiency still greater, in some cases amounting to one half. The deficiency that has been corrected in the second and third accounts, includes quality as well as quantity ; from which I conclude, if similar accounts were received from other correspondents, the deficiency would be found to amount to more than one third.

When you state that the deficiency of the crop amounts to one third, or one half, do you mean one third or one half of an average crop, or of an abundant crop ?

I always mean one third of an average produce.

How many bushels do you allow, per acre, in your computation of an average crop ?

Something between twenty-two and twenty-four.

Have you any information with respect to the stock in hand at the period of the last harvest, and the quantity of foreign wheat in the country at that time ?

I know nothing of the quantity of foreign wheat ; but my information is, that the stock on hand was very small (probably not one month's consumption) in the country. I had no information what stock there was in London. I speak of the end of the harvest, which was very late.

What is your information respecting the last crop of barley, oats, and rye ?

The produce of barley and oats deficient, perhaps, one fourth or one fifth in point of quality ; in some places the crops worse, but varying considerably ; in other places, the crop equal to an average one in quantity, but in point of quality miserably bad, insomuch that I know of farmers that have sold barley from 20s. to 60s. per quarter from the same farm ; and I have had information which seems to confirm this account, which is, the price of oat flour in Westmoreland, and that is 4s. 6d. the stone of 14 lb., being the same prices as
wheat

wheat flour in Suffolk, with wheat of 11s. 8d. per bushel. With regard to rye, I have no particular information.

Have you any opinion respecting the consumption of wheat?

It is about one quarter per head on the population of the country, among those who live upon wheat; and this seems the settled result of all inquiries on the subject.

Can you suggest any means of economizing the expenditure of wheat?

I think the present scarcity so truly alarming, that no economy whatever, upon the mode of consuming wheat, will answer the exigency of the moment. In Suffolk, attempts have been made, and are now making in some parishes, to mix barley and rye with wheat, and to make a browner sort of wheaten bread; but the distress of the poor is great, notwithstanding every effort of this sort. In regard to a standard wheaten bread, I cannot see any considerable relief that can result from it. It seems to me, that the whole flour of the wheat, reckoning that flour at about 45 lb. in 60 lb. of wheat, is eaten at present. Something much more effectual than this is absolutely necessary; and I venture to propose, as an opinion, that nothing short of stopping the consumption of oats by horses, or importing rice to a very great amount, or extending the use of soup almost generally, will be equal to the demand occasioned by the scarcity.

I beg to mention a circumstance respecting soup: I made a copper full of soup every day; and in order to try the effect of the leanest meat that could be procured, I killed ten of the very leanest sheep there were in a flock of 500; and that effect was exceeding good. To each copper, containing 30 gallons, I put one sheep of from 25 lb. to 30 lb., a peck of potatoes, half a peck of onions, a peck of carrots, a peck of turnips, half a peck of peas, and 6 lb. of rice, and it made most excellent soup, which the poor relished exceedingly; and the out-fetters of the parish, who lived five miles off, came for it very readily; from which I conclude, that one very great resource for the kingdom at present, is the establishment of soup shops, or perhaps rather to enforce all parochial assistance whatever to the poor, universally, to exclude the consumption of wheat; which, if general, would do more to alleviate the present scarcity, than all assizes of bread that can be devised.

PART IV.

AGRICULTURAL INTELLIGENCE.

INDEPENDENT of the inauspicious circumstances which attended the conclusion of the preceding year, the first quarter of 1800 may be considered as tolerably favourable to the general purposes of husbandry; and, in the arable districts, the labour of the season is almost as far advanced as in ordinary years. The weather in January was variable, which prevented the ploughing from going steadily forward. February was, upon the whole, a dry month, and a considerable quantity of wheat and oats were sown upon light soils. A severe frost about the beginning of March prevented the further progress till the middle of the month, when fine weather set in, which has been improved to the utmost by the generality of husbandmen.

It would have given us pleasure to present a statement equally favourable of the rural economy of the higher districts, which comprehend more than one half of North Britain: this is unfortunately not in our power. From respectable sources of information, we learn, that ploughing in these situations is very far behind; and that the different storms which have prevailed since last harvest was finished, have not only prevented field work from being executed, but also much injured the stock of cattle and sheep. Fodder, which was originally scanty, and inferior in quality, is in many places nearly exhausted, while the grain on hand is generally unproductive and unsound, yielding a small portion of nutritive food to the inhabitants, and hardly fit to be used for seed. Several counties are in this respect more deplorably situated than in the year 1782, when supplies of meal and feed corn were benevolently provided by the landed proprietors and the public.

Those who reflected upon the disastrous circumstances which almost uniformly accompanied the crop 1799, from its being put into the ground till it was gathered into

into the stack-yard, early predicted, that a very great advance in the price of grain would necessarily follow, which, unhappily for the country, has taken place in the articles of barley, oats, and peas, to a degree above what was ever experienced. Meal has of late bore a price exceeding any thing known in Scotland; and, unless some substitute or other is procured, there is serious cause to apprehend, that the increased demand from the unproductive districts, will occasion a general scarcity of that article during the Summer months. Were it not for the free transit of corn over all Scotland, several places would be totally unprovided; and we observe with pleasure, a late decision of the Supreme Court of Justice upon this point, which, under existing circumstances, must be productive of beneficial consequences to the public welfare.

The Legislature have not been inattentive to the distresses of the country, but have used a variety of expedients, with a view to lessen the evils of scarcity, and prevent it from being felt in a more alarming degree. It admits, however, of some doubt, whether the issue of these measures will accomplish the proposed end; for a deficient crop can never supply the ordinary demand: And as other parts of Europe have been also visited with adverse weather, it is evident that the strictest economy will be necessary, to make the stock in hand, even when aided by the expected foreign supplies, answer the unavoidable consumption.

In North Britain, a scarcity of oat-meal, which is the chief food of the great body of the people, is seriously to be apprehended; and this, in all appearance, can alone be remedied by limiting the quantity given to pleasure horses, or those not employed in useful purposes. The working stock, in fact, from the inferiority of the grain, require a greater abundance than usual, and any curtailment would be succeeded by double loss afterwards; but those of a different description may be safely restricted from the use of oats, without any real injury to the owners, but with much advantage to the public.

Under all the calamities of this memorable year, it must and ought to be recorded, to the honour of the lower ranks, that they have been generally disposed to submit to them with patience and fortitude. In country parishes, meal has been sold at prices very much reduced;

ed; but, in great towns, the case of working people has not been attended to with so much commiseration. Perhaps, with equal good intentions, it is impossible, considering the number of those who stand in need of assistance, and the different modes required to be taken for raising the necessary funds, to give relief to the same extent. It is obvious, however, that the families of the working people cannot be supported, unless wages are either raised much higher than has usually been paid for labour in this country, or that meal is provided for them greatly below the market rates. This subject is important; but we forbear saying more, trusting that every thing will be done by those provided with the means, for alleviating the distresses of the lower ranks, upon whose welfare so much of the prosperity of the country materially depends.

[The following Articles, among a number of others sent us, were omitted in last Number for want of room.]

From the Newspapers, with Remarks by a Correspondent.

THE comparative advantages of the labour of horses and oxen, have been for some time under the consideration of the public. His MAJESTY has unquestionably tried the latter upon a larger scale than any other person, as he does not work less than 180 oxen upon his different farms, parks, and gardens, and has found them to answer so well, that there is not a horse now kept for tillage. Upon the two farms, and the Great Park at Windsor, 200 oxen are kept, including those coming on and going off. Forty are bought in every year, rising three years old, and are kept as succession oxen in the park; 120 are under work, and 40 every year are fatted off, rising seven years. The working oxen are mostly divided into teams of six, and one of the number is every day rested; so that no ox works more than five days out of seven. This day of ease in every week, besides Sundays, is of great advantage to the animal, as he is found to do better with ordinary keep, and moderate labour, than he would do with high keep and harder work.

These

These oxen are never allowed any corn ; as it would prevent their fattening so kindly afterwards.—Their food, in Summer, is only a few vetches, by way of a bait, and the run of coarse meadow, or what are called lea-fowes, being rough pastures. In Winter, they have nothing but cut food, consisting of two-thirds hay, and one-third wheat straw ; and the quantity they eat in twenty-four hours is about 24 lb. of hay, and 12 lb. of straw ; and, on the days of rest, they range as they like in the straw yards ; for it is to be observed, they are not confined to hot stables, but have open sheds, under which they eat their cut provender, and are generally left to their choice to go in or out.

Under this management, as four oxen generally plough an acre a day, and do other work in proportion, there can be no doubt but their advantage is very great over horses, and the result to the public highly beneficial.

The forty oxen that go off, are Summered in the best pasture, and finished with turnips the ensuing Winter.

A correspondent remarks—‘ The above is so contrary to the experiments made respecting the working of oxen, that I am inclined to call in question the accuracy of the statement. In the *first* place, A yoke of oxen will not plough an acre of ground *per* day, unless a broad furrow is taken. *2dly*, They are incapable of undergoing five days constant labour *per* week ; it being found necessary, in ordinary cases, to keep two sets, the one to relieve the other. *3dly*, They cannot be properly supported (as we of course must suppose his Majesty’s oxen to be) upon 36 lb. of hay and straw *per* day. The comparative value of oxen and horses in husbandry having been a fertile source for disputes betwixt practical and theoretical men, it would give me great satisfaction to see the question fairly argued in your Magazine.’

London, Dec. 17th.—The Magistrates of Worcester have given notice, by public advertisement, that all persons guilty of forestalling, regrating, or ingrossing provisions, are punishable by indictment ; and of their determination to proceed against all such offenders with the utmost severity.

Upon the above paragraph, a correspondent observes, ‘ That these obsolete terms, forestalling, regrating, and ingrossing, continually get into the mouths of our municipal officers, whenever provisions rise in price, whether they are in the least degree applicable or not. He would ask the sapient authors of the advertisement, who, it is presumed, are manufacturers, whether a piece of broad cloth, sold and refold at every stage betwixt Worcester and London, would sell, at the latter place, a single halfpenny

halfpenny *per* yard higher, than if it had been directly received by the waggon? Just the same consequence will take place in the sale of beasts or grain. When carried to Smithfield or Marklane, they will draw their comparative value, whether 5l. or 5s. of profit had been previously gained upon them. Many, otherwise sensible persons, entertain very absurd ideas upon this subject; which can only be removed by practice and experience.'

The Duke of Bedford is elected President of the Bath and West-of-England Agricultural Society. Lord Sommerville and Mr Hobhouse are elected Vice-Presidents.

Sir John Call, Baronet, has written a letter to the above Society; in which, after dwelling at considerable length on the subjects of Population and Agriculture, he says, 'But, taking the data and facts as they are, and as they stand incontrovertibly, it is clearly deducible, that Great Britain must either continue to import a considerable portion of the first article of subsistence, and thereby give an additional bounty on foreign cultivation; or that 160,000 additional acres of land must forthwith be brought into tillage, and 30,000 added yearly to that number, to provide for an annual increase of 10,000 souls in the population.

'Without such a resource, starvation or emigration must ensue; for I will not suppose that any legal or political stop will be put to the increase of mankind. It then becomes a question seriously to be decided, Whether Great Britain, as a commercial island, depending greatly on the cheapness and excellence of her manufactures, for the support and extension of her commerce, and, of course, the maintenance of her power, should depend, in a great degree, on foreign nations for her daily bread? If that important point is unanimously discussed in the negative, the argument for bringing every inch of waste or unproductive land into an immediate state of inclosure and improvement, is supported by an imperious necessity; and it will become a duty, in the highest degree incumbent on the Legislature, to meet and provide for this growing demand.'

The good sense and liberal views discovered in the above letter, entitles Sir John Call to the warmest tribute of thanks from his countrymen. The subject is truly an important one; and, to the shame of British legislation, has been by far too long neglected. Many millions of acres in England are capable of being converted into rich corn fields; which, at present, are almost, in a legal manner, locked up as waste.

Edinburgh,

Edinburgh, Dec. 20.—Last week the Magistrates of Aberdeen fined a person for *couping* meal, or buying it from country people when coming to market, and selling it at an advanced price.

The above is another instance of municipal wisdom. Could this poor *couper* sell the meal one farthing per peck higher than what the country people would have done, to whom it originally belonged? Whenever the purchase was made, the one stood in the shoes of the other, and consequently was entitled to all the after profits, just in the same way as if he had bought a *parcel of stockings*.

EXTRACTS FROM PRIVATE CORRESPONDENCE.

S C O T L A N D.

Edinburgh, March 10. 1800.—By a letter from a gentleman in Virginia, dated the 18th January last, we learn that tobacco has been falling in price for a considerable time, and can now be bought at 17s. or 18s. per cwt. Good wheat sells at 6s. 9d. Sterling per bushel; and flour $8\frac{1}{2}$ to 10 dollars per barrel of $1\frac{3}{4}$ cwt.

Extract of a Letter from Aberdeenshire, March 11.—The state of the crop this year is very bad indeed; and I have no occasion to suppose that there will be one half of the *oat-meal* produced this year which we had in 1798. I should rather suppose, from some inquiries which I have made at different mills, that the quantity will not exceed two fifths of the preceding year; for there is not above four fifths of the oats which were raised in 1798; and the average of meal from the boll, is rather above than below 8 pecks, or 4 stones Dutch weight.

The state of the forage in the higher parts of this county, is still worse than that of the crop. I have heard of corn and straw being sold as high as 4l. Sterling per boll, and of young cattle being sold for a mere trifle. We have had another storm lately. If the weather does not set in mild in a very short time, many of the cattle must perish for want of food.

I consider that the comfortable, if not the necessary supply of the people of Scotland, for this year, depends upon two things: 1st, The stoppage of the English distilleries: 2^{dly}, The mixture of barley meal with oat meal or flour.

It is much to be apprehended, that bad seed will be used by many farmers, partly from ignorance, and partly from necessity. The danger is, I suspect, not sufficiently understood. In 1782, a severe frost on the 3^d August was very hurtful to the earliest and best oats, which were then in flower, or in the milky state; it rendered them unfit for the purpose of seed, though it did not stop their vegetation. The later oats, which were of much less value for meal, were incomparably better for seed, because they were not in flower when the severe frost happened in August. But this year we had severe frosts at different periods of the harvest, and especially in September, when the late oats were in the flower, or in the milky state; and I apprehend, that nothing but actual trials can justify the farmer for sowing one parcel of oats in preference to another. The experience of 1782, may tend to mislead those who do not consider the difference of circumstances; and the apparent freshness of grain is no criterion for its being fit for the purpose of seed.

Oats no doubt are a hardy kind of grain, as nature has furnished it with a *great coat* to defend it from the inclemency of the weather; but it is when the plant is in flower, and before this great coat can be buttoned closely, if I may use the expression, that its powers of vegetation are most easily and most deeply wounded.

Extract of another Letter from Aberdeenshire, March 18.
—Our county is really in a deplorable state; for the fields are this day covered with a deep snow, and the straw for our cattle is almost consumed. Bear, with fodder, has given 4l. per boll, and oats, not fit for seed, 2l. 10s. per ditto, Aberdeenshire measure. Hay sells at 2s. per stone of 20 lib. Amsterdam; but, what is worst of all, it is difficult now to get it in this corner at any price. I rent a farm at 50l.; and this day there is not more ploughed than 10 bolls of oats will sow. Many of my neighbours have less in proportion, and few of them more. The poor have been supplied with meal on lower terms than with you, and yet they are run of money, and credit is ill to be had. Best oat meal 1s. 10½d., and bear meal 1s. 4d. per peck of 9 lib. We are getting seed oats from the
Garioch,

Garioch, at 1l. 12s. per boll, and from the country about Kincardine O'Neil and Banchory, at 40s.

I have had occasion to notice both the theory and practice of raising early potatoes; but have found the following method most efficacious for obtaining an early crop:—Take the potatoes whole, and cover them up in horse litter of a moderate warmth; let them remain there until they put forth shoots of 4 or 5 inches in length, which they will do in two or three weeks; then take them carefully from the litter, and put them, perpendicular and equal with the surface, into a light dry soil, with more horse dung. If the season is tolerable, they will vegetate amazingly fast. In this cold country, the last week of April, or first of May, is early enough to venture them out. By these means, potatoes may be had four weeks earlier than the same variety can be raised in any degree of perfection, were they planted in the usual way. The above was communicated to me by a reverend clergyman of my acquaintance, who has practised it a dozen of years, and who has ripe potatoes commonly at his table by the 4th of July. Northward of the Grampians, we are at least a month later than you are in the Lothians.

Berwickshire Quarterly Report.

Turnips, which from the beginning could scarcely be reckoned half a crop, suffered a good deal by the frost. They were mostly consumed by the last week of March, though every means was used to save them as much as possible.

Young *clovers* do not appear to have been injured during the Winter; but vegetation is very backward; and those few fields which were sown in Autumn, have not a promising appearance.

A considerable quantity of *wheat* has been sown upon dry soils during this quarter, after turnips, &c.; but, upon the cold lands, the greatest part of the fallows must now be sown with other grain. Sowing of *peas*, *beans*, and *oats*, did not commence generally till the middle of March; since which, these operations have been carried on with the greatest activity, the land harrowing better than could have been expected from the bad weather immediately preceding; a good deal of hot feed *peas* are sown in different places.

There are few cattle now remaining in this county; indeed the number put up to feed was (in consequence of the failure of turnips) comparatively small. Of the sheep that were fed, a considerable proportion has been already disposed of. Lean

stock is likely to sell well in the course of the Spring, and already bring good prices.

In consequence of the long continued rains in Autumn, the rot has been more than usually prevalent amongst the sheep in particular situations. The lambing season has been hitherto favourable in the low part of this county, and the grass is just beginning to shoot.

The Winter has been severely felt in the Lammermuir district of this county. Great numbers of young sheep have died; and from the lateness of the harvest, and long continuance of frost and snow, very little had been got ploughed before the middle of March, which will make the small quantity of corn sown there very late.

The corn markets kept advancing till the beginning of March, since which all the grains have declined a little, except barley, which still keeps its price.

Prices at Berwick, March 22d, per boll of 6 Winchester bushels, were,

Wheat	s. 60 to 70	Oats	s. 35 to 45	Portlands	s. 50
Peas	s. 56 to 60	Barley	s. 40 to 42	Fine	s. 45
Seed potatoes 40s. per Berwick boll of 40 stones.					

The butcher markets have experienced a gradual rise from the beginning of this quarter, and still keep advancing.

Prices at Berwick, March 22d, per lib. of 16 oz. English.

Beef	d. 5 to 7	Veal	d. 8
Mutton	d. 5 to 6½	Pork	d. 7
<i>March 26.</i>			

Fifehire Quarterly Report.

During the month of January, neither ploughing, nor indeed almost any other kind of work, could be carried on without doors in the county, as the fields were covered with snow. Even in the month of February, the labours of the field made but little progress, the ground being either bound up with frost, or too wet for ploughing. Some ley land, in favourable situations, was broken up; and towards the end of the month, and beginning of March, several fields designed for wheat, but which had lost the season in Autumn, through the badness of the weather, have been sown. The present month has been exceedingly favourable to the farmers.

ers. Much land has been tilled, and the sowing of oats is far advanced. The land being in fine order for tillage, and the seed having got a dry bed, it is to be hoped that the crop will be good. The sowing of beans and peas is not so extensive as usual, owing to the high price of seed. The farmer cannot seed an acre of beans under 3*l.* 10*s.*, when sown broadcast, which is frequently practised in this county.

Current Prices of Grain during the last three months.

1800.		s.	s.
January.	Wheat, from	-	23 to 35 per boll.
	Barley	- -	20 to 30
	Oats	- -	16 to 25
	Oat meal	-	32 to 34
	Peas and beans,	none exposed to sale.	
February.	Wheat, from	-	25 to 42
	Barley	- -	22 to 30
	Oats	- -	21 to 28
	Oat meal	-	34 to 38
	Peas and beans	-	25 to 32
March.	Wheat, from	-	30 to 48
	Barley	- -	25 to 35
	Oats	- -	25 to 40
	Oat meal	-	38 to 48
	Peas and beans	-	27 to 32

During the last three months, the price of potatoes has been gradually advancing, and risen from 12*s.* to 20*s.* per boll of 24 Dutch stone. The price of hay, of clover, and ryegrass, from 1*s.* 6*d.*, to 2*s.*; and meadow hay 1*s.* per stone. Thatch of wheat straw 8*s.* the threave of 24 sheaves a yard round.

The great difference in the prices of the same kind of grain, is owing partly to the great difference of quality, and partly to the progressive rise.

Northern Quarterly Report.

The crop in the northern counties of Moray, Nairn, Inverness, Ross, Sutherland, and Caithness, has turned out fully as productive as was expected, and will do more than supply the consumption of the inhabitants. Within the last two months, there has been cleared out at the different ports within the precincts of Inverness Customhouse, 2,260 quar-

ters of oats, 1700 quarters of barley, 2020 quarters of wheat, 6 quarters of peas, and 62 bolls of oat meal. And from the county of Caithness, a considerable quantity has been shipped during the same period. Perhaps there may remain 10,000 quarters of the different grains for exportation; and it is supposed that the crop of no county in the kingdom will come nearer the usual average than that of Caithness, notwithstanding its northern situation.

The prices of grain are, for

	s.	s.		s.	s.
Wheat	40	to 45	Peas	30	to 34
Barley	30	to 36	Oat meal	24	to 32
Oats	25	to 42	Potatoes	20	to 24

The latter is much demanded for seed. Butcher markets continue well supplied. Beef 5d. to 6d. per lib.; mutton much about the same; and, from the number of fat cattle still on hand, these articles are not expected higher. Hay has not exceeded 1s. per Scots stone this season.

Notwithstanding the severity of the Winter and Spring, little loss has been sustained amongst the sheep flocks; and respecting the prices of them and cattle, nothing certain can be yet given. The great scarcity of provender has put the latter in bad condition; and where they are used in farm labour, this may occasion the sowing of the crop to be much retarded.

The constant frost and the frequent falls of snow, which prevailed from the 17th December to the 12th March, allowed little ploughing to be executed till lately; but the Spring has now set in very favourably, and the ground is in excellent condition for ploughing and harrowing. The oat and peas seed has become general; and, upon the whole, labour cannot be considered as farther behind, than it is upon an average of years. In the Highland districts, they seldom begin to plough before the 1st of March; and consequently, in that respect, they are not in a worse case than usual.—*March 27.*

East-Lothian Quarterly Report.

Notwithstanding the adverse weather that prevailed during the first month of the current quarter, and the backward state of aration at its commencement, the labours of the field are now much farther advanced than what was then expected. In the lower district of the county, where corn crops is the chief object, a considerable quantity of wheat, though not to the usual extent, has been sown; the
oat

oat and bean seed is nearly finished. Some barley upon the dry soils, after turnips, is sown; and a few fields of potatoes are also planted. Some of the coast-side farmers have already concluded their seed work for this season; and almost in every situation the land has harrowed well, being completely mellowed by the repeated black frosts, which have brought the strongest soils into a reducible state, as fast as they were ploughed up.

The markets for grain, with the exception of wheat, have continued rapidly to advance, though, perhaps, the demand from the higher districts for seed corn has occasioned a temporary rise. Wheat, which is now dry, and in a condition for keeping, sells from 36s. to 51s.; barley, 35s. to 46s.; oats, 34s. to 46s.; beans, 30s. to 50s.; peas, 45s. to 52s.; and tares at the enormous prices of 60s. and 80s. per boll; all Linlithgow measure. Oat-meal, 3s. per peck in retail; and common potatoes for seed, 30s. per boll, of 24 stone Dutch weight. Some of the early varieties have sold as high as 4s. per peck. Vegetables of all kinds are scarce; and, in some places, can only with difficulty be procured.

The *Turnip* crop, which was much injured by the late frosts, is now nearly consumed; owing to which, it will be difficult to carry on the small portion of fat stock on hand. Barley, in some instances, has been boiled and given to cattle; which is found to answer well, though the expence is very great. The early ewes are lambing fast; and every exertion has been made to bring stock of every description into condition for an early market.

Grass land has this year met with a most extraordinary rise, which does not afford room to suppose that butcher markets will soon be reduced to their usual rates. Perhaps, the prices of grain have occasioned a number of fields, commonly kept in pasturage, to be broke up by the plough; but whatever has been the cause, the rise has been general, and, in some instances, gone the length of 50 per cent. above last year's rates.

The higher district of the county is in a most distressed state, as very little ploughing is yet performed, and hardly any of the last crop can with safety be used for seed. Fodder is very scarce; and a considerable mortality has taken place among the hogs, or young sheep. Great ewes may be stated, as selling from 6d. to 18d. higher than last year. At Gifford Spring Fair, a pretty large show was presented, which in general were sold.

Hay experienced a declension in price about the first of February, and now sells from 1s. to 1s. 4d. per stone, or from 4l. 10s. to 6l. per load. The quantity on hand is not great; but if the weather continues favourable, the working flock will probably be early put to grass, which may lessen the demand for that article.

Upon the whole, the first quarter of 1800 might have been considered as highly favourable to the farmer, if rural economy had not remained in such an imperfect and backward state at its commencement. A doubt can hardly be entertained, but that the half work given to last year's fallows, and the constant humidity which prevailed till the middle of February, must have great influence upon the ensuing crop. Still, under all these disadvantages, the husbandry of this district deserves to be viewed in a superior light to what, three months ago, the most sanguine person could have reasonably expected.—*March 31.*

Extract of a Letter from Kelfo, March 25.—Grain of all kinds has been rising every week; and, in particular, oats for seed have got up to the amazing price of 50s. per Berwick boll of 4 firlots. There is a great want of seed-oats, owing to the general failure of the crop upon the higher grounds. Few beans or peas will be sown this season, as the price is so extravagant. A considerable quantity of wheat was sown the latter end of February, and beginning of this month, upon the turnip and bare fallows; and, in general, we have got a wonderful good season. Barley seed will commence in a few days; the present price is about 50s. per Berwick boll, but expected higher. It is my opinion, that a vast quantity of land of the inferior quality will not be sown this season; and that the farmers upon the high grounds will be put quite out of their usual rotations, to the great injury of their stock. With respect to the market for fat beasts—Feeders have been hurrying on their stock for these three weeks' past, owing to the want of turnips; consequently, the market has been so much overstocked, that sheep of 20 lib. per quarter have fallen 10s. Beef has maintained its price pretty well, being worth 7s. 6d. and 8s. per stone of 14 lb. avoirdupois, sinking the offal. Those who can carry on till May-day, (and few will be able), may expect a much higher price, there being few on hand, compared with the stock of former years. The young and breeding stock are in general in bad condition; a great quantity of the former are already lost; and the appearance of a crop of lambs is so bad, that it is almost certain that lean stock will be very high.

We are all turned great œconomists in the articles of flour, oat meal, and mixed bread. After shealing the wheat, no bran is taken out of it ; and potatoes are used as substitutes for oat meal and bread. A considerable quantity of this valuable esculent root, of the early kind, is already planted. I do not remember to have seen so little straw in the stack-yards at this season ; and I need not add, that there will be little corn to the bulk.

Mid-Lothian Quarterly Report.

During the whole month of January, from the prevalence of snow, rain, or hard frost, very little field work was done, even in the low parts of the county ; while, in the moorlands, there was nothing done at all, except merely leading in, from time to time, as it could be got thrashed, the miserable remnant of the preceding crop. In February, the weather softened gradually to a more genial temperament ; and, although generally attended with frost during the nights, admitted the different operations of ploughing and sowing, there being a considerable proportion of the wheat land finished in this month, that was unavoidably postponed from the Autumn season : some oats and beans were sown, and even potatoes planted, all in pretty good order. The state of the weather in March was not so favourable. From the 4th to the 10th inclusive, the frost prevented all tillage ; and being immediately succeeded by heavy snow or rain, the labour was thrown far behind, as well as the lands into a bad state for tillage ; and although, from the 17th to the end, both the plough and the harrow were well employed, yet a considerable proportion of the oat and bean seed land remains to be accomplished. Several fields of Autumn sown wheat (which were all laid down in an unfavourable condition) have also failed ; a circumstance to be regretted, merely as occasioning a loss of seed and labour, as there can be little doubt, that the crop with which they have been, or may yet be resown, whether of oats or barley, will yield full as large a return of food for the community.

The prices during this quarter have been uncommonly high. About the *Candlemas time*, indeed, there was a considerable depression in the rate, both of corn and fodder (a very usual occurrence at that term), which tended to confirm the unjust suspicion, that the former high price had proceeded more from a fictitious than a real scarcity. Whether this impression is yet effaced from the public mind, it is not material to inquire ;
but,

but, from the market prices having again advanced, we can have no hesitation in renewing our recommendation of the most rigid œconomy in the use of corn, as well as the utmost possible exertion to get a foreign supply. The following have been the state of the markets :

	Bushels.	January.		February.		March.	
		s.	s.	s.	s.	s.	s.
Wheat per boll,	4,114	from 38	to 42	36	to 40	40	to 45
Beans and peas,		32	to 36	32	to 35	40	to 50
Barley ditto,	5,962	32	to 35	32	to 35	35	to 42
Oats ditto,		30	to 38	30	to 36	35	to 45
Oat meal per peck, 8 lib.		d.	d.	d.	d.	d.	d.
Dutch,	-	30	to 32	29	to 30	30	to 36
Potatoes per peck, about							
$\frac{1}{4}$ cwt.	-	15		14		16	
Beef per lb. 17 $\frac{1}{2}$ oz. avoirdupois,	-	5	to 7	5	to 7	6	to 8
Hay per stone, 22lb. avoirdupois	-	21	to 26	16	to 18	21	to 24
Oat straw, about 15 stone,		s.	s.	s.	s.	s.	d.
hay weight	-	16	to 17	10	to 14	14	to 17 6
Wheat straw, ditto, for litter	-	9	to 10	6	to 8	9	to 10 6

Haddington, April 4.—We had a full market this day of all sorts of grain: The sale was heavy, particularly for beans and peas, of which grains a far larger quantity was presented than at any market this season. Wheat also sold dull, and prices declined nearly 2s. per boll. As the demand for oats is great, that grain maintained its price, and good barley rather met with an advance. There being few purchases made at the seaports for some time past, occasions our markets to be generally well supplied, though the demand for wheat has been uniformly less this year than usual. Prices—Wheat 36s. to 40s. 6d.; barley 38s. to 47s.; oats 36s. to 45s.; beans 30s. to 48s.; peas 35s. to 51s.; tares 70s. to 75s.;—all per Linlithgow measure.

ENGLAND.

Doncaster, March 21.—All kinds of grain are excessively dear; and several small farmers are almost ruined with buying feed. Many stacks of Spring corn, that were thought decently got, have turned out rotten, mouldy, and of little or no value. We have severe weather for the season; and the lambs are coming fast into a cold and hungry world.

York, March 15.—The Grand Jury of this extensive county, impressed with a conviction, that, at this crisis, it is the duty of all to stand forward in the cause of their country, have come to a number of resolutions respecting the alarming scarcity of grain, and the means necessarily required for rendering the produce of the kingdom equal to the consumption of the inhabitants. Among several others, we observe the following resolution, which decidedly expresses their sentiments upon a point long considered as the chief obstruction to agricultural improvements:

Resolved,—That it seems a very well-founded opinion that was given by the persons appointed to examine into, and report upon the General State of Agriculture in this country, when they almost unanimously and uniformly declared, that the want of a fair and permanent compensation to the proprietors, in lieu of tithes in kind, is one of the greatest obstacles, not only to enclosure, but to the improvement of agriculture.

These resolutions contain matters of the utmost importance to the interest of Britain, and are signed by Sir George Armitage, Sir Thomas Pilkington, Sir Charles Turner, Baronets, and twenty other respectable gentlemen. Instead of viewing the scarcity as temporary, and only requiring the application of palliatives, the Grand Jury very judiciously point out the real causes of the evil, and suggest remedies which would effectually prevent a repetition of the present calamities.

Wakefield, March 10.—The weather, for three weeks back, has been tolerably open, and a good deal of land has been got ploughed up for barley and oats, by those farmers who had their horses in proper order; but the high price of corn, and scarcity of hay, has prevented several small farmers from bringing their working cattle into condition, as they apprehended they could not maintain them through the
Winter,

Winter, by which means they will lose the benefit of the present frost, for making their land harrow freely. Very little of any thing is yet sown; for the frost is so severe as to stop ploughing, and it is just now beginning to snow. Fat cattle are high; and, as the turnip crop is nearly consumed, I fear a sufficient quantity will not be kept on to furnish a regular supply till the grass cattle come to market. Beef $7\frac{1}{2}$ d. and $8\frac{1}{2}$ d. per lb.; mutton 7d. and 8d.; wheat 11s. to 15s. per bushel; barley 5s. 6d. to 8s.; fine ditto for feed 10s.; oats 5s. 6d. to 7s. 6d.; new beans 10s. to 13s.; old ditto for feed 14s. 6d.; very few beans of crop 1799 are fit for feed.

Stafford, March 18.—Every article of grain has been very high in our markets: I have lately sold wheat from 15s. to 19s. per bushel; barley at 10s. 6d.; damaged ditto 5s. or 6s.; oats at 8s.; beans 13s. or 14s.; peas that are good feed 18s. or 20s.; all per bushel of $9\frac{1}{2}$ gallons, which is our customary measure. Hay sells from seven to eight guineas per ton. Vetches that are found cannot be procured. I had it in contemplation to sow thirteen acres; and, after great difficulty, could only procure ten bushels, at the extravagant price of 17s. per bushel, and those very bad; for, having tried them in a green-house, I found that not above one fourth of them have come up. I then sent to London, but the price of them in that market was from 21s. to 24s. per bushel; even these could not be warranted; so I will only sow a small quantity. My lambs are dropping fast every day; as yet I have lost only one. At our last fair, lean stock sold low, as the major part of farmers have not provender to spare. Fat cattle 6d. and 7d. per lb. Cheese 3l. 10s. per cwt.; butter $15\frac{1}{2}$ d. per lb. I have fed several beasts this Winter with boiled barley, which brings them on fast; they got a peck each per day. Straw is scarce and dear. Hope next harvest will be better than last, otherwise this country will be in a dreadful state.

Lincoln, March 18.—The circumstances of the times have occasioned every prudent family to adopt a variety of expedients to lessen the consumption of wheat and potatoes; and inferior grains are generally used as substitutes for what has hitherto been considered as the staff of life. The badness of barley has induced the maltsters to decline carrying on their business, which makes a greater portion of grain on hand than otherwise would have happened; indeed, as the quality of wheat is so bad, the transition from the one grain to the other is thereby rendered less difficult.

The

The number of inhabitants in Britain being greatly increased, and luxury augmented, it appears absolutely necessary that the Legislature should take vigorous measures for bringing the wastes and commons into a cultivated and productive state. If the growth of corn is not increased in such a manner as to meet the increased consumption, it is obvious that our money must be constantly sent abroad to purchase the necessaries of life; and as different counties are differently circumstanced, it would be advisable for the Legislature to pass an act, to empower each county to enclose their commons and wastes, so as they may be properly cultivated, and the quantity of grain and number of cattle thereby increased.

The average price of wheat is about 5l.; barley 50s.; beans 84s.; oats 35s. per quarter of eight strikes or bushels each. Beef and mutton about 6d. per lib., and have not been scarce. But turnips being nearly done, I apprehend Winter-fed sheep will be scarce, when the turnip-fed mutton is finished. Hay is not plentiful, and sells at 5s. per cwt. The rate of markets for lean cattle are not yet well known, it being too early for the graziers to buy in stock for their pastures; but prices apparently will be high.

Northumberland Quarterly Report.

From the middle of January to the middle of February, a total stop was put to agricultural operations by the frost, and snow which accompanied it; the third week of February was more favourable, and a great deal of wheat was sown upon the naked fallows of last Summer, as well as upon the land cleared of turnip. A few oats and beans were also put in upon dry lands. The frost and snow again set in on the 24th February, and continued till the 20th March, which has occasioned a large portion of naked fallows upon wet soils to remain unsown, which of course must now be cropped with barley or oats; very few peas or beans are yet got in upon the clay soils.

The peas and beans of last crop are so much injured, that very few are fit for seed, which has rendered it necessary to import considerable quantities for that purpose, as also for mixing with barley for bread.

Turnips in some places have suffered much by frost, and a general scarcity of this valuable root begins to prevail. The expence of feeding on turnip this Winter has been very high, from 9s. to 12s. per week, and now not to be had at these prices.

Fat stock has advanced within the last month, and will probably get higher soon, as a scarcity is expected. The prices at present are, beef 7s. 6d. and 8s. per stone of 14 lib.; mutton 7d. or 8d. per lib. both sinking the offal.

In the prices of grain, there probably never was so great a variety as this year. The following, I believe, are nearly the averages of the lowest and highest prices for the last three months.

Wheat	from 7s. to 13s.	per bushel.
Barley	4s. to 8s.	ditto.
Oats	4s. to 7s.	ditto.
Peas	8s. to 11s.	ditto.
Beans	8s. to 12s.	ditto.

Oats for seed have been sold as high as 7s. and 8s. per bushel; peas 11s.; and beans 13s. 4d. per bushel, Winchester measure.—*March 24.*

Yorkshire Quarterly Report.

The present favourable weather has enabled the farmer to commence the operations of his Spring seed-time with promising auspices, except from the uncertainty of the vegetation of a considerable proportion of the grain. A greater allowance of seed will be sown on every acre than usual, which will in no small degree aggravate the evil of scarcity, so justly dreaded. A considerable part of the bean lands is sown; the oats are in great forwardness; and some barley is put in upon the dry soils after turnips; but the preparation for this grain is not generally much advanced, though the turnips are nearly eaten off the ground.

The wheats now assume a very promising appearance on dry warm soils. On the wet and loose lands, the frequency of bare frosts has affected them severely; on some of them the blade is scarcely visible.

From the general deficiency of turnips towards the Spring, some apprehensions were entertained of a scarcity of fodder; milder weather has in some degree abated them. Hay is sold from 5l. to 8l. per ton.

The price of wheat is about 14s., though it is rather a falling than a rising article; barley 10s., oats 6s., and beans at the enormous rate of 14s. per bushel of Winchester, for the best of each sort. The oats have turned out better than many persons expected; but the quality of general samples is miserably bad. Considerable loss has ensued from warehousing some parcels of this and other grain; and corn this season is in too damp a state for keeping on speculation, unless it was
kilm-

kiln-dried. Potatoes are scarce and dear, 4s. per bushel; many are wanted for seed, and it is to be feared many will be wasted, as the cultivators of this root are unfortunately too much in the habit of using more than double the necessary quantity. The sets or eyes, judiciously cut out, of from three to four sacks, are sufficient for an acre, and there will remain nearly two thirds of the potatoes for boiling. This is a circumstance demanding attention at all times, and now in a tenfold degree.

Fat cattle are sold at high prices, about 8s. per stone of 14 lib. sinking the offal. Very few are turned off really fat. Lean cattle and sheep remain at moderate prices. The wedders fattened upon turnips, now flocking into the markets, render the price of mutton somewhat lower than beef; the drop of lambs appears rather scanty and backward.

Good horses sell at high prices; and all sorts are more in demand than for some time past, or than could have been expected.—*March 24.*

Extract of a Letter from a Yorkshire Farmer, dated March 31.—I shall endeavour to give you a statement of our present markets, &c.; but they vary so much, that it is impossible to be accurate. Last market days, at Wakefield and Pontefract, prices were as follow:

Wheat 40s. to 50s. per load,
 Beans 42s. to 50s. per ditto,
 Barley 60s. to 73s. per quarter of 8 bushels,
 Oats 50s. to 60s. per ditto,
 Bread meal 4s. 2d. per stone,
 Malt 10s. to 12s. 6d. per bushel,
 Hay 6l. to 8l. per ton,
 Butcher meat 5d. to 8d. per lib.
 Oil cake 12l. 12s. per ton,
 Rape dust 28s. per quarter,
 Turnips 2l. 2s. per waggon load.

Wakefield market, on Wednesday, was well filled with sheep, and such as were fat sold well; but a great many, from want of food, are barely fit for killing. Beasts of good quality are scarce, and many are slaughtered before they are in proper condition. No fat lamb is yet presented in the market; but the ewes are lambing fast, and promise well. Lean beasts, in good order, sell well; but the expence of the straw-yard, which is paid at 2s. 6d. per week, limits the demand. It is much to be wished, that a good crop may be got this year, which will set all things to rights again; for the hardships of
 persons

persons with small incomes, tradesmen, mechanics, and little farmers, are much to be lamented. A general apprehension prevails, that wheat of the coming crop will be defective. Some few persons have already sown part of it over again; but we often sow oats amongst it when thin, at this season of the year.

On Wednesday the 28th March, Lord CARRINGTON was elected President of the BOARD of AGRICULTURE, in room of Lord SOMMERVILLE.

The Board of Agriculture, taking into their serious consideration the high price of corn in 1795, and the present severe scarcity, have wrote letters to their different correspondents in the kingdom, requesting their opinion on the best means of preventing the like in future; which we hope will cause the attention of persons versant in inquiries of this nature, to be directed to such an important and salutary object.

We have not heard of any other particular proceedings which have lately occurred at the Board. But when matters of importance occupy the deliberations of this respectable Institution, the same shall always be fully detailed in this Magazine.

Average Prices of Corn, per Quarter, for England and Wales.

Wheat,	Rye,	Barley,	Oats,	Beans,	Peas.
107s. 8d.	78s. 5d.	56s. 0d.	39s. 6d.	69s. 4d.	68s. 2d.
Oat meal per boll of 140 lib. avoirdupois, 66s. 9d.					

Extract of a Letter from London, March 31.—The counties round London have had a favourable seed-time; and the different grains are all put into the ground in good order. The wheat fields look exceedingly well, having greatly improved in the course of last month; though, on some of the higher lying lands, they still have a yellow appearance. Seed corn of every kind has been very high this Spring. Oats 60s. to 63s. per quarter. Barley 75s. Beans 66s. Small ditto 72s. Tares are now as high as 21s. to 23s. per bushel. At Marklane, the prices of grain have been steady for five weeks past. Wheat was rather higher this day. Fine Essex 124s. per quarter. Ordinary and kiln-dried barley 40s. to 50s. Fine mealing barley 70s. to 72s., but few samples good. Malt from 50s. to 86s.; fine malt very scarce. Feed oats 35s. to 42s. Polands 44s.
to

to 49s. No real good oats at market. Hog peas 63s. and 66s.; beans 46s. to 56s.; good rye-grass, 5s. 6d. per bushel. The prices of clover seeds are various; fine from 120s. to 126s.; ordinary very low. The quantity of foreign grain imported into London for three months past, has been but small; not more than 15,000 quarters of wheat, and 10,000 quarters of oats. By letters from Embden, we learn that the prohibition of exporting flour, and all kinds of grain from Holland, is continued to the 31st August, so that the ports of the Baltic are the only places on the Continent from whence any supply of consequence can be expected. The regulation adopted, of not allowing bread to be sold till twenty-four hours after it is baked, together with the economy which the rumour of scarcity has produced in noblemens and gentlemens houses, have lessened the consumption in London fully one third. Potatoes are very ordinary, and much advanced in price. The best Yorkshire sort are now selling at 14l. per ton, being 3s. 6d. per peck, according to your measure. Inferior qualities at 10l. and 12l., and are retailed at 2d. per lib. Garden stuffs are equally scarce and dear, in consequence of which the prices of boiling and split peas have advanced; fine Suffolks to 103s., and split peas to 130s. and 140s. Hay and straw have for two months past increased in price. Best meadow hay 126s. to 132s. per load; clover ditto 130s. to 140s.; straw 60s. to 63s. Smithfield market, for some time past, has been well supplied with cattle, sheep, and pigs. The present price of beef, sinking the offal, is from 4s. 8d. to 5s. 8d. per stone of 8 lb. avoirdupois. Mutton 4s. 6d. to 5s. 6d.; veal 5s. to 6s.; pork 9d. per lib. by the carcase. There has been a greater proportion of fat cattle at market, of late, than appeared before Christmas, numbers of them being stall fed.

Extract of a letter from Newcastle, March 31st.—The highest price given for wheat of this country's growth, at our market this day, was 104s. per quarter. Some samples from Norfolk brought 112s.; but we must observe, that the latter is about one tenth less measure than the former. We have very little old wheat on hand. Good Dantzic would bring nearly 120s. per quarter. Barley fit for malting is worth 50s. per quarter, and upwards. Oats 50s.; ditto for seed 60s.

 O B I T U A R Y.

Died at Mount Vernon in Virginia, on the 14th December last, the great and good GEORGE WASHINGTON, Commander in Chief of the Army of the United States of America, late President and Founder of the Federal Union of that free and rising nation.

It is with pride we assume the privilege of enrolling his name in the Obituary of eminent and skilful farmers, and we have reason to believe he would not have disdained the prospect of this distinction, in the midst of all the eulogy he has justly received, and is hereafter to receive, with the trial ordeal of dispassionate posterity, and the lapse of ages.

With his political and warlike life, we have nothing to do; and it is a subject only for the historian. He was one of those, whom the Almighty, in every age, has chosen and raised up to promote the ulterior designs of his mercy and goodness in the melioration of his creatures.

It may be said of Washington, as was written by Tacitus of Agricola, that though he was snatched away whilst his age was not broken by infirmity, or injured by decay of reason; yet that, if his life be measured by his glory, he attained to a mighty length of days; for every true felicity, namely, all such as arise from virtue, he had already enjoyed to the full. As he had likewise held the supreme authority of the State, with the confidence and applause of all wise and good men in every part of the world, as well as among those he governed or commanded, and had triumphal honours in a war undertaken in defence of the liberties of his country,—what more could fortune add to his lustre and renown? After enormous wealth he sought not; an honourable share he possessed. As the infirmity of nature requires, in our last moments, the tender sympathy of relations and friends, and the consoling views of futurity,—these also he had in his amiable and worthy consort Mrs Washington,—in his kindred, and in that excellent man Tobias Lear, whose worth is not unknown in Scotland, and, where best known, will be most valued. He died with the fortitude of a philosopher, and, what is much better, with the hopes of a Christian. He, therefore, to continue the parallel, may be accounted happy; since,

since, by dying according to his own magnanimous, yet humble wish, expressed in his farewell address to the American people, whilst his credit was nowise impaired, his fame in its full splendour, his relations and friends not only in a state of security, but of comfort and honour, he was to escape the unforeseen evils of futurity, and the sorrows of declining years. His last act, relating to the councils of his nation, was to coincide with the worthy associate of his youth, Mr JOHN ADAMS, and the other Members of the Council of State, and of the Senate, in holding forth and looking for the return of peace, not allowing false pride and resentment to counteract the duties of a Patriot and a Christian, and the return of the destructive sword of war into the scabbard. This sentiment and expression, we transcribe from one of his letters to a Noble Lord in this country; and a passage from another, written 22d April 1793, when moderation was least to be expected, is worthy of the highest approbation: "To be little heard of in the great world of politics, in the words of your Lordship's letter, are expressive of my sentiments; and I believe it is the sincere wish of United America, to have nothing to do with the political intrigues, or the squabbles of European nations; but, on the contrary, to exchange commodities, and live in peace and amity with all the inhabitants of the earth." And again, that great and good man, when he put the last hand to the Federal Union, expressed himself thus: "The foundations of national policy must be laid in the pure and immutable principles of private morality; since there is no truth more thoroughly established, than that there exists, in the economy and course of nature, an indissoluble union between virtue and happiness, between duty and advantage, between the genuine maxims of an honest and magnanimous people, and the solid rewards of public prosperity and felicity; since we ought to be no less persuaded that the propitious smiles of Heaven can never be expected on a nation that disregards the eternal rules of order and right, which Heaven itself has ordained; and since the preservation of the sacred fire of liberty, and the destiny of the Republican model of Government, are justly considered as deeply, yet perhaps finally staked, in the experiment entrusted to the hand of the American people."

Thus far, regarding the public character of this illustrious man. As a private citizen and agriculturist, he was amiably distinguished in all their relations. He held 8000 acres in

his own management at Mount Vernon ; his black people never felt the chains of bondage ; and his deeply sagacious plan was, by education and time, to render them capable of citizenship and freedom. Great difficulty he had to encounter in the cultivation of his land, where tenantry is almost unknown ; but he performed much more than could have been expected ; and his last aim, in corresponding with the Noble Lord already alluded to, was to create a free tenantry in America, upon the most liberal principles of unfettered meliorating leases, with a rent to be estimated according to the value of the fruits of the earth.

“ His saltem accumulæ donis et fungar inani munere. ”

January 1800.—At Airfield, in the parish of Cranston, county of Mid-Lothian, aged 76, Mr THOMAS RENNIE, farmer there.

Mr Rennie possessed one of the Long-Niddry farms upon the Seton estate, for more than 40 years ; and, among a number of eminent farmers in his neighbourhood, was distinguished for rural knowledge, and assiduous attention to the different branches of operative husbandry. When the York-Buildings Company sold the estate in 1779, and the tenants were generally removed to make room for a new set of possessors, Mr Rennie took a lease of Airfield farm from Sir John Dalrymple, Bart. ; which farm he rapidly improved in a superior style.

Mr GEORGE RONALDSON, farmer at Dodridge, in the county of East Lothian.

At West Walton, county of Norfolk, Mr N. COKER, farmer and grazier.

At Inkborough, county of Worcester, HENRY DAVIS, a labourer. He was born in 1699 ; and, during the long period of his existence, had lived the quiet and peaceable life of an ancient English husbandman. He was particularly skilful in the art of grafting trees ; and, at the age of 96, pursued his occupation with vigour and activity.

At Ashton, county of Suffolk, Mr ROBERT POOLE, a respectable farmer.

At Blifsthorpe, Nottinghamshire, Mr FLINT, farmer there.

At Thirleston, near Whittingham, Northumberland, Mr RALPH BOLOUR, an eminent farmer.

At Yeaverin, Mr WILLIAM ATKINSON, a warm friend to agricultural improvements.

FIARS OF GRAIN IN SCOTLAND—CROP 1799.

Wigtonshire.

	L.	s.	d.		L.	s.	d.
Oat meal -	2	16	0	Best beer -	2	5	0
Farm meal -	2	8	0	Farm beer -	2	0	0
White corn -	2	0	0	Malt -	2	15	0
Mixed corn -	1	15	0	Barley -	2	10	0
Grey corn -	1	5	0	Wheat, per quarter	3	12	0

All Galloway Measure.

Berwickshire.

Wheat, per boll	1	17	4	Kerfe oats -	1	9	0
Kerfe Barley -	1	12	0	Lammermuir ditto	1	5	0
Lammermuir ditto	1	6	0	Peas -	1	13	4
Rough beer -	1	5	0	Meal, 8 ft. to boll	1	16	0

Lanarkshire.

Best oat meal, per boll) -	1	13	0	Second malt (duty included) -	1	8	0
Second ditto -	1	11	0	Best wheat -	1	17	0
Best oats (feed excepted) -	1	3	0	Second ditto -	1	14	6
Second ditto -	0	18	0	Best beer -	1	7	0
Best malt (duty included) -	1	14	0	Second ditto -	1	5	0
				Best flour -	2	5	0
				Second ditto -	2	0	0

Stirlingshire.

Oat meal -	1	10	0	Kerfe oats -	1	4	0
Wheat -	2	0	0	Dry-field oats -	1	3	0
Common malt -	1	10	0	Airfeed oats -	1	6	0
Kerfe beer -	1	7	0	Kerfe barley	1	10	0
Dry-field barley	1	6	0	Dry-field barley	1	9	0
Muirland beer -	1	0	0	Barley malt -	1	12	0
Peas and beans	1	8	0				

Clackmannanshire.

Wheat, per boll	1	15	0	White Kerfe oats	1	4	0
Kerfe beer -	1	10	0	Dry-field oats	1	3	0
Dry-field beer	1	7	6	Black oats -	0	18	0
Muirland beer	1	2	0	Peas -	1	6	0
Meal -	1	8	6	Malt -	1	12	0

Archbishoprick

Archbishopsrick of Glasgow.

	L.	s.	d.		L.	s.	d.		
Meal, per boll	-	1	16	0	Oats, per boll	-	1	4	0
Beer ditto	-	1	10	0					

Commissariat of Hamilton and Campsie.

Meal, per boll	-	1	16	2	Beer, per boll	-	1	6	3
----------------	---	---	----	---	----------------	---	---	---	---

Commissariat of Glasgow.

Meal, per boll	-	1	15	4	Beer, per boll	-	1	5	6
----------------	---	---	----	---	----------------	---	---	---	---

Forfarshire.

Wheat, per boll	1	15	9	Oats	-	-	1	1	10	
Barley	-	1	4	3	Meal	-	-	1	8	8
Chester beer	-	1	2	2						

Kincardineshire.

Oat meal, per boll	1	9	0	Beer, without fod-					
White oats, with				der	-	-	1	7	0
fodder	-	1	16	0	Peas, without fod-				
Do. without fodder	1	4	0	der	-	-	1	10	0
Beer, with fodder	1	10	0	Wheat	-	-	1	17	0

Elginshire.

Wheat, per boll	2	0	0	Oats, 5 fir. to boll	1	6	0
Peas, beans, rye	1	6	0	Oat meal, 8 stone			
Barley or beer	1	6	0	Dutch to boll	1	3	3

Ayrshire.

Oat meal, per boll				Wheat, per boll, 4				
8 stone	-	1	8	0	bush. Winchester	1	15	0
Beer, per boll, 8 bush.				White corn per boll,				
Winchester	-	1	15	0	8 bush. ditto	1	8	0

Mid-Lothian.

Best wheat, per boll	2	0	9	Best oats	-	1	9	6	
Second ditto	-	1	16	5	Second ditto	-	1	2	0
Best barley	-	1	13	1	Peas and beans	1	10	9	
Second ditto	-	1	9	5	Oat meal	-	1	14	3
Third ditto	-	1	7	0					

East-

East-Lothian.

	1.		2.		3.	
	s.	d.	s.	d.	s.	d.
Wheat,	43	9	40	9 $\frac{3}{4}$	34	8
Barley,	34	8	31	11	29	2
Oats, -	32	4 $\frac{1}{2}$	28	7 $\frac{1}{2}$	25	0 $\frac{1}{2}$
Peas, -	38	1 $\frac{1}{2}$	33	1 $\frac{1}{2}$	28	6 $\frac{1}{4}$

The East-Lothian fiars are thought to be calculated with greater accuracy than those of any other county in Scotland, being formed from the averages of the prices of grain actually bought or sold by 70 or 80 of the most respectable corn-dealers and farmers in the county, with the addition of 2 $\frac{1}{2}$ per cent. put by the Sheriff upon the price. The reason of this addition proceeded from its being anciently the custom to strike a second fiars at Lammas; but, since 1678, to save that trouble, 2 $\frac{1}{2}$ per cent has been added, which, it is supposed, in ordinary years, will compensate for the rise in markets during the Summer months.

The proof, which is taken upon oath by the Sheriff-depute of the county, includes the prices of a very considerable quantity of grain, and is in every respect conducted with great minuteness and regularity. As a number of the clergy receive their stipends according to the fiars, and rents in several cases are paid in the same manner, it is a matter of importance to the county, that the scale of prices should be justly ascertained.

NOTES TO CORRESPONDENTS.

THE very interesting and valuable *Rural Sketch of the County of Lancaster* will appear in our next.

Extracts from Mr Wright's treatise on the *floating of land*, agreeable to the request of our *Hawick Correspondent*, shall be given. If his letter had come to hand in time, it should have been presented in this number. We will be extremely happy to hear from him afterwards.

If *S. A. R.* does not know whether or not to sow his land with *flax-seed*, he is not a proper correspondent for the *Farmer's Magazine*.—We suspect this gentleman, however, to be more *rogue* than *fool*.

We are sorry *W. C.*'s letter did not arrive sooner, as it contains important information. An extract is given, and his future correspondence requested.

We thank the worthy clergyman who has kindly informed us, where we can receive "an authentic detail of the misery of Scotland, occasioned by the failure of the crops 1697-8-9" which shall be attended to.

Mr *Bakewell's* *Memoirs* are delayed, in expectation of some additional materials from England.

The review of *Rochefoucault's* *Travels*, Vol. II. is unavoidably postponed, together with several other articles.



THE
FARMER'S MAGAZINE:

MONDAY, 14. JULY 1800.

(No. III.)

PART I.

ORIGINAL COMMUNICATIONS.

FOR THE FARMER'S MAGAZINE.

The Rural Inquirer, No. 2.

Certainly we are all afraid lest our plenty should be our ruin, or else men that study so much to get estates at second hand from one another, would rather strive to get them at first hand out of the earth.

Blythe's Improver improved.

A NOBLE English Peer, at a late public meeting, (as we are informed by a respectable correspondent), hardily declared, that the modern agricultural improvements, instead of being beneficial, had proved injurious to the public welfare. 'What,' said his Lordship, 'have not rents risen since waste lands were generally cultivated? Have not provisions of all kinds increased in price? and has not stock, *i. e.* cattle and sheep, equally advanced?' The company silently heard his Lordship, and thereby tacitly acknowledged the justice of his observations.

We have often observed, with surprize, the aversion of the generality of landed proprietors to the division and inclosure of waste lands, without being able to trace it to any well founded cause. Perhaps sentiments similar to those avowed by this noble Peer, may have influenced their conduct, and contributed to fix such immense tracts of the national territory in their present unproductive state. This, in fact, is

the most charitable reason that can be assigned, for their opposition to measures of such obvious utility. If meliorating and improving the waste lands were necessarily succeeded by such mischievous consequences, undoubtedly they ought to remain as they are, or be effaced from the map of Britain, as containing matter within them destructive to the public interest.

But as we do not view the subject in the same light with his Lordship, and consider a large moiety of the waste lands susceptible of material improvement, we look upon an increase of provisions as an important branch of political economy.—Under these impressions, we shall seize upon his Lordship's speech for the ground-work of this Number, and endeavour to make up for the deficiency of his friends.

We admit, at once, that the rent of land has greatly risen, and that the price of every article of provisions has also increased, notwithstanding the extensive improvements that have taken place, within the period of fifty years, over every part of this island; but it would be absurd to suppose, that, under this admission, these circumstances were produced by the cultivation of waste lands, or by the superior attention now almost universally bestowed upon the cropping of the ground; which, in fact, includes all that goes under the name of modern improvements. The proportion of the wastes, formerly unproductive, but now brought into a condition for carrying crops of corn and artificial grasses, has most assuredly augmented the quantity of provisions; and this quantity could not be lessened by the superior attention now paid to dressing and cropping of the old arable fields: the reverse must necessarily have been the fact: and if the circumstances of the country, *in other respects*, had remained as formerly, or if improvements had kept pace with the increase of luxury, and the increased numbers of the people, it is apparent, that as the means of subsistence were so considerably augmented, their value would consequently have sustained a great diminution.

Three causes have occurred, which effectually prevent improvements from producing a reduction of the price of provisions; these are, the increase of luxury, the increase of population, and a diminution in the value of money. The two first are real preventives; the last may be considered as merely nominal; at least, so long as the value of labour bears an affinity to the scale of prices at which the necessaries of life can be procured.

To a person in the least degree acquainted with the state of Britain in former times, the great difference in the mode of living among the majority of the people, would be a satisfactory instance, that a much greater extent of produce is now required to support an equal population, than what was necessary even within the short period of our remembrance. In the *first* place, The demand for butcher meat is at least twice as great as it was twenty years ago: this is confirmed, not only by general observation, but by the sales in the different markets, as well as the superior weight of the animals therein exposed. This increased demand has occasioned a greater quantity of land to be thrown into pasture than formerly; under which system it is evident, that a given space of land will not maintain one half so many people, as when employed in producing corn crops, and esculent roots. *2dly*, The increased number of pleasure horses, and those employed in hired carriages, arising from the growing prosperity of the country, occasions a consumption of much grain; which in former times, would have gone to the support of the people.

Hence it appears, that a greater space of ground is now required, not only for supporting the number of cattle and sheep adequate to the supply of the markets, but also for producing corn, so as the crops may be equal to the average demand. Had luxury arrived at its present height, without being preceded by an increase of culture, it is demonstrable, that the produce of the country, even in the best years, could not have supplied three fourths of the present extensive demand.

An *increased population* is the second cause which has prevented improvements from reducing the price of provisions. Upon this point, we are well aware, that several political writers entertain sentiments unfavourable to this opinion; and that it is scarcely possible to remove their objections, without an actual numeration. This has already taken place in Scotland, though perhaps not so correctly, in many instances, as could be wished; and the result fully confirms the general ideas formed by us upon the subject. But, to speak to the population of Britain. To whatever quarter we turn our eyes, we see an increase of trade, an increase of manufactures, and an increase of shipping for carrying on the coasting trade, and transporting our commodities to foreign markets. We discern public works of every kind going briskly forward, while a greater number of sailors and soldiers are

employed in the national service, than in any former war. Notwithstanding the immense numbers thereby taken from ordinary labour, no scarcity of hands is discovered for executing the most extensive territorial improvements; but every thing goes on as if the present was the most peaceable æra. When we compare these things with what actually happened during the American war, when labourers could not be procured, when foreign sailors navigated our merchant vessels, when the navy could not be manned, and when our army was constantly non-effective: We say, when we make such a comparison, the warrantable conclusion must be, that the population of Britain has of late rapidly increased, and that its progress has been uniform and steady, since the conclusion of the unhappy and unfortunate war with our ancient colonies.

Again, the alteration in the value of money has prevented improvements from reducing the nominal price of the necessaries of life; we say, the nominal; because, if a man will not give as much labour for sixpence as formerly, he is not entitled to receive the same necessaries for that sum as he formerly procured. It is evident that provisions have been lower, upon an average, during the present century, when compared with the value of money, (laying aside their rate at this distressing period, when a scarcity, unparalleled in the annals of our history, prevails, which, by the by, would have been greater without improvements), than for the century preceding. We know no better rule for ascertaining this matter, than a comparative view of the price of bread during each century, with the wages earned by the labourer or manufacturer, during the same period. Such a comparison will shew, that the latter, in the course of a century, has advanced full as much as the former; consequently, that the rate of rents, provisions, stock, &c. sagaciously stated by the Noble Peer at the meeting alluded to, as an objection to agricultural improvements, is merely imaginary; and that, in ordinary years these things will constantly bear an affinity to each other, if left to find their own level.

The division and inclosure of common fields and wastes, from the number of inclosure bills passed in Parliament, have perhaps increased the quantity of productive land in the kingdom, at the rate of a quarter *per cent. per annum*, for fifty years back; in other words, the land now in condition for carrying crops of corn and grass, exceeds what was in that state in the year 1750, at the rate of $12\frac{1}{4}$ *per cent.* If we add to this, the
augmentation

augmentation of produce arising from a superior cultivation, which may safely be calculated at the same extent, it will appear that Britain now produces one fourth more food for man and beast, than it did fifty years ago.

Now, if these improvements, so much complained of by the Noble Lord in question, had not been made, what would have been the inevitable consequences? Precisely these: either one fourth of the inhabitants would have been obliged to emigrate, or a quantity of provisions, equal to what is gained from the modern improvements, must have been imported from other countries, at an expence greater than the balance of trade in favour of Britain could possibly defray, and which in time would have impoverished the country. Under present circumstances, it is obvious, that a still greater portion of waste land ought to be brought into a state of cultivation, to meet the progress of trade, luxury, and population: and we venture, without fear of contradiction, to affirm, that whenever this extent of improvement accomplishes a depreciation of rents, or reduces the price of provisions below their ordinary level, that then the prosperity of Britain is on the decline; that trade and manufactures have met with a check; and that population is decreasing, from a want of employment to the usual inhabitants.

We have, in this Number, deviated from the line marked out in our first Paper; but before we described the different modern improvements, we thought it absolutely necessary to ascertain, whether or not these improvements contributed to promote the real welfare and prosperity of the country with which we are connected.

R.

FOR THE FARMER'S MAGAZINE.

A Rural Sketch of the County of Lancaster.

“Tempus in agrorum cultu consumere dulce est.” OVID.

It is easier to submit to the toil of travelling, than to turn travels to solid advantage. An intelligent, industrious mind, can never be a loser by a change of place and circumstances. Much individual profit may be reaped, yet little

may be added to the stock of public utility. Many of our modern tourists, amidst a multitude of pages, do nothing more than perform the part of triflers; they unhappily abound in verbosity of manner, to the neglect of unfolding stores of sense, and interesting occurrences, to the eye of the world; perhaps from a persuasion, that man seeks, at times, to be amused in the forest, no less than to be seriously employed in the fertile field.

During a residence of three months in Lancashire, a multitude of diversified observations were made, and shall be detailed without order or partiality, fresh and glowing as they were written on the mind.

Lancashire is one of the leading counties of England, meriting regard, not so much for extent of surface, as for the degree of population, and the active spirit of the inhabitants of all descriptions. According to the latest calculations, it claims 425,000 inhabitants, and 1,129,600 acres *. Notwithstanding a late prodigious decrease of people, Lancashire appears still to be inferior in population to Middlesex only.

A traveller is struck with surprise and sorrow, to observe so extensive, delightful a district, in an uncultivated condition, decked with invariable green. The love of pasturage prevails. Agriculture, the mother of a thousand conveniences and comforts, though not despised, is much neglected. The whole tract of land, low and fertile, is favourable to aration; but few fields are allowed to suffer or to enjoy the pressure of the plough. It is not by proper periodical tillage, but rather by perpetual rest given the grounds, that riches are expected. A park is covered with corn once in twelve years, or seldomer, if the old grass is not so deteriorated as to be unfit for pasture.

Manufactures and commerce completely triumph over agricultural pursuits. The factory brings more money than the farm. All the ingenuity, the zeal, the perseverance of man, are vigorously exerted to invent or perfect various arts of life; while the first, the simple art of operating on the soil, obtains transient attention. The same person cannot, at the same moment, both navigate the ocean, and cultivate the earth. Put Manchester and Liverpool together, you form another London. United, they may be considered not less the emporium of the west, than the metropolis is of the east of Britain.

The

* Middleton's Review of Middlesex.

The situation of Lancashire boasts of advantages, suited to the views of manufacturing and commercial men, which few countries possess. Mines of coal and fountains of water, navigable rivers and numerous canals, found everywhere, invite enterprising individuals to form a settlement. Washed by the ocean for many miles of coast, Lancashire can export multifarious superfluities, and receive in return all the articles, that necessity, curiosity, cupidity, or caprice, can demand. External intercourse with foreign nations is easy; internal navigation is commodious. A nobleman of immense fortune *, an example to all of the same high order, devotes his attention to trade; and, by means of a canal of his own, stretching at least forty miles without a single lock, covered with vessels of various sizes, moving in different directions, facilitating interior communication, increasing the general prosperity, carries on an extended lucrative business. The industry of the people, greatly favoured by nature, nourished by the countenance of superiors, is displayed and manifested, not in raising rural productions, but in working up raw materials.

The existence of *tithes* is an effectual obstruction to all rural improvements. The farmer will not sow, when the clergyman reaps. If a cultivator, of inferior capital, can avoid a partial, oppressive, odious system, as is that of taking tithes; if, by a different mode of management, he can lawfully prevent a stranger from devouring a tenth of the fruits of his labours; if he can secure to his family an exclusive right to all the advantages his industry hath acquired, how can he be blamed? What does he do more than every other man would attempt? Christianity, with all its able, eloquent, faithful, public advocates, ought to be supported, but never by the oppression of a particular class of respectable, industrious citizens. The patron ought to be made responsible with his own funds, whenever a clerical man is imposed on a parish, in direct violation of the best inclinations, the acknowledged rights, the noblest interests of the people. There are many neglected starving curates in England; but, if the lands are always unsown and unreaped, the writer should not be surprised to see starving vicars too, and rectors who could no longer afford to spend their usual pleasurable months at Bath. Tithes produce two unhappy effects, creating a rooted aversion to a national church, and depressing the spirit of agricultural adventurers. A mind

* The Duke of Bridgewater.

inflamed by animosity, exasperated by prejudice, will suffer the best fields to be overrun with brambles, rather than contribute, by constraint, to an obnoxious tax, imposed to support the clergy. While the intolerable system is not discontinued, we may expect to see agriculture declining, corn decreasing in quantity, enhanced in price; seasons of scarcity periodically returning, and our country left to the mercy of foreign markets. The tithe-laws and the game-laws are enormous national evils, that cannot be too speedily abolished.

The shambles of Lancashire demand immense supplies, arising from the increased crowded population, operating in favour of grass more than of corn. The extravagant price of provisions in February, were equally unprecedented as in North Britain, irritating the passions of the multitude, and producing, in various places, the most tumultuous assemblages. Several of the leaders have been apprehended, imprisoned, and must stand trial at the assizes in Lancaster.—The rent of land in the immediate vicinity of Manchester is six guineas an acre. A.

FOR THE FARMER'S MAGAZINE.

Letter from a Scots Farmer, during a Tour through England.

LETTER III.

My last having concluded with our arrival in the capital of the British empire, I shall now endeavour to give you a hasty detail of the various circumstances that came under our observation during the few days we remained in that overgrown city.

The first thing that struck my attention, upon issuing from our lodgings, was the immense multitude of people, posting along as if they were walking or running for wagers, and the great throng of carriages of all descriptions which filled every street. Custom, or law, has, however, ordered these matters so well, that the greatest regularity is constantly preserved. By taking one line, the foot-passengers
upon

upon the pavement follow each other like foldiers upon a march, while those going in a contrary direction, by following the same rule, pass on without the smallest interruption. In the driving of carriages, the same plan is strictly adhered to, it being no uncommon matter to see the *Strand* filled with two lines of machines from the one end to the other.

Here it may not be improper to say a few words concerning the admirable police maintained in London, which is infinitely superior to that of any other city in the kingdom. I had recently perused Colquhoun's treatise on that subject, and certainly had formed very different ideas from those afterwards realized by observation and experience. During the time of my residence, I did not discern the least inclination to rioting or breaking the peace; and the streets, at night, were as quiet and undisturbed as those of our northern metropolis. In this respect, as well as in many others, London holds out a pattern to other great towns, where, though the population is infinitely less, their police is much more defective.

After fauntering through the streets at the west end of the town, examining Westminster-Abbey and other public buildings, we arrived at St James's palace, just in time to see the King step out of his carriage at the gate. His Majesty is a stout healthy man, of a florid countenance, rather corpulent; but as he takes a great deal of exercise, we have every reason to hope that he will long be preserved in this world, *as a blessing to his subjects, and a safeguard to the welfare and happiness of Europe.*

Passing by the public office in *Bow-Street*, we stepped in, and had an opportunity of witnessing the celebrated Mrs Jane Gibbs lodge her accusation against a decent-looking man at the bar, for robbing her in Kensington-gardens. She appeared unconnected in her deposition; and, notwithstanding every exertion of the magistrates, could not be kept to the point during the examination. Charitable people attributed the eccentricity of her behaviour to the agitation of mind occasioned by such a public appearance; and the magistrates, after making every attempt to ascertain the truth, were under the necessity (the accuser's character being then unknown) of committing a man for trial, who was in reality innocent.

As all the world flocked at that time to see *Sheridan's Pizarro* at Drury-Lane, we of course followed the multitude, and, with difficulty, procured access. *Barrymore*, who filled

filled the character of Pizarro, was the best picture of a villain I ever witnessed, and did strict justice to his part. Upon the whole, what occurred to me, upon seeing this popular representation, was, that a great deal of its success was owing to the painter and tailor: indeed, the scenes and dresses were excellent. Rolla's famous speech to the Peruvians favoured much of bombast and declamation: perhaps, the nature of the times has given a degree of currency to this and several other passages, which might otherwise have been received, without such extraordinary marks of applause.

We observed, with much satisfaction, the great dispatch used in the courts of law, which, if imitated in Scotland, would inevitably beggar three fourths of the profession. In the Court of Common Pleas, during the short space of a single hour, we saw a cause of considerable importance determined, and a fresh Jury put into the box. Every attention seemed to be paid to the business by the Judge (Sir Giles Rooke), by the Counsel on both sides, and by the Jury. The several forms of opening the cause, examining five or six witnesses, charging the Jury, &c. were gone through in less time, than would have been taken in some other Courts to determine upon the previous point, viz. the relevancy of the indictment.

It was our good fortune to be in London when the King inspected or reviewed the volunteer corps, (any of these terms are equally applicable); and as such a sight in the city was novel and extraordinary, the public curiosity was awakened to the uttermost. The police, as usual, took every step to prevent disorder; and the principal streets through which his Majesty was to pass, were covered with sand in the course of the preceding night, while barricadoes were erected at the different entrances, to prevent carriages from passing—a very necessary precaution. His Majesty being to enter from the Surrey side, by Blackfriars Bridge, we went over early in the morning to Sir Ashton Lever's museum, where, from a balcony, we had a full view of the Royal Family, and their attendants. I must premise, that the procession came up at a *hard* gallop or canter, a detachment of the horse-guards clearing the way; next followed the King, upon his white charger, with the Duke of York on his right, and Kent on his left, attended by a great number of general officers, while another detachment of horse-guards closed this part of the procession. Behind,

were

were a mixed multitude of all descriptions, whipping, spurring, and driving on at full speed, without the least order or regularity. In short, I could compare this part of the procession to nothing else than your holiday hempies, who scamper along the back-sands at Leith races, during the interval between the heats.

At Blackfriars Bridge, the King was met in state by the Lord Mayor, Sheriffs, and other officers of the municipality; but his Lordship's horse was badly trained for facing such a numerous assemblage. We followed as fast on foot as we were able; but, as it was impossible to keep up with his Majesty, we proceeded no farther in that direction than Leadenhall-street, which was filled with the East India volunteers. Learning that the chief exhibition would be in Finsbury-square, we made the best of our way to that place, which was crowded with troops and a multitude of people, while the windows of every house were occupied by the female sex. We forced our way up to the head of the square, where the procession was to enter; and, by getting hold of the balustrades, I had the finest view imaginable. Figure to yourself a vast body of troops drawn up in the square; fresh bodies constantly marching along the street, while the scene was enlivened by numerous bands of martial music, and the loyal huzzas of an immense multitude. The weather, which, in the morning, was but lowering and dull, now changed for the better: the sun shone bright, and a gentle breeze prevented the heat of the place from being disagreeable. Under these favourable circumstances, his Majesty entered the square, and was received with such bursts of applause, as could not fail to animate his royal breast with the most delightful and grateful sensations. Thousands of white handkerchiefs in an instant were waved from the windows, while the spectators below testified their heartfelt joy by repeated and general acclamations. The King immediately took off his hat, and bowed to the people; and, during his march round the square, (which was conducted with great deliberation), was joined by the Prince of Wales, at the head of the Artillery-company of the city, who afterwards rode on his Majesty's right hand: the procession then went on to the Lord Chancellor's, where the Royal Family breakfasted, instead of taking that refreshment at the Bank, as was expected by the Directors. Satisfied with what we had seen, we returned to our lodgings.

His Majesty appeared to great advantage upon this occasion, as he is an excellent horseman; and, what is more to his credit, the warm and grateful reception which he uniformly experienced, evidently affected him in a feeling manner. John Bull himself was highly delighted with the great honour of this visit—an honour never bestowed upon him by any of the preceding Sovereigns. It was curious to hear the conversation in the streets: “What do you think,” says a worthy citizen to his friend, “of the King’s goodness? He absolutely took off his hat to my Lord Mayor at Blackfriars Bridge.” “Did he indeed!—Oh, he is a fine fellow—huzza!!!”

We understood, it was past five o’clock before the whole affair was over; and a fatiguing one it must have been to those immediately concerned. Our friend — of the St. Martin Le Grand volunteers, assured me next day he was quite exhausted before they were dismissed, having been upon the ground in Hyde Park from 8 o’clock A. M. without any refreshment. The error lay in calling out the corps in the west end of the town so early; for a very small degree of foresight might have taught the commanders, that the previous procession would consume a good deal of time.

The business of the day has confirmed my opinion of the goodness of the London police; for I did not hear of a single accident having happened; nor did the least degree of confusion prevail in the streets, further than what might naturally be expected from such a concourse of people. The erecting of barricadoes was an excellent preventive, and the covering of the streets with sand, proved of much utility. In a word, the day passed over in the most agreeable manner; and, at the conclusion of the business, the multitude retired peaceably to their homes, without kicking up a dust, as is commonly the case in a certain city upon public rejoicing days.

Let me now say a few words upon agricultural subjects.—I thought it but the least I could do, to pay my respects to the noble President of the Agricultural Board; and, to speak in a court figure, was most graciously received. His Lordship, after talking a little upon general points, inquired if I was acquainted with the Kentish husbandry (wheat and beans alternately), as he wished much to have it generally introduced. I replied, that such a system undoubtedly deserved serious attention upon the soils calculated for producing these grains; but that I had good cause to believe, that the strictest care

care bestowed upon the working of the land, could not prevent Summer fallow from being necessary, as the feed furrows, for both crops, were generally given at a period of the year, when the ground was not in the most favourable condition for receiving benefit; though I had not a doubt, but that, if the beans were sufficiently cleaned, the line or course of crops might thereby be extended, providing the ground was duly manured. His Lordship then mentioned, that he thought, in the bean husbandry, the intervals of the drills should not exceed eighteen inches; and that a hand-hoe, invented by the celebrated Mr Ducket, which, in the hands of a woman, was capable of cleaning one acre per day, was the best instrument to be used. I remarked, that cleaning an acre per day by one hand, was an uncommon circumstance; as three women would hardly, in that time, go over an acre of turnips, which were generally raised upon softer soils, and had received a greater extent of culture; and that, with submission, I was of opinion, if beans were meant to be raised upon the great scale, that no mode of working them was equal to the horse-hoeing husbandry, under which the business was performed at less expence, and in a completer style, than it was possible to execute upon loams and clays by hand-work. His Lordship referred me to the office for a sight of Mr Ducket's hoe, which, he politely observed, would contribute to produce a change in my sentiments.

His Lordship appeared to possess a good deal of information respecting practical husbandry, and displayed a degree of keeness when discussing the different subjects which occupied our conversation.

I next went to the office, but was sorry to learn that the bean-hoe was returned to Mr Ducket, for some necessary alterations; so my prepossession in favour of the horse-hoeing system continues unremoved. The clerks very civilly shewed me the innumerable models of husbandry implements belonging to the Board, which, if preserved from destruction, will, in a couple of centuries, prove an immense gratification to the antiquarian.

I have been out at our friend — in Hertfordshire, who has a snug little box, and a small property in that county. He keeps the latter entirely in grass, which certainly saves him a deal of trouble; and I do not think profit seems to be his object. The Hertfordshire plough, for strength and size, exceeds every instrument in the kingdom for breaking up ground: our old Scottish plough is but a child, in comparison
with

with this giant. Five horses are usually employed in the draught; and yet, strange to tell, the furrow we saw did not exceed four inches in deepness! I have seen land ploughed full deeper with one horse.

I saw an excellent mode of putting up a hay stack, which, I think, deserves to be generally known. I need hardly tell you, that they bestow much more pains, in the vicinity of London, to win hay green, or in the sap, than is customary with us; and they are right; for, by letting it remain uncut till the blade is hardened, or the moisture nearly exhausted, the value of the herbage is lessened, and the land injured. To preserve the juices, it is cut very early, perhaps a fortnight sooner than we would think it ready for the scythe; it is put into small cocks as fast as possible, and stacked with all convenient speed. The mode of stacking which I saw, was this.—Two large posts were perpendicularly erected, at a distance from each other, equal to the length of the intended stack; a cross beam was laid, stretching from the one post to the other, upon which a large sail or canvas was hung, intended as a covering to the stack during the time of building; and the hay was brought in small quantities, according to the state of the weather, or the degree of winning it had received. By this means, whenever any part was got into condition for keeping, it was instantly secured, while the stack was preserved from injury, by the cover or umbrella which hung above it. Another important circumstance was, that very little treading was required, as the stack settled gradually, and by this means was not exposed to an *over-sweat*, which is highly destructive to all grasses, particularly those of the meadow or natural kind. In short, this mode appeared to me one of the best that could be devised for winning and preserving hay, in our variable and unsettled climate.

You may believe, that Smithfield and Marklane would engage my attention in a particular manner. Such a number of beasts, sheep, lambs, calves, and swine, were presented in the former for sale, that the first thought which occurred to the mind was, Where will people be found to eat you all? The market is conducted with surprising regularity; there not being one half of the confusion usually attendant upon our petty county fairs, where the fiftieth part of the business is not transacted. The beasts are all tied up by the head to strong rails, and arranged in a line according to their size, and, in many instances, according to their respective breeds; which facilitates business very much. The sheep, &c. are all

all enclosed in hurdles: in a word, the police of the market is managed with the greatest judgment and regularity.

The corn exchange in Marklane is a busy place, where almost as much noise prevails as in your Outer Parliament House. This is a sample market, where the grain is shown in small bags, about a peck each, placed upon tables, for the inspection of purchasers; but the fact is, the place is too small for such extensive dealings.—Many of the samples that I examined, were of inferior quality, and far from being well dressed, particularly those of wheat and oats, the last of which were generally exceptionable. The beans were of excellent quality, much surpassing any we have in Scotland, which I attributed to their being raised and harvested under the influence of a hotter sun.

It is surprising how adroitly the horses are managed in the large drays, and other carriages used in the streets of London, without a hand being laid to the rein, but all executed under the influence of the whip and the voice. No fewer than four powerful horses are ever yoked in a team; and they all go in a line with wonderful steadiness. I have seen them take a turn into a narrow lane, where the carriage had scarcely room to move, without more pains being used by the driver, than would have been required with one of our single-horse carts.

It is unnecessary to trouble you with a description of St Paul's Cathedral, the Tower, and other public places which we visited, as these subjects only afford a repetition of what has been said a hundred times before. The wharfs are ill calculated for carrying on the trade of the emporium of the world, being little better than large back doors into the warehouses where goods are deposited. We heard with satisfaction, that several plans were in contemplation, for rectifying these defective accommodations, which, like every other mode of improvement in this country, has been selfishly opposed.

We are just going to set out upon our homeward route, which we take through Essex, Suffolk, Norfolk, &c. As these eastern counties are seldom visited by Scottish travellers, I hope something at least new will occur in our progress, which, if it does not add to your stock of knowledge, may contribute to your gratification and amusement. I am, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Flax Husbandry.

GENTLEMEN,

THE culture of Flax is such an important branch of the rural economy of Britain, that I can hardly help expressing my surprize at its being hitherto so much neglected. It is evident, that a considerable proportion of our soil is naturally well calculated for the production of this article, which is the foundation of one of our first and most valuable manufactures: and it is truly wonderful, while immense sums have been annually, for a great space of time, transmitted to the Continent, for the purchase of a commodity which cannot be wanted, that we should not arrange our own economy in such a way, as to produce a quantity necessary for supplying the home manufacture. This surprize will be augmented, when it is considered, that facts fully ascertain, that seed of a proper quality can not only be raised upon our own fields, but also, that flax, of sufficient strength and fineness for every branch of the linen manufacture, may be produced; which, consequently, if the different processes of management were properly attended to, could not fail to be succeeded by the most important national advantages.

I am aware, that the generality of farmers look upon flax as a robber, and, consequently, consider its growth as injurious to British agriculture. I humbly believe, that, in one respect, the opinion generally entertained will not be supported by facts; for, if flax is pulled at a proper period, that is, when the seed has not arrived at maturity, it is not severer to the ground than any of those classed under the head of leguminous crops, and less so than a white crop of corn. I acknowledge, that a field under flax gives no return of dung to the farmer for that year; but still, under this acknowledgment, the culture of the article is not more deteriorating than where hay is raised, without being consumed on the premises. After all, so much of our meadow and richest lands may be employed in producing flax, without any perceptible diminution of the quantity of dung required for the arable fields, that I can be under no difficulty in maintaining, that a quantity sufficient for supplying the consumption of the country, may be raised at home, without
affecting

affecting the value of the soil, or lessening its productive powers.

It may be argued against this, that the experiment has already been tried, and that, even with the aid of public bounties, the cultivation of flax has not arrived at perfection, nor has the quantity increased much for a great number of years. I acknowledge the force of these objections; but am not so ready to yield the principal point, viz. that our lands are not capable of producing what is requisite for supplying our own manufactures; and that the growth of the article may be extended with advantage to the farmer, without hurting his fields in a perceptible manner. If these things be conceded, I humbly apprehend, that the want of success hitherto, must be attributed to a defect in the general management, and to several prejudices which have operated against the extension of this branch of rural economy.

I am happy to notice my sentiments respecting the value of British flax, fully corroborated by the writer of a letter herewith transmitted to you; and, I believe, his remarks upon the subject are applicable to the practice of nine tenths of Britain, so far as concerns the culture, growth, and after management of flax. An appendix is also sent you, which shows the great national advantages attending the growth of this article. These papers were received from Sir John Sinclair, Baronet, to whom Britain lies under innumerable obligations.

One thing more, and I am done. If, at any period of our history, the raising of flax was deemed of importance to Britain, it now deserves a greater degree of attention than ever, for these reasons:

1. On account of the increase of our manufactures, which require a greater supply.

2. On account of the uncertainty of procuring the usual supplies from foreign countries.

3. On account of the promising appearances of the flax-mills for spinning, which are brought to such perfection as to admit a greater extension of the linen manufacture, consequently will require a great deal more of the raw article; and British flax is the best adapted for mills, of any I have seen. I am, &c.

Your, &c.

N.

Extract of a Letter from a Linen Manufacturer, to
Sir JOHN SINCLAIR, Bart.

Dated May 11. 1795.

SIR,—Were an apology necessary for the trouble this may occasion, I should be much at a loss how to make one, that could be accounted proper; but as there can be no offence in communicating a few hints, respecting the improvement of any production of the earth, more especially those of our native soil, I forbear offering any apology for the liberty now taken.

Nor can I suppose the conveyance of such hints, confirmed by practical experience, will be the less acceptable for being expressed in language familiar to those who are bred to cultivate the soil, whose ideas and conversation, like their daily labour, have nothing to recommend it but simplicity and antiquity; for, in every other respect, their ideas and conversation are, in general, the least improved of any description of men in the empire, and to these they adhere with as much obstinacy as they do to their antiquated customary modes of cultivation. In no part of culture, this is, or can be more conspicuous than in that of hemp and flax, which, in the course of more than a century, has not received any visible improvement, although they are every year becoming more important, as materials for numerous and various branches of our manufactures.

In the north-east part of the county of Cumberland, where I resided for several years, and was concerned in carrying on a branch of the linen manufacture, I endeavoured much to introduce a different mode of process in the growth of flax, and every part of the process it must necessarily go through before its being fit for the heckle. For this purpose, for several years, I had from three to five acres under flax. My principal intention was, to show a superior attention in the choice of the ground, in the preparation previous to its receiving the seed, in the weeding of the flax when growing, in pulling it at a proper time, preserving the seed, watering the flax, spreading it to whiten the bark or skin, for drying and breaking the bone or stem, and separating the shoves from the flax, &c.; all of which were the direct reverse of the common modes in use, and which I endeavoured to render as conspicuous as possible, in order to encourage, by example, a deviation from the customary processes in use. But, for upwards of nine years, neither example, nor the experience of the good

good effects which my management had in that time produced, were sufficient to gain any imitators in the neighbourhood.

As I managed the dressing of the flax and spinning of the yarn for the manufactory in which I was concerned among them, I took every occasion to converse with, and show the spinners the difference betwixt the foreign flax we used, and what I grew, in respect of strength and other advantages, with respect to the durability of cloth made from my production, and that made from foreign flax; and they were, from their own experience, convinced of the superiority of the foreign flax to what they produced on their own land; and every farmer, as well as cottager, cultivated more or less every year.

They had hitherto been under the necessity of purchasing some foreign flax, in addition to what was produced from their own growth; and at length they were so well convinced of the superior properties of mine, that they would purchase no other when I had any to sell. I had at last the same success with the sale of my seed, although, at first, so far were they from purchasing it, that they would not even accept the gift of it; only those who could not afford to pay from 3d. to 4d. a pound for foreign seed, on them I prevailed to accept of some; and, by instructing them how to use it, I at last succeeded so far, that no other seed could be sold at market while I had any to dispose of. My process then began to gain ground also among those who could afford to make the experiment.

Yet it is with me a matter of doubt, if there remains in that part of the county any vestige of it. Although I had annually as much seed as was necessary for next year's sowing, and sold as much, after the quality was perfectly understood, as paid land rent, and every expence till the flax was put in the water; yet, owing to the want of experience in those I was obliged to employ in the subsequent steps, and their intractability, my flax came to the heckle as dear as the foreign flax did. My only advantages were in the superior quality both of flax and seed, and having experimental proof, that, under proper cultivation, we might in a few years produce flax nearly sufficient for the supply of our linen manufactures, and seed for sowing, for oil, and great quantities for exportation, and both of a much superior quality to what we usually import, especially the seed.

Upon perusal of this, should it appear to merit your notice, and you condescend to signify a wish for a more detail-

ed account of my method, I will think myself honoured by your commands, and will, by letters or personal attendance, at your option, explain, in the minutest manner, to the best of my slender abilities, the whole process, from the seed to the loom.

I conclude, as I began, without any apology, and with subscribing myself, Sir, Your obedient humble Servant.

P. S.—I was in my youth bred to the linen manufacture, and, in maturer years, carried on the manufacture of different articles in that branch on my own account.—To make the raising of flax an universal or national pursuit, it will be necessary to give pecuniary encouragements; not in such manner as has been done, for the largest quantity raised by one person in one year: this is an ostensible, but not a real or well applied encouragement; nor will it ever promote any real national advantage. Some persons of fortune may, for applause, sow a quantity, for the purpose of gaining the premium for that year only, as the premium is given on the quantity grown, but not for preparing it for use; while, perhaps, neither seed nor real flax is produced by the attempt. The premium, therefore, should only be given for flax and seed fit for the manufacturer, and proportioned to the quantity and quality so produced; to be continued annually for a certain number of years; or (should the expence not be deemed too great) till the practice become general. Let the bounty on linen cloth be withdrawn, and applied to this more necessary and beneficial pursuit; as such bounties never are of any use to our manufacturers, but are a considerable expence to the public.

None but the countries who at present supply us with hemp and flax, are in the least benefited by this well meant, but ill judged bounty; for, so long as they know we must apply to them for these materials, they will add to the price of the articles as much every year, as will more than counterbalance the end for which such bounties are given; and, by the advance on the price to our manufacturers, they will still be capable to undersell us, both in foreign markets and our own, in the same manner as if these bounties had never been given. But, the instant they find we give premiums for the home production of these materials, they will lower the price and duties paid upon them, in order to prevent a rivalry which would materially injure them, and benefit ourselves.

AN APPENDIX, shewing the great National Advantages, by the Employment of a number of People, during the Autumn and Winter Quarters, and other parts of the Year, which the Encouragement of the Growth of FLAX will produce, with the number of People One Acre will employ.

<i>Average Expenses of One Acre of Flax.</i>	<i>Stones of Flax 14 lb. Weight. Average produce.</i>	<i>Produce of Flax from the 30 Stones.</i>	<i>Value per lb.</i>
Rent of the land - - - - -	£. s. d.	lbs. d.	£. s. d.
Ploughing, sowing, &c. - - - - -	1 5 0	90 at 10	3 15 0
2½ bushel seed - - - - -	0 10 6	170	5 13 4
Weeding - - - - -	0 18 0	40	1 0 0
Pulling - - - - -	0 4 0	30	0 12 6
Carriage, and getting in the harvest - - - - -	0 3 0	60	0 12 6
Tithes - - - - -	0 15 0	30
Poor rates, highways, &c. - - - - -	0 5 0		
Threshing - - - - -	0 5 0		
Watering, carriage, and spreading - - - - -	0 14 0		
Braking and swingling - - - - -	0 10 0		
	1 14 0		
Deduct	L. 7 3 6		L. 11 13 4
The value of 12 bushels of seed, which is frequently sold to the oil mill, for the making of lintseed oil - - - - -	4 4 0		
	L. 2 19 6		L. 2 8 4
		Deduct	
		Heckling - - - - -	1 0 0
		Value of flax brought down - - - - -	8 5 0
			9 5 0

APPENDIX CONTINUED.

Produce of the Acre in Yarn.	Each Lea of Yarn is 800 Yards.	Value per lb.		Produce of the Flax in Cloth.		Value per Ell.	
		lbs.	£. s. d.	Of cloth	elli. d.	£. s. d.	elli. d.
Of Linen yarn, 10 Lea	-	40 at 20	7 10 0	-	-	145 at 19	11 9 7
Ditto	-	170	11 6 8	-	-	197	13 18 10
Ditto	-	40	12 2 0	-	-	45	2 12 6
Ditto	-	30	6 1 2	-	-	28	1 10 4
		60	4½ 1 2	-	-	45	2 1 3
			L. 23 1 8				L. 31 12 6
Deduct							
Spinning the different yarns	L. 11 8 4						
Working the flax brought up	9 5 0						
			20 13 4				29 0 6
			L. 2 8 4				L. 2 12 0

N. B. The manufacturing part of the produce will employ 15 perfons full three months, the different works being thrown on an average.

The above statement will be subject to great variations, according to the difference of crops.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Floating of Land.

GENTLEMEN,

AMONGST the many pertinent and sensible remarks in your review of Mr Middleton's Survey of Middlesex, I was surpris'd to find that the reviewer should think Mr Middleton speaks in rather too high terms on the subject of irrigation, when he states, 'that forty acres of good water-meadow will support, in the greatest luxuriance, 500 Wiltshire ewes and lambs for six weeks, from the middle of March to the first of May.' On this quotation from Mr Middleton, the reviewer observes, 'that it exceeds any thing he has met with respecting the produce of grafs land; for it is only the best meadow that will feed five ewes and lambs per acre, from the middle of March to the first of May; and the greatest part of the pastures in the kingdom will not support near so many.'

As the produce of watered meadows certainly very far exceeds the produce of the best pasture land, or the best *unwatered meadow* in the kingdom; and as the floating or watering of land is one of the greatest improvements that can be introduced into any country, when the rearing or feeding of stock is an object; I would beg leave to point out to the attention of the reviewer, the following statements of the produce of watered meadows by different authors.

Mr Davies, in his Agricultural Survey of Wiltshire, on the subject of Watered Meadows, states, 'that *one* acre of good meadow will support 500 Wiltshire ewes and lambs for one day;' consequently, forty acres will support the above stock for forty days, which is only two days less than in the statement given by Mr Middleton.

Mr Wright, in the second edition of his treatise on Watered Meadows, gives the following instance of the produce of a meadow in the neighbourhood of Cirencester. 'It was one which had been watered longer than the oldest person in the parish could remember, but was by no means the best meadow upon the stream, nor was the preceding Winter favourable for watering. It contains six acres and a half. The Spring food was let for seven guineas, and well supported

ported near 206 sheep, from the first of March till the beginning of May; the hay was sold at thirty-two guineas, and the aftermath for six guineas. A meadow of seven acres, the whole crop of hay on which had been sold for 2l. before it was watered, has, ever since it has been laid out as a watered meadow, been let at the annual rent of 3l. per acre.'

In Mr Wright's third edition, is the following account of the product of a meadow:

'In order to make the most of the Spring food, the proprietor kept the grass untouched till the 2d day of April; from which time he let it to the neighbouring farmers, to be eaten off in five weeks, by the under mentioned stock, at the following rates per head: A sheep, 10d. per week; a cow, 3s. 6d.; a colt, 4s. The quantity of land is eight acres.

107 wedder sheep, one week	L.	4	9	2	
8 cows, ditto	-	1	8	0	
4 colts, ditto	-	0	16	0	
		L.	6	13	2
					5 weeks.
Total of 5 weeks	L.	33	5	10	
3 colts, 3 weeks, to be added		1	16	0	
		L.	35	1	10
					or 4l. 7s. 8 ^o / ₁₂ d. per acre.

After being fed as above, the hay crop was, as usual, about fifteen tons, and was six weeks in growing.'

Since such are the immense advantages to be derived from the floating of land, and that, wherever there is a considerable stream of water, many acres may be thus highly improved, I think extracts from the treatises of Mr Wright, on the art of floating land, and from Mr Davies's account of the art, in his Survey of Wiltshire, might be introduced with great propriety into your valuable Magazine.

Yours, &c.

S. E.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Observations on Expences of Farming; on Manorial Claims; and on Improvement of Entailed Estates, &c.

GENTLEMEN,

I HAVE perused the first Number of the Farmer's Magazine, with much satisfaction. The Introduction is a masterly composition; so are many of the communications.

The spirit of investigation, this publication may raise, cannot be disagreeable to the publishers; it could therefore have been wished, in place of *the annual charge attending a plough and two horses*, they had mentioned the quantity of land, of a particular kind, the labour, the expence, and the produce, that one might see what profit should reasonably be expected. As it stands, this is only part of an account; and most of the articles may be said to be paid by the farm itself, or furnished by it, which amounts to the same thing*.

There is another thing may probably appear very simple to many of your readers, the want of knowledge of which, has, last year, caused a good deal of loss, viz. *the best mode of preserving apples through Winter*. This, the people who deal in large quantities must certainly know: an account of it would be agreeable to many of your readers.

As to *manorial claims*, I am afraid your correspondent has only looked at one side of the picture; and as he admits he has not gone to the origin of them, his hints must be defective: He does not even seem to look forward with much penetration. As to the *game*; admitting, for the sake of discussion, that all the game-laws hitherto enacted in favour of proprietors,

Remark by one of the Conductors.

* If the account presented, p. 46, be correct, (and we believe it is near the truth), what is said above, by our respectable correspondent, is rather out of place. The *Rural Economist* professed to give no more than the annual charge of a plough and two horses, and his statement includes every article: so cannot, with the least propriety, be considered as "*only part of an account*." That several of the charges are for articles furnished out of the farm produce, is no objection; for, if not consumed in this manner, they would have just drawn as much money at market. It might, with equal truth, have been alleged, that a farmer pays nothing for his farm, when the rent is delivered *in kind*.

proprietors, were abolished; and that a new legion of Nimrods were created in the farmers and their sons; and that this noways abated their industry in farming:—How could the proprietor, who was a sportsman, be prevented from conditioning with his tenant, that he reserved the game to himself, or to such other gentlemen as might have leave in writing from him? This, every landlord would immediately do, and with more reason than excluding assignees and subtenants; for, though power were granted both to assign and sublet, still would the principal tenant be liable to pay the rent. With regard to *copy-holds*, these are analogous to our *feu-holdings*. Now, as to these, the lord of the manor, having been the proprietor, had assuredly a right to grant these (which are neither more nor less than perpetual leases) on any conditions he chose. The fines on the entry of heirs, are therefore equal to fines on renewal of leases to sons of tenants. *Milljokes* or *multures*: When the lands are sold with this burden, they sell so much cheaper: when the lands on which the mill stands change masters, a greater value is given on that account. *Wastes* must be divided according to the value of the interests of those who have right. *Minerals* are accounted for, in being claimed by the lord of the manor, from his reserved right of property. If, indeed, the Legislature should judge it beneficial, to cause all or any of these claims to be valued at certain rates, and ordain the lord of the manor to sell, and the copy-holder or feuar to buy, it is uncertain if this would give much satisfaction; and to give an option to the latter, would not be embraced. Witness the few rights of patronage purchased by the parishes, in the beginning of this century, on a similar option. Neither would a rent-charge, or additional feu-duty, in place of these, where neither of the parties inclined to purchase, please much better. And perish the pretended reform, that would rob any honest man of his right, by taking it from him without a compensation! *

To

* While we applaud the spirit of the above exclamation, we must remark, that the advancement of the public good renders it necessary, upon many occasions, to sacrifice the interest of individuals. If Henry VIII. and the Lords of the Congregation, had acted according to our correspondent's principles, the Reformation would not have been introduced into these kingdoms; nor would the glorious Revolution of 1688 have taken place. The fact is, that every law for improvement, injures some individual or other; which might be exemplified by innumerable instances of legislative interference, was the point in the least degree questionable.

To show the reader, that the writer of these sheets is no enemy to the improvement of the country, or to an amendment of the laws for that purpose, he begs leave to suggest the following considerations as to *entails*. The power allowed to heirs of entail to sell, for the purpose of redeeming the land-tax, was highly proper. Had it been extended to all the public taxes, there would have been no harm; could a plan be contrived, by which it were certain the money would be applied to that end. To allow them to borrow a sum sufficient to purchase an annuity equal to these, on giving proper security to the clerk of entails, that the annuity was to be so applied, would possibly answer the end; or to borrow a sum, which, lodged with their banker, the interest should be adequate to the purpose, security always being given for the proper application, as above: for, although the entail might provide against the extravagance or facility of the heir, he must have been subject to the taxes, had he been able to perpetuate his life, as well as his estate; as he could have had no right to lock up his funds from the service of the public, to which he must have contributed, if alive. In fact, the statute for the improvement of lands under settlements of strict entail, has not been found to answer the end; because it required the heir of entail to lay out the money, in the first place, which he generally cannot afford to advance; and, being little other than a life-renter, cannot borrow, as few creditors choose to lend on assignment to his claim against the next heir. To allow him to borrow, on a petition to the Court of Session, with a specific plan and estimate of the intended improvements, and intimation of the petition to the next heir, and on caution to the satisfaction of the clerk to the register of tailzies, would tend more to the improvement of the estates, and be perfectly safe, if there were a statute obtained to authorise the measure. And this clause, of caution to the satisfaction of the clerks in office, is perfectly customary in Scotland, in judicial sales, in removings, &c. &c.

Wishing your publication all manner of success, I am,

Your most obedient servant,

MILONIDES.

FOR THE FARMER'S MAGAZINE.

Short View of Agriculture in Russia.*

IN the vast extent of territory now included in the Russian dominions, the people who have, from time immemorial, attached themselves to agriculture, (however rude, and with whatever success), are the *Russians*, properly so called, the *Poles*, the *Lithuanians*, the *Lettes*, the *Finns*, and the *Esthonians*, who dwell conterminous to one another, in the N. W. quarter of this great empire. As the first of these, however, compose the chief and most numerous class, the following particulars must be understood as principally confined to them, with this preliminary observation, that in the whole stretch, from east to west of the Russian territory, there is hardly any part susceptible of cultivation, beyond the 60th degree of north latitude, and even to this extent only in the western parts, as the frigid region extends farther and farther south, the more easterly we go, till, at the point of Kamtschatka, on the shore of the American Ocean, cultivation is impracticable beyond the 51st degree; thus, leaving a tract of about 160,000 square miles bound up in eternal sterility, frost and snow.

The chief implement of Russian agriculture, is the *fork* or *hook-plough*, described as having two ploughshares fastened to a forked board, and is usually drawn by one horse, or by two oxen; and is held by a lad of fifteen, who drives at the same time, but making a furrow of only $1\frac{1}{2}$ inch deep. This is used generally on lands that are in constant tillage; but when new grounds are broken up, what is called the *knife-plough* is employed, and which, after all, goes only about half as deep again. At other times, it should appear, that the land, in this case, is ploughed twice, first with the *knife-plough*, cutting the turf into slices, and then with the *fork-plough*, at which time the ploughman must turn the furrow over, as it rises, with his foot; from which it may be inferred, that this simple implement does not possess that power of itself, but does probably operate in a similar manner to the *scrape-plough* in Britain (drawn also by one horse), which is sometimes

* This is collected from the 3d Vol. of *Tooke's View of the Russian Empire*, lately published. A work of great merit, and abounding so much in matter well chosen, and so well arranged, as almost to preclude abridgement.

sometimes used in cutting up the weeds in the intervals of drilled crops. The harrow is still more simple than the plough, being composed entirely without iron, and in many places without even wooden pins; it being the practice, in some provinces, to construct it with branches of trees rudely interwoven together. The *roller* is hardly known at all. The Finns never use any other but the branch-harrow, and frequently the *rake* instead of a plough.

One should imagine, from this superficial mode of tillage, that the crops would turn out very defective. This, however, is by no means the case; for, so rich is the soil by nature, that an ordinary crop of rye is from eight to ten fold, barley twelve, oats twenty, and wheat almost never below six.

In Finland, the *best* mode of carriage is a two-wheeled small cart; the wheels unshod with iron; but more commonly two poles fastened at one end to the sides of the saddle, and the other ends trailing on the ground. The Rufs, however, have their wheels shod with iron, and many examples of four-wheeled carts.

The *reaping* instruments are various. The sickle, the common scythe, and the great German scythe. The Lette cuts his crop with a little scythe, fixed to a short handle, which he holds in his right hand, having in his left a small hook, with which he collects as much of the corn as he intends to cut at once. The Tartars use short, but very arched scythes, on a short handle; and, standing upright, they cut both to right and left. The corn, after it is bound up, is set on end in circles of ten sheaves, leaning against each other, and covered with one inverted at top.

Wheat and rye are sown from the 1st of August to the end of September; and as the Spring is late of commencing, the Spring crops are not sown till about the beginning of May. Harvest is in July and August. From this, it may be conceived how rapidly vegetation comes on. In fact, the Spring season in Russia can hardly be said to exist; as, from the stern rigour of Winter cold, the weather bursts forth, at once, into all the fervency of the heat of Summer.

Potatoes, so general in the North of Europe, are not cultivated by the native Rufs at all, except only in the government of Archangel, in 63 degrees of latitude, where no kind of corn comes to maturity; yet here potatoes thrive wonderfully, producing from thirty to fifty fold.

In the northerly provinces, the corn is kiln-dried in the straw (by the author improperly called *malting*); the thrashing

of corn, over all, is by the common flail; in some places, by the still more rude method of *treading* it out with men, or with horses, and this on the ice as well as the barn floor.

It does not appear, that artificial grasses, of any kind, are sown; but nature, in some sort, precludes the necessity, by the immense product of the meadow hay.

Rotation of crop, in the view of melioration, appears also to be unknown. The crop is indeed changed from one kind of corn to another; but the *green* crops, or those which fertilize the soil, bear no proportion to the *white*, or those which tend to sterility; yet so bountiful is nature in defiance of this treatment, that, in the words of the intelligent author, "there is no country in Europe, where agriculture is conducted with such negligence, and yet yields so great a return."

In the management of cattle, the Rufs is perhaps not behind most of the European nations: with regard to numbers, he is better provided than any. Almost every peasant has his horse, besides other cattle. The very beggars have their milch cow. The number of live stock possessed by some rich individuals, among the Tartaric nations in the southern quarter of this empire, is almost beyond belief. Fifty thousand sheep are stated as belonging to one person. Another has 10,000 horses, 300 camels, 3500 black cattle, 20,000 sheep, and 1000 goats. The patriarch Job would not have been reckoned the greatest man of the East, in this country.

Besides all sorts of cattle common to the rest of Europe, there are some which seem peculiar to the Russian empire. Thus, the *Dshiggetei* and the *Khulan*, not ascertained whether they belong more to equine or to the affine species, are met with in vast droves, in the forests to the northward of the Caspian. Nothing can exceed them in swiftness, nor in their fierce and untameable disposition. There is likewise a beautiful race of wild horses, of a bay colour, in the wilds of the Ukraine, that hardly yield to the foregoing in any of the above qualities. Camels are native in the southern provinces, as likewise buffaloes, both subjected to the rule of man. In the north, the rein deer of Lapland are trained to the yoke of the Rufs; while in the east, by Kamtschatka, dogs are applied to the same purpose. To conclude, *The View of the Russian Empire*, by Tooke, from whence the above short notes are selected, is a work that cannot fail to be interesting to readers

ers of almost every description ; and, in particular, to the amateurs of Agriculture and Rural Affairs *.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Quality of Rye-Grass Seed.

GENTLEMEN,

I was highly pleased with the observations given in your last, respecting *the management of hay*, from which, in my humble opinion, much benefit may be derived. It would have given me additional pleasure, had the well-informed author of that paper communicated his sentiments, concerning the *kinds, qualities, and quantities* of seed, proper to be sown for producing a full crop of that necessary article ; as I believe, upon these points, the public in general are much at a loss. In this country, agriculturists are nearly at one, that red clover and rye-grass afford the greatest return ; while, in our sister country, very different notions are entertained. Taking it, however, for granted, that red clover and rye-grass are best calculated for producing a full crop of hay, I beg leave to inquire, in what manner the kind or quality of the rye-grass is to be ascertained ? It is notorious, that an annual kind of rye-grass is lately introduced, which has been attended by heavy losses to the farmers who have sown down land, with a view of allowing it to remain in pasture for two or more years ; and I am also inclined to think, that many noxious weeds, both of annual and perennial soils, are now generally mixed amongst the greatest part of rye-grass. It is evident, that, since grass seeds have been sown in quantities in this country, a vast increase of that destructive and pernicious weed, provincially called *knot-grass*, or *swine-arnol*, has taken place ; and that, upon a great many soils, it is scarcely possible, with every degree of pains, to extirpate it. I have noticed fields very completely fallowed, when
sown

* We do not mean, however, from this, to give an unqualified approbation to this work. The author has allowed himself, in some instances, without reflection, to adopt very ill-founded opinions from others. For example, what he states of Sweden, having a population of 220 to the square mile, and European Russia upwards of 400, is beyond all bounds extravagant. N.

sown with seeds among the first crop, and taken up after lying only one year, to have been quite filled with this baneful plant or weed; which was a circumstance hardly to be expected, unless the seed had been mixed among the rye-grafs. Some old farmers inform me, that very little of it was to be seen till within these fifty years, or since the sowing of grafs seeds became general, which is the more remarkable, as the practice of husbandry has, out of all doubt, received much improvement during that period. It appears, therefore, to me an important object, that the farmer should be provided with rye-grafs of a right kind and quality: and, to attain this, I know of no better method, than that every farmer should raise his own seed, which I most earnestly recommend.

Yours, &c.

A RURAL ECONOMIST.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

GOOD roads are so necessary to the improvement of the country, that few objects are so interesting to those who are concerned in its welfare. Till roads are made good, and the communication between different places be rendered easy and commodious, it is scarcely possible that any capital improvement can take place. An unnecessary waste of labour, to a great extent, is the unavoidable consequence of bad or inconvenient roads; and perhaps this waste or loss, if it could in any degree be accurately computed, amounts, in Britain, to a greater sum *per annum*, than would be required to put the whole public roads at once into a complete state of repair.

This subject has occurred to my mind, from having lately had occasion to travel the *new* or middle road from your city to Glasgow, which certainly has been laid out and constructed upon more scientific principles than any other road in this island. There is hardly such a thing as a single rise in the whole line of road; at least, any variation from the level, has been executed in such a judicious manner, as scarcely to be perceptible to the eye, or to incommode the traveller in his passage. In a word, the gentlemen who undertook such an important work deserve well of the public, by thus providing a communication betwixt two great cities, whereon a single horse is capable of drawing a heavy load with greater facility

facility than is practicable, upon many other great roads, with a double number.

I beg leave to notice, that some parts of the road, where embankings have been necessary, are not provided with a wall or row of posts, for the security of travellers, which will be a dangerous neglect in Winter nights, or during a snow storm. This occurs particularly at two places to the westward of *Airdrie*, and ought to be instantly remedied.

Excellent houses for the accommodation of travellers, are likewise provided at every stage; and, if the adjoining soil, the capital stock of the inhabitants, was of a superior quality, this road might be travelled over with pleasure and delight, in every respect.

Yours, &c.

A TRAVELLER.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

THE distresses arising from the scarcity of fodder having been severely felt throughout the whole of Britain during the late uncommon season, especially in the hilly and upland districts, I take the liberty (through the medium of your Magazine) of offering some hints, which, if properly taken up, may have a tendency to lessen the evil in future.

The most prominent feature of the Highland husbandry, next to the almost total inattention to the breed of their sheep and cattle, is the improvidence and want of care in securing a proper supply of Winter sustenance for them; a neglect the more to be blamed, as it is fully in their power to procure a sufficiency with little trouble, and almost without expence. In these elevated situations, abundance of herbage of a nutritive quality is produced, upon which the animals not only live, but fatten, during Summer, and which, when the Winters are mild, continues to support them in health and vigour during that inclement season. In years so calamitous as the last, however, the case is somewhat different. A continued series of cold wet weather during the Spring, Summer, and Autumn, killed many sheep and lambs early in the year, and

prevented those that survived from acquiring flesh or strength at the proper season: In that debilitated state, they encountered one of the severest Winters ever remembered; an evil that was greatly aggravated by the heavy fall of snow at its commencement, which in many places entirely deprived them of food. The consequences are but too well known. Great numbers perished in the first instance; and, of those that reached the Spring, many have died from weakness alone. This, however, has not generally been the case; as, upon almost every farm where a sufficiency of hay and other articles of a good quality were laid up, the stock has been kept in tolerable condition during the Winter, and reached the Spring nearly in the usual way.

The evils arising from the want of a proper provision for the stock upon Highland farms, during Winter, has long been observed and lamented by intelligent men; and many attempts have been made, both by patriotic individuals and public societies, to lessen them. Amongst these, the labours of the Highland Society hold a distinguished place, and will long be remembered by the country at large with gratitude and pleasure. The encouragement held out to Highland farmers, for the purpose of enabling them to sow broad clover, and cultivate turnips and other green crops, has already produced very beneficial effects; and, if carried to the extent of which the system is capable, will, in many districts, not only prevent the evils arising from bad Winters, but produce additional benefit, by enabling the farmers to keep their young stock in a growing state throughout the whole year; a matter of much more importance than is generally imagined; as both sheep and cattle, so treated, make more progress in two years, than such as are half-starved during the Winter usually do in five. But, as there are many extensive tracts, where the nature of the soil and other circumstances prevent green crops from being introduced to any great extent, it is of much importance to persons possessing farms in these parts, to be able to substitute something in their place:—that substitute, nature has bountifully provided, even in the most exposed situations.

The article we mean, is *heath*; which, from the experience of ages, is known to contain a wholesome and palatable nourishment, when eaten in a green state; and, it is well known, proves that every kind of green herbage, hitherto employed for feeding our domestic animals, is also calculated to support them in health and vigour, when dried, provided

it is cut at a proper period, and due pains taken to preserve it. The value of the different kinds of straw and hay is so well known, that it would be absurd to attempt any reasoning upon it.—Have we the least room to suppose, that heath, if cut at a proper season, and well managed afterwards, would not also be found highly useful?

Growing in situations where scarce any thing else will thrive, the qualities of heath have not only been overlooked in many instances, but its very existence deemed a reproach upon the soil. That it was not considered in the same light by our ancestors, is evident, from their understanding its qualities so well, as to be able to prepare from it a fermented liquor, of a highly agreeable flavour, and an intoxicating quality, which was used upon all their great occasions. Indeed, we have a tolerable confirmation of this fact, by attending to the pasture of bees upon heath; from which, in a given time, they collect more honey than is usually done from the richest fields of white clover during the same space: and, as it is now ascertained, that the food of bees is derived from the saccharine or fermentable matter contained in the flowers upon which they feed, and which acquires the distinguishing properties of honey, merely by passing through the vessels of the insect, and the particular organization of these vessels, it may safely be inferred, that heath, when properly managed, contains properties greatly superior to what it is generally thought to possess. Were any doubt to remain, additional conviction would arise from the high flavour and other good qualities of the Highland mutton, so justly celebrated over the whole island, reared in situations where the animals have not any other food but heath.

In Sweden, the practice of cutting heath for Winter food has long prevailed; and the heath-harvest, in some parts of that country, is as regular, and as much attended to, as the corn-harvest in the most fertile provinces. Long experience has taught the natives its value, and furnished an example that ought to be followed by other nations, similarly circumstanced as to soil and climate. In that country, it constitutes a bulky and essential article of Winter food, in many situations where no other can be obtained. Little coarse hay is produced in the Swedish hills and uplands. Sown grasses are unknown. Straw and turnips are equally scarce, except in the corn provinces; and even there, the only broad-leaved crop cultivated for Winter food, is the roota baga, or Swedish herb; a vegetable that unites, in a considerable degree, the

qualities both of the cabbage and turnip. But, allowing turnips, hay, and other articles to be produced in much greater quantity than they are, even in the most fertile of the Swedish provinces, it would be found impossible to transport them to the higher districts, owing to the very inaccessible nature of the country, the badness, indeed the almost entire want, of roads, and other unfavourable circumstances. Thus insulated, and cut off as it were from every supply but the produce of their own mountains, necessity has, with the boors of Sweden, become the parent of industry and invention, and taught them to appreciate the value of an article (despised or neglected in other countries) which they find fully adequate to their wants, and have for the trouble only of cutting and curing.

Were we simply to reason upon the subject, we would suppose, that a practice which has obtained for a length of time in any country, and from experience been found useful, would be adopted in every similar situation. Britain resembles Sweden in many respects. Both countries can boast of the most fertile corn provinces in Europe, and, in both, there is a large extent hilly and mountainous. It is well known, that these parts of Sweden, by the industry of the inhabitants, are rendered highly productive, principally by their management of heath. Have we any reason to think, that the produce of the hilly and mountainous parts of Britain would be less valuable, or of a quality less nourishing? The soil is, in every instance, equally good, and the advantage, in point of climate, greatly in our favour. This last circumstance renders the cutting and subsequent treatment much easier in this country, than it possibly can be there.

At present, the usage of the high lands and uplands throughout Britain, is to burn the heath, with a view to improve their pasture. By that operation, the tops of both heath and grass are completely destroyed, and a considerable time elapses before new shoots are produced; whereas, were the heath cut for Winter food, in the way we have mentioned, it would send out new shoots the following Spring; which, being of a tender and succulent nature, would form a palatable article of food for sheep, with this additional advantage, that the grass which grows amongst it would spring up at the same time, and add to the value of the pasture.

In cases where heath grounds have been cut or burnt for a few years, if the surface is tolerably smooth, the heath may be cut with a strong scythe; but when it is of many years growth,

growth, and the stems have become hard and thick, that instrument will not be so very proper, as it is liable to bend, and get out of shape, and little work can be done with it in a given time. Other instruments have been proposed, and certainly might be employed with advantage; but farmers, who are not in possession of these, may make very satisfactory experiments, by cutting it with a common hedge-bill, an instrument with which a labourer can cut a considerable quantity in the course of a day.

With regard to the time of cutting, that should be determined by the season, and other circumstances. Experience, which, in every case where it can be resorted to, ought to be the standard, both of opinion and practice, establishes the fact, that cutting at an early period of the season is the most certain way of obtaining a valuable and nourishing herbage. When we say early, no particular month, or period of any month, is meant; earliness depending entirely upon the season, which, in an insular situation like that of Britain, is very variable. The most certain criterion is, the progress the plants have made in their growth; as, at a certain stage, they possess properties, which are either impaired, or entirely lost, if they are suffered to stand longer. Perhaps, when the flowers are fully expanded, the heath will be found most nourishing. Indeed, shepherds and others, who have paid much attention to the subject, think the pasture most valuable during the time it continues in bloom. If possible, it should always be cut during dry weather, and immediately thrown into cocks or heaps, where it may remain for a week or ten days; after which, it may be put into large ricks, and allowed to stand, till it is found convenient to carry it to the situations, where there is a chance of its being used through the Winter.

In recommending a practice, which in Britain is entirely new, much diffidence and circumspection are required; and, could no instance be quoted of the beneficial effects resulting therefrom, less would have been said upon the subject. The example of Sweden, however, where both soil and climate are inferior to ours, holds out to the store-farmers of Britain a tolerable prospect of success. To those immediately concerned, the matter is of considerable importance; and, as very satisfactory trials can be made, at a trifling expence, we indulge a hope, that the hints now thrown out will not be altogether useless to society.

A. Z.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Proper Mode of Ridging a Wet Clay Soil.

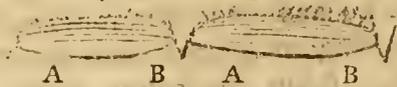
GENTLEMEN,

A PERIODICAL publication, such as yours, to put on record the facts that occur to the practical farmer in the course of his business, must tend to the improvement of Agriculture, and will ultimately prove of general utility to mankind. It is therefore to be hoped, that the intelligent farmers in Scotland will not let slip the opportunity of making observations on every subject relative to country affairs, and send you the result of their experience; that, by insertion in your Magazine, they may not be lost to the public; and, by accumulating a number of facts, be the means of establishing a more perfect system of agriculture: For it is partly owing to husbandmen living in the country, at a distance from neighbours, that agriculture has not arrived at the same degree of perfection with the arts carried on in towns. Farmers, however, endeavour to remedy the inconvenience of their situation, by communicating freely to one another their knowledge in rural affairs; whilst the wary inhabitant of the town endeavours to veil in mystery every process in his art, and transaction in his business: But the sphere of a practical farmer's communications must be confined to a very narrow circle; and for this, a publication such as yours, if farmers will only come forward with their observations, must be attended with beneficial effects to society. With this view, I now transmit you a few observations on the proper mode of forming ridges on a wet clay soil. It appears, from the remains of the ancient ridges in East Lothian, and I suppose also in every cultivated county in Scotland, that all the fields in cultivation, both of a wet and dry soil, were originally formed into high-gathered ridges, of betwixt thirty and forty feet in breadth. None of these were found straight, but were extended in well turned serpentine lines; which induced many, who have a great regard for the wisdom of our ancestors, to believe that they were formed in that manner on purpose, as being the properest for draining off the superfluous water, and best adapted for serving every purpose in agriculture. This, however, is an erroneous opinion; for the straight line

is, of all others, the best calculated for carrying off water with the greatest celerity, thereby rendering a wet soil as dry as possible, which is of the utmost importance in the cultivation of the different grains at present in use in our northern climate. The curved form of these old ridges, certainly was occasioned by the long teams of oxen and horses which were formerly yoked in the plough, even to the number of twelve or fourteen, which, beginning to turn before the plough arrived at the end of the ridge, gradually changed it from the straight line, till, in process of time, the serpentine form was extended to the whole ridge. But these curved broad ridges, although sanctioned with the stamp of antiquity, have, almost all of them, in this country, been levelled, and reformed into straight narrow ridges, of from fifteen to eighteen feet in breadth. This operation was, however, always attended with a temporary loss: for, unless great attention and expence was bestowed, in preserving the old vegetable mould on the surface, it was buried, in many places, beyond the roots of the plants which we cultivate, and a sterile substratum of till brought up to supply its place, on which plants cannot be made to grow with the same vigour, as on the old surface soil. I do not know when narrow ridges were first used in England; but I have reason to believe, that the late John Cockburn of Ormiston introduced them into Scotland early in this century. I have observed some ridges on the estate of Ormiston, formed at an early period, at the breadth of six and nine feet. These were ploughed alternately; the crown of the ridge, this year, forming the open furrow betwixt the ridges next year: But this form does not seem to have given satisfaction; for the whole ridges on the estate, at last settled at fifteen feet; which was of a sufficient breadth to give them a considerable roundness, so as to allow the water to run with rapidity off the ridge into the furrow. When I entered to my farm, which is of a strong wet clay soil, or brick loam, being a mixture of ferruginous clay, and vegetable mould, with a large portion of sand in it—the under stratum a yellow ochrey clay, with a larger portion of iron and sand, which consolidates into a hard mass, that admits of no water to pass through it,—I found the ridges all of the breadth of fifteen feet, and continued them of that breadth, till about fourteen years ago, that, happening to see a letter from Mr Arthur Young, now Secretary to the Board of Agriculture, to a neighbour farmer, wherein he mentioned, that Mr Arbuthnot, who was esteemed one of the best farmers in England, had found, from experience, that a

ridge, of the breadth of from thirty or forty feet, sufficiently rounded, was the properest form for laying a wet clay soil dry; I immediately determined to try the experiment, and pitched upon a field of seven acres, that was already formed into fifteen-foot ridges; and, in order to form the broad ridges in a gradual manner, I continued for several years to cast two ridges together, keeping an open furrow in the crown, till I got them of a sufficient height, and properly rounded, when the open furrow was discontinued, which formed one high and broad ridge of thirty feet. The field was then Summer-fallowed, dinged, and sown with wheat; the crop a good one, but not up to what I was entitled to expect. In the following Spring, which was a dry one, it was sown, in good condition, with beans and peas, in the proportion of one pea to three beans. A few days after the field was finished, one of the most extensive farmers in the county passing it, said to me, 'I see you are making trial of broad ridges; they are excellently formed, being well rounded, and of a proper height. I have not a doubt, that, if I chance to pass your farm some years hence, I shall find all the ridges upon it formed after the same model.' These broad ridges, which had thus received the approbation of this expert farmer, were soon put to the test. The weather broke, and a very wet Summer followed. Upon examining the field, from time to time, it appeared to me to be evidently injured by the breadth of the ridges: there was such a pressure of water on the sides of the ridges, from their great breadth, that the clay soil, which had been highly cultivated in the Spring, was dissolved into mud, in so much, that the water furrow betwixt the ridges almost disappeared. When the crop came to be cut, not a single pea was to be seen on the broad ridges, having all died early in Summer. The beans, a scanty crop, were evidently stunted in their growth by the wetness of the soil, few of them exceeding eighteen or twenty inches in height; but, on a round narrow ridge in the field, although of an inferior soil, there was a considerable number of peas at harvest, and the beans were much more luxuriant in their growth. I must again observe, that the Summer was a remarkably wet one. A neighbour, who had a field of good beans, sown upon casten ridges of fifteen feet in breadth, showed me an odd ridge in the field that was gathered, on which he had a third more beans than on any of the casten ridges, which proved the necessity of laying beans dry this season. After the beans were got off, the ridges were gathered, for laying them dry during the Winter; but, in the
Spring,

Spring, the soil was in a wet cohesive state, and did not pulverize in ploughing. Barley was sown upon it, and I again examined with attention the state of the field during the course of the Summer. It appeared to me to receive greater injury from the wet weather, than the neighbouring fields with narrow ridges of fifteen feet. The crop of barley was a scanty one; clover and rye grass followed the barley, and then oats, which finished the rotation. Not being satisfied with any of these crops, nor the state of the soil after the rotation was finished, I was determined to abandon the broad ridges, and make an experiment on a field formed into ridges even narrower than fifteen feet. The one in my eye was of a wet clay soil at one end of the ridges; but the greatest part of it, although of a clay soil, was drier, being situated on a hanging bank, with a substratum that allowed the water to pass through it. The crops that grew upon this drier part of the field, were always destroyed by the cut-worm, and produced nothing, some years, but a narrow skirting of grain, next the open furrows, betwixt the ridges. Observing that these worms infested the most elevated parts of the ridge, I conjectured, that, by forming the field into twelve-foot ridges, and keeping them flat, ploughing them crown and furrow, without even water-harrowing the drier part after it was sown, would tend to prevent the cut-worms from making such devastations on the young plants, before they push out their surface roots: for, whenever the plant arrives at this stage of its growth, the danger from the worm is over: and I had the satisfaction to find, it had the desired effect of stopping the ravages of these destructive animals, in this particular instance. But the consequences attending the ploughing the field alternately in ridges crown and furrow, particularly on the wet part, was evidently hurtful to the crop, for the following reasons. It is obvious, that the ploughman, in deepening and clearing out the water furrows betwixt the ridges, must go deeper with his plough in that part of the ridge, than in any other; and, in a clay soil, they cannot be made too deep. When, therefore, the ridge comes to be reversed, there is a solid base of soil under the cultivated surface, and, more frequently, a solid base of till, through which no water can pass (the clay on the surface being in general nearly turned up with the plough shelving in this manner)



from the furrows, towards the middle of the ridges; but it is obvious, that this inclined form, A B, of the surface of the solid

solid under-stratum, towards the centre of the ridge, must be extremely unfavourable for allowing the superfluous water to drain off from the pulverized soil into the water-furrows; and, consequently, I always found the crops growing upon them materially injured in wet seasons, and sometimes nearly destroyed. But a loss also attends this mode of ridging a clay soil, even in dry seasons, when a deficiency of the crop, on the middle of the ridge, is to be observed, where it ought to have been best. This is easily to be accounted for. Every practical farmer knows, that, when a clay soil is ploughed, especially in a drought, it is laid so open, by its crumbling into large masses, that the sun and air in a few hours carry off its moisture, and render it unfavourable for vegetation. When we add to this, that the sides of the open furrows, and contiguous soil, over which the Winter rains and melted snows have passed, from being consolidated with so much moisture, become extremely hard in time of drought, this hardened soil on the sides of the open furrow, being turned up by the plough in clods of different sizes, when laid together in forming the crown of the new ridge, cannot be so well pulverized as the rest of the ridge; and, consequently, the drought continues to take a greater effect in depriving it of moisture. To these causes I attributed the deficiency of the crop on the crown of the ridge in dry seasons. But, of late years, our crops have suffered from too much moisture; and the wet clays, that have been ploughed crown and furrow, in alternate ridges, have suffered accordingly. Passing, the other day, through some fields in the neighbourhood of Edinburgh, where that practice prevails on such soils, I was shocked to see their wretched appearance; fields of beans, and other grains, with the couch grass springing up in them, thicker, and with greater luxuriance, than the oats or barley; some of the farmers in that neighbourhood seeming to despise good culture, in trusting to the ample doses of dung they procure from the city of Edinburgh. Being thus convinced, both from reason and experience, that neither a very broad ridge, although well rounded, nor a flat narrow one, are proper forms to be used in ploughing wet clays; for some years past, I have adopted upon my farm well rounded ridges, of the breadth of twelve feet, gathering them up twice from the level for Summer fallow wheat, generally harrowing the field across the ridges before the seed furrow, to keep them the flatter. After the wheat is off, the ridges are gathered before Winter: in the Spring, beans are put in, after
 casting

casting the ridges : but before the ploughman begins, I make him go two bouts, throwing in the earth into the furrow that is to be ploughed out betwixt the ridges when they are finished ; this keeps the ridges equally round, and all the furrows in the field nearly of an equal depth : gather after the beans before Winter ; in the Spring, cast the ridges for barley, throwing in the open furrows as before ; or, if necessary to give two furrows in the Spring, cast them twice, as, I think, cleaving ridges for barley ought to be avoided upon a wet soil, if possible ; for the open furrow in the crown, even when laid close with a gathering, tends to lodge water there, for the reasons above assigned. I have also observed, that when a field of clay soil is ploughed across the ridges, after they have been cloven and harrowed, the soil on the sides of the open furrow on the crown, turns up in a more cohesive state than the rest of the ridge : this is owing to the plough's not going so deep, contiguous to the open furrow, whenever it loses resistance, on the land side, to keep it in the ground. By this mode, of always gathering the ridges before Winter, and casting them in the Spring, the solid earth under the cultivated soil is continually kept in the same rounded form with the surface of the ridge, to which the floods of rain, sinking, run off expeditiously to the open furrows betwixt the ridges ; and these being deep, and cleared of obstructions, from the ridges being gathered before Winter, convey it with rapidity off the field, in proportion to the number of open furrows in it. I have therefore always found a well rounded twelve-foot ridge to be drier, and work better in the Spring, than a fifteen-foot ridge ; and even a ten-foot, than one of twelve. But there are inconveniences that attend a very narrow ridge, which are not counterbalanced by its superior dryness : I therefore would not recommend them to be formed under twelve feet. If they are to be kept in tillage, four harrows, or two breaks, cover them ; and I have not found that they are attended with waste of seed, as I never exceed three firlots of wheat or barley, and a boll of oats per acre, the quantity I sowed on fifteen-foot ridges. I have now finished my observations on the proper mode of forming ridges on a wet clay soil ; if you think them worth the notice of the public, you may insert them in your Magazine. But as a number of your readers will no doubt favour broad ridges, I shall be glad to hear what they have to advance in their defence ; for it is only from a free discussion of sentiments, through the medium

of the press, that error is to be exploded, and truth discovered, for the benefit of mankind ; which, whenever it is attained, is the source of much happiness to a lover of agriculture.

Banks of the Tyne, 2d June 1800.

RUSTICS.

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

General View of the Agriculture of the County of Fife ; with Observations on the means of its Improvement. Drawn up for the consideration of the Board of Agriculture and Internal Improvement, by JOHN THOMSON D. D. Minister of Markinch. 413 pages, 8vo. Creech, Hill, &c. Edinburgh; Nicol, London.

IT is a circumstance extremely creditable to the Established Scottish Clergy, that such of their number as were appointed, under the authority of the Agricultural Board, to assist in the great work of executing a detailed survey of the kingdom, have performed the respective parts assigned to them with singular ingenuity and judgement ; while, in England, where the profession is ten times more numerous, only one solitary individual, to the best of our recollection, viz. the Reverend Arthur Young, was selected from the clerical order for handling the labouring oar upon this important occasion. The office of a surveyor, required that the person appointed should be intimately acquainted with the different branches of rural economy and practical husbandry, together with the possession of a steady and enlightened mind, capable of discerning abuses, and describing how they might be rectified. These qualifications appear to have fallen to the share of the several clergymen whose reports have come in our way, in an eminent degree ; and their labours promise to be equally useful, and deserve as much applause, as if they had proceeded from the most perfect and practical scientific agriculturist.

The situation of a country clergyman, if his mind is devoted to rural affairs, presents an excellent opportunity of accumulating a large stock of practical knowledge. Possessed of a glebe, (smaller, we confess, than the general merits of the profession deserve), he has it in his power to try all the
different

different improvements which fashion or the times recommend; and, if in good habits with the tenantry, (which every clergyman, if he wishes to be useful, will assiduously seek to be), he enjoys the fullest means of procuring information respecting the several branches of husbandry, and comparing every theory, whether specious or well-founded, with the different operations daily carried on before his eyes. If an observing mind is added, the person so situated, can hardly fail to be well qualified for describing the rural œconomy of the district with which he is connected.

We have already (page 191.) examined the works of one respectable clergyman, and now proceed, with equal satisfaction, to open up the labours of another. As this gentleman had a path to tread only slightly marked out, the natural difficulties of the office were consequently augmented: These he has surmounted, with credit to himself; and, though we differ from him upon a few points, yet we have no difficulty in acknowledging, that he has described the husbandry of the district in which he resides, in a distinct and perspicuous manner.

Fife is a district of great importance, and may be ranked in the second class of agricultural counties. Local circumstances confer many advantages upon it, being washed by the sea, and the Friths of Forth and Tay, upon three sides, from which a great stock of manure is constantly procured; and the abundance of limestone and coal upon its southern shore, is not only advantageous to agricultural improvements, but highly conducive to the comfort of the inhabitants. These circumstances are satisfactorily detailed in the first chapter of the work, from which the reader will derive much useful information.

Property is greatly divided in this county; perhaps more so than in any other part of North Britain, which Dr Thomson thinks is attended with the happiest effects. The valued rent is 361,584l. Scots, which is above one tenth of the kingdom, and is a strong proof that improvements had taken place at an early period. The *real* rent of many counties exceeds in pounds Sterling the nominal valuation in Scottish money; whereas, in Fife, the former is more than one third below the latter, being calculated at 212,000l. Every calculation of this nature, however, is questionable, being built upon hypotheses, which do not afford any solid proof.

Our author is an enemy to entails, and we cannot but applaud the judicious sentiments offered upon this article. No doubt,

doubt, the evil of entails is much lessened by a late act of Parliament; but still they are attended with injurious consequences to the prosperity of Britain, whether considered as an agricultural or commercial country. We select the whole of this section, as deserving serious attention.

“ Tailzie, or entail, though sometimes used to denote simple destination, is chiefly used to signify the settlement of a land estate upon a long series of heirs, substituted, in succession, to one another, containing prohibitory and irritant clauses, which preclude any of the heirs from alienating the estate, by debt or deed, in prejudice of the substitutes specified and fixed by the deed of entail. What proportion of the land in Fife is under this kind of destination, it is impossible, from any information I have been able to procure, exactly to state. It is well known, however, that a great many estates, and some of these of the first magnitude, are strictly tailzied.

“ How far this mode of settling the succession of heritage is wise and proper, may deserve consideration. To assume the power of determination just now, who shall possess the estate 500 years hence, when the present proprietor shall have as little interest in it as he had 500 years ago, has at least the appearance of absurdity. Perhaps, ambition to perpetuate the existence of a family called by his name, at least for many generations to come, is the motive. But, is vanity a principle of conduct which a virtuous and dignified mind would wish to adopt, or to avow? Or, is it his object, in securing to his posterity the unalienable possession of his lands, that they may be enabled to support, with greater dignity and splendour, the titled rank to which he has raised them? But is it certain that the possession of the estate will prevent them from disgracing the nobility, fairly, and perhaps hardly won, by the illustrious deeds of a worthy ancestor?

“ It merits consideration, also, whether entails may not be unfriendly and injurious to the prosperity of a great commercial and manufacturing nation. The free circulation of land property is a powerful spur to enterprize and exertion; as, by that means, the merchant or manufacturer has it in his power to retire, when he thinks proper, from a hazardous employment, and to convert the profits of his successful industry into a more stable and permanent inheritance. But, were all the estates in the kingdom guaranteed by entails to the present proprietors and their posterity for ever, this would be rendered impossible.

“ Besides its being an unnatural restraint upon property, it not unfrequently puts it in the power of profligacy and dissipation,

tion, to ensnare the honest tradesman, who may not be apprised of the terms upon which his employer holds his estate.

“ Entails have often the unhappy effect, likewise, of restraining, within too narrow limits, the operations of natural affection, and natural justice, by putting it out of the parent’s power to make a suitable provision for the younger branches of the family.

“ Nay, in many instances, they prove a great bar to the progress of agricultural improvement. If the proprietor has a large family, when he finds that he can neither burden his estate, nor alienate any part of it, instead of devoting a liberal portion of his income to the amelioration of his lands, the advantages of which must be ultimately reaped by the heirs of entail, he will be led to save every shilling in his power for the education and settlement of his younger children. Or, if he has no heirs of his own body, and his estate, agreeably to the nature of the entail, must pass into the hands of a distant relation, or of one with whom he has little connexion, and for whom he has little friendship, he will be equally indisposed to project and execute schemes of expensive improvement.’

A very ample and favourable character of the Fifeshire farmers is given in the fifth chapter, which conveys to us a high idea of the author’s liberality and candour. Some surveyors have not considered the Farmer in the point of view taken up by Dr Thomson, but described him as a person secluded from society, and destitute of information. The following passages we extract as a specimen.

“ From the progressive improvements in the science and practice of agriculture, which have been going forward during the last twenty or thirty years, the condition and circumstances of the farmers have experienced gradual alteration for the better. And their growing affluence, co-operating with the general progress of luxury and refinement through the nation, have had a very visible effect upon their manners and habits of life. Formerly, it was customary for the farmers to subject themselves to every kind of drudgery and hard labour, undergoing the same toil, and often eating at the same table, with their servants. And, in some instances, this may be the case still, especially where their farms are small, their circumstances narrow, their rents high, and consequently cannot afford to exempt the master from personal labour. But many of the farmers now occupy a more respectable and important station. Their chief business is to superintend. The operative and servile part is committed to others; but the master’s presence and direction are every-
where

where to conduct and forward the various necessary operations, in every department, and in their proper season. These requisite attentions, together with the business of the counting-room, and his attendance on markets, for the disposal of his grain and cattle, (a province which he usually reserves to himself), will afford little time for relaxation or idleness, and are surely much more conducive to his interest, than holding the plough, thrashing the grain, or filling and driving his own dung-cart.

“ The alteration in their style and manner of living, is equally remarkable. Their houses, in general, are decently and substantially furnished, and the apartments so arranged, and the general economy of the house so regulated, as to produce a more marked distinction between master and servant, and to put an end to that indiscriminate intercourse, in respect of sitting and eating, which was common in former times. Though many of them continue to be mostly supplied with necessary maintenance from the produce of their farms, and to be clothed with their own manufactures, there are few who do not indulge, more or less, in the luxuries of life. Butcher meat is much commoner now than formerly; and their Sunday’s dress, at least, is furnished from the shop. The universal use of tea, as an article of living, need not be mentioned, as there is scarcely a cottager’s house in the county, where it is not to be found. It is to be observed, however, that between the great body of the farmers, and those who rank in the highest class, there is, in this respect, a very remarkable difference. Several of this last description are men, not only in easy, but affluent circumstances; men who have had the advantage of a liberal education, and whose manners, from their intercourse with the world, have acquired a superior polish. Correspondent with these circumstances, is their style and manner of living, the elegance of their furniture, the economy of their table, and the quality and fashion of their dress. Thus distinguished by education, fortune, and manners, they hold a most respectable place in the community, and are entitled to be considered as one of the intermediate links, which, in the gradations of rank and opulence, connect the higher and lower orders of men in society.”

We cannot agree with Dr Thomson as to the propriety of paying rent in kind, even upon the supposition that the *ipsa corpora* was not to be delivered, but to be paid for in money, according to the rate of the fiars. If such a mode had been common this year, three fourths of the tenantry would have been reduced to bankruptcy; it being evident that the
rent,

rent, under such a regulation, would uniformly be greatest when the tenant was least able to pay an advance. Let us suppose that two bolls of grain (no matter of what kind) was the average rent of arable land, and that this, in ordinary years, amounted in money to $\text{xl. } 10\text{s.}$, which might undoubtedly be paid when a fair crop was procured. But reverse the case, and suppose that adverse circumstances had occasioned a failure of the crop, to the extent generally calculated this season, viz. three eighths; which failure would lessen the tenant's sales perhaps three-fourths, the same quantity as usual being required for seed corn and home-consumption. Now it might happen, and we are certain it has happened during this same year, that the tenant had not a quantity of produce to sell equal to the value of the *ipsa corpora* he was bound to pay the landlord, independent of the sums necessarily required for defraying the expences of his farm, which, in unfavourable years, are always augmented; whereas, had the rent been paid in money, the extra-price received for the bolls sold, might have compensated for the deficiency of his sales. Land is disposed of in perpetuity for money, and why should not its annual value for a limited time be ascertained in like manner?

We differ from the opinion given p. 145, respecting the proper breadth of ridges upon wet soils; being experimentally convinced that narrow ridges are pernicious in the extreme, in such situations. Where the soil is of sufficient deepness to bear three gatherings from the flat, without impoverishing the furrows, twenty-four feet is an excellent breadth; under different circumstances, they ought never to be less than eighteen feet; for all wet lands require a degree of acclivation not to be gained with propriety upon a lesser breadth. Casting is a bad method of ploughing, if it can be avoided, and is as seldom resorted to by good farmers as possible. If cross-ploughing was more practised, there would be little cause for the casting of ridges, where a suitable rotation of cropping is adopted.

An extensive improvement upon the Lomond-hills, formerly attached to the palace of Falkland, but now the common property of the surrounding heritors, is very properly recommended. From the nature of the law of 1695, we suspect it will be found necessary to apply for a particular act of Parliament, before this valuable subject can be divided. The following extracts will shew the loss sustained by allowing this commonity to remain in its present state.

“ The following information, afforded me by a neighbouring heritor, appears to place the matter in a new and important point of view, and shows how highly advantageous the division of this commonty would be to all concerned.

“ This gentleman has lately inclosed about 170 acres of ground, contiguous to, and of very much the same quality of soil, with the Lomond hills. This ground, in its former state, yielded a rent of little more than 15d. the acre. Last year, he let it as a grass park, for fifty guineas; and this year, although one of the most unfavourable seasons experienced for a long time past, it has maintained above seventy head of cattle.

“ From the above experiment, this gentleman makes the following calculations: The Lomond hills are of a quality no way inferior to the park above mentioned: therefore he reasonably concludes, that, in a divided and inclosed state, they would maintain above 1400 head of cattle; if grazed with sheep, the profits would probably be still greater: a very different return, indeed, from that which the proprietors now draw from it, in its present neglected state. He concludes with observing, that the hill abounding with limestone and freestone quarries, the expence of inclosing would not be heavy.”

Dr Thomson appears to possess just ideas respecting the utility of *lime*, when used in husbandry. He considers it in the light of an *alterative*, which we have always found it to be, in the course of our practice.

A very accurate description of the Fife breed of cattle is given, chap. 13th. A great proportion of the county being adapted to the breeding and rearing of young stock, it is undoubtedly a matter of importance that suitable attention be paid to the selection of a proper breed. Dr Thomson states, upon the authority of a dealer, that a Fife bullock of forty stones will bring an equal price, in Smithfield market, with an English bullock ten stones heavier, and equally fat; and that they are generally selected by the butcher for the most luxurious of his employers. An engraving of a fine bull lately in the possession of the Earl of Leven, and bred by Mr Robert Russel, one of his Lordship's tenants, is given, which conveys a very favourable idea of the properties of this valuable breed.

Dr Thomson is friendly to the working of oxen, in preference to horses, though he candidly acknowledges that the general opinion is in favour of the latter, and that “ there is not perhaps one ox employed at present, in the plough or
cart,

cart, for ten that were used twenty years ago ;” a fact we should consider as decisive upon the side of horses ; for the greatest part of mankind are sharp enough sighted in such matters, to choose always what is most conducive to their own interest. If oxen had never been wrought, their utility would have been problematical ; but when they were at one time the usual beasts of labour in this country, and have regularly been laid aside as improvements were introduced, a doubt can hardly be entertained respecting the superiority of horses.

We are sorry that the nature of our work prevents us from doing justice to that portion of the report which treats upon the situation of the *parochial schoolmasters*. Animated with the same sentiments which influenced Dr Thomson upon this occasion, we join him in reprobating the scheme of depriving the lower ranks of the benefit of education, as inconsistent with sound policy and productive of the most serious mischief to the state. The case of the parochial schoolmasters deserves the commiseration of the landed interest ; as at this time their general situation is much worse than the meanest labourer. If it was necessary and proper for the Parliament 1696, to ordain that they should be provided with salaries, very probably suited to their station according to the value of money at the time, it certainly, under existing circumstances, is equally necessary and proper that these salaries should be advanced in a proportional manner to the rise that has taken place upon the necessaries of life ; otherwise, *after the present incumbents are starved out*, the office will remain unsupplied, or be filled with persons incapable of educating the rising generation.

The *short endurance of leases*, is stated as one of the greatest obstacles to improvement ; and it is really surprising that proprietors should ever expect that their lands will be improved, by persons who have not a suitable interest in the issue of such improvements. We have always considered this question in a public point of view, unconnected with the benefit of private parties, unless so far as their exertions were necessary to insure a general advantage. If land, therefore, is held under a short tenure ; if restraints are imposed upon the activity of the tenant ; if he is prevented from cultivating and improving the ground in his hand, in such a way as to render it capable of returning the greatest quantity of produce ; then the public interest is injured, and the capital stock of the country is lessened and deteriorated.

Lord KAMES's *plan of a lease* has been much applauded : but it was left to Dr Thomson to shew the reason why it has not found its way into general practice. While such a mode of leasehold is evidently advantageous to the public good, because it promotes improvements, it certainly is prejudicial to the landlord's interest, upon the account here assigned, viz. that it throws into the tenant's hands every benefit that may arise from an increase in the value of produce, or, which is the same thing, from a fall in the value of money. We have not heard this objection offered before ; and acknowledge the force and propriety of it.

Dr Thomson considers *road-money*, even when the tax is imposed during the currency of a lease, as no material hardship upon the tenant ; because the advantages derived from the improved state of the roads, do more than compensate for the duties they are liable to pay upon this account. While we are fully sensible of the eminent benefits procured from the possession of good roads, and acknowledge that no tax whatever, so far as it includes his real share, ought to be paid with greater cheerfulness by the tenant, we feel ourselves obliged to remark, that the Doctor's discernment has here been rather asleep. Do not good roads contribute as much to the improvement of an estate as any other local advantage ? and if these roads are repaired at the expence of the tenantry, which is the principle of all our statute-labour acts, does not the estate become considerably improved at the conclusion of the lease, without the expenditure of a halfpenny by the owner, but at the sole expence of others ? If the statute-work was equally divided, like poor-rates, and other public burdens, the one half payable by the proprietor, and the other half by the possessor, no cause of complaint would remain ; the tenant's proportion would be reimbursed by the superior facility with which he passed the roads during the currency of his lease, while the proprietor would be compensated by the increased value of his estate.

A very respectable list of subscribers is annexed to the work ; and it gives us much satisfaction to learn, that a second edition is in contemplation. We cordially offer our best wishes for its future success, being fully convinced that it is in general executed upon liberal principles, and with an ardent desire to promote an object of primary importance, viz. the Prosperity of British Agriculture. N.

General View of the Agriculture of the West Riding of Yorkshire.

(By a GENTLEMAN in Yorkshire.)

Continued from p. 207.

HAVING considered the first seven chapters of this work with much attention, we now proceed to examine its remaining parts. Indeed, we can hardly bestow too much pains in analyzing a performance which so fully describes the agriculture of a district deservedly ranked as the first in the kingdom.

Chap 8. *On Grass*, has some remarks on the rich old pastures of this Riding, particularly those in the district of Craven, many of which might be broken up for corn, to the advantage of the community; but it is nearly certain, that little or nothing of that sort will be done during the continuance of the tithe system. In the words of the author, "Before any of these rich fields can be broke up, the tithe system must undergo a change; as it would be a notable affair for a tithe-holder to have a tenth of the weighty crops they would produce. From respectable authority, we learned, that the payment of tithes was, in a great measure, the cause of laying these fields totally in grass, and that this tax continues to operate as a prohibitory restriction against breaking them up." A pregnant proof, if proof be wanted, of the incalculable mischiefs of this tax; for a vast treasure of useful industry, and circulation of grain, and other products useful to man, are, by this system, entirely locked up and lost to the community, which might otherwise be brought forward, without any diminution of the stock of cattle maintainable on the same ground. In these seasons of scarcity, bordering on famine, which, if the tithes continue as they are, must be almost periodical, can a warning voice be necessary to rouse to a sense of danger and duty, those who have the power to remedy this abuse?

An observation, in page 118, will excite some surprise—"Clover by itself always makes bad hay:" Now, in many parts of the country, clover is ever esteemed as most valuable fodder, at least for horses, if not for all other cattle.

Chap. 11. *The inclosure of waste and unimproved lands*, is again more particularly recommended; and an excellent Scotch

law for that purpose brought forward, which might be of great utility in England.

The remarks on this interesting subject are supported by the notes of several correspondents; but the chapter is principally occupied by a most valuable and circumstantial paper, communicated by Robert Stockdale, Esq. on the celebrated inclosures of the forest of Knaresborough, stating the difficulties attending the division of above 33,000 acres, with a candid and instructive account of his own errors, and final success, in the cultivation and improvement of a most rugged and unpromising allotment, which appears to have been of considerable extent. This paper may be of infinite use to future adventurers in the same tract. A note at the end of this chapter says, "Great part of the waste lands call loudly for improvement, by the plough and the spade. May the call be obeyed, lest we *fight*, and *weave*, and *hammer*, till we have not *bread* to eat." How does this, written in 1795, digest in 1800.

Chap. 12. *Improvements* are here alluded to, such as drainings, irrigations, paring and burning, liming and warping; all articles of moment. The subject of draining is very sparingly treated: some further observations on the best modes of conducting the works in open and covered drainages, would have been acceptable. Irrigation is recommended in proper situations; but it is acknowledged to be an expensive and difficult work. The paring and burning of all swards, indiscriminately, are not advised by the surveyors. YOUNG, on the contrary, says, it is a most beneficial practice in general, as it is found by experiment not to reduce the quantity of soil, nor to deteriorate its quality; but, by converting the turf into a manure, instead of its being turned down as a nidus for various reptiles, so destructive to the common roots, &c. it is approved of by him as a safe and beneficial practice. In the section on *manures*, there is an observation, which will not a little startle the cow-keepers, &c. viz. "Dung ought not to be laid upon the grass fields; which, properly sown down, will sufficiently improve themselves!" To a grower of hay for cows, &c. this would seem incomprehensible; but it is in some sort explained in a note on old meadows, where it is said, "The surveyors detest this mode of raising hay." Notwithstanding some well founded objections to old swards in general, meadows of this description will be valuable; while their produce of milk and butter are so much in demand as they now are; and while, by good management

management and manure, they can be brought to yield from one to two tons of excellent hay per acre, succeeded by fog or after-grass, worth from 1l. to 3l., the occupier of such meadows ought well to consider, before the attempt of breaking them up, whether he can, by the plough, increase their value, especially where corn tithes are taken in kind. The rents of these lands are, in general, by much the highest of any in the Riding. On *Lime*, the theory laid down is perfectly consistent with the result of the best conducted experiments on that important subject; particularly those of Anderson, Dundonald, and Hunter. It is accordingly treated as a stimulus only to other manures, or the remains of animal and vegetable substances previously in the soil, but, without the addition of this stimulant, perfectly inert and useless to vegetation: on these principles, it is evident much lime is misapplied, if not thrown away. Many pertinent and judicious hints occur, on the best methods of applying lime, well supported by facts adduced by correspondents; and, on the whole, this section contains much instruction, on safe and tried principles.

Several papers on the *warping of land*, as practised, for some time past, in the southern parts of the district, throw much light on the subject, and will be curious and informing to the inhabitants of the northern parts of the county. This operation is a most ingenious effort of human industry. What wonders would it not perform, if encouraged! what a garden might Britain soon be, if permitted! Hundreds of thousands of acres of land on the coasts, well adapted to this signal mode of improvement, are, to our certain knowledge, lost to the community, in consequence of one or other of the obstacles already insisted on.

Chap. 13. Here are some notices on the foiling of cows and horses on mown grass, &c. during the Summer months, a practice highly meritorious; the benefits of which practice are by many supposed to be more strikingly in favour of working horses, than even of cows. The surveyors speak favourably of the long horned breed of cattle; but many of the most attentive breeders in the West Riding, will prefer the Durham, or short horned kind, in most situations, as producing an animal of better proof, when fattened, more productive in milk, the oxen more fit for labour, and, on the whole, as a race better adapted to the climate, than the formerly so much admired Lancashire or Craven breed: but it must be observed, a strong distinction is and ought to be

made between the Durham and Holderness species, which are, in the furvey, in some degree confounded, or at least not treated as distinct breeds. Of sheep, the sort most valued by the superior improvers, appears to be the new Leicestershire or Dishley breed.

In Section 3. the merits of *Oxen* for draught are discussed, and, in our opinion, they are too hastily decided against; for we are confident, from fair experiment, that a good ox will do as much work as a heavy draught horse, the pride of the modern farmer; and, unless he will so far conquer his prejudices, as to fatten and eat his heavy horse when disabled, the question will not bear a debate. The vast increase of horses during the last century, is believed, by many, to be among the causes, that the comparative supply of provisions for market, has not kept pace with the boasted agricultural improvements of the same period. Section 7. *Dove cots* are severely denounced as nuisances, proper for extirpation. We allow there may be "too much even of a good thing;" but since we know of little or no damage actually done by this beautiful winged species of live stock, except on lodged corn, and at or a little before the harvest; and as they are of some value, besides leaving an excellent manure; we are not inclined to condemn them to utter extermination, without further inquiry into their alleged demerits. Yet some of the remarks on this subject may be just. Where vast numbers are kept, they are doubtless nuisances; of which a strong proof existed in France before the Revolution, where the agriculture of whole districts was discouraged, if not destroyed, by myriads of those birds, preserved and encouraged, at the expence of the cultivators, by the most tyrannous restrictions.

Chap. 14. On *Rural Economy*, has some notices by a correspondent in sect. 1. on the subject of *Labourers*, which appear to indicate, that the situation of that indispensably useful body of men, is rather deteriorated, than otherwise, notwithstanding the improvements of the present period. If these improvements are considered only as properly centering in and supporting a system of high rents, high rates of provisions, &c. &c. the majority of the most useful members of the community cannot have reason to join the loud plaudits of those improvements, which we so frequently hear echoed and re-echoed from every quarter: And why farmers, in general, should lean more to high rents, &c. than
to

to adequate wages of rural labour, is a problem of difficult solution, on any fair principles.

Chap. 15. The *Roads* of the district, though much is done upon them, are, too, generally bad, from the softness of the materials, &c. A remark here against the use of waggons, and in favour of light carts, will not be relished by many, yet possibly it may be just. Section 3, contains lists of *Fairs and Market Towns* within the Riding. The reasoning against the "proposal of some wild imaginations," that all grain should be sold in the public markets, is perfectly conclusive; indeed, the insanity of such a proposal is self-evident.—In Section 4. the leading *Manufactures* of the district are briefly noticed: and some hints occur on the partial occupation of land by manufacturers. We are most clearly of the opinion, that, where manufacturers can be accommodated with land in small parcels, for their convenience and relaxation, this mode of occupation is highly advantageous to individuals, and to the community, in every respect. In Section 5. on the *Corn Laws*, our surveyors justly observe as follows:—

‘ From the beginning of this century, to the year 1756, the corn laws were allowed to operate without any suspension; but the crop of the above year being rather defective, an act of Parliament was passed, whereby exportation was stopped during the year 1757. In 1766, upon an application from the Lord Mayor of London, the Privy Council assumed the power of issuing a proclamation for stopping exportation, which was emphatically called by the late Earl of Mansfield, “the forty days tyranny;” and and, since the year 1773, the corn laws, like Proteus, have assumed so many various shapes, no regular system being adhered to, as to throw the whole trade into confusion and disorder.’

Chap. 16. *Miscellaneous Observations.* The following remarks on *Agricultural Societies*, we will extract:—

‘ As improvements in agriculture very often locally take place, and are slow in travelling from one part of the country to another, we should esteem the institution of societies, upon proper principles, an excellent method for disseminating knowledge in this science. If these societies were to correspond with one another, every new improvement, either in cultivation, stock, or husbandry utensils, that was devised in one part of the country, would be
immediately

immediately known in its most distant parts. For want of these means of communication at present, the great body of farmers are almost as ignorant of what their brethren in other counties are doing, as if they lived in a foreign land.

‘ In constituting Agricultural Societies, we are far from recommending an intermixture of proprietors and farmers together. It is absolutely necessary, for many obvious reasons, they should be separate. Without dwelling upon these, it may only be said, that, in presence of a landlord, some farmers are ready to be diffident, and will not propose their opinions in that free and unrestrained manner they would do in the company of their brethren and equals. We heard of the Sheffield society, where gentlemen, clergy, and farmers, met promiscuously; the consequence of which was, that the latter were in a manner prohibited from mentioning improvements, in case they should be a watch-word for the one to increase the rent, and the other to raise the rate of tithes.’

In regard to the troublesome and long complained of diversity of *Weights and Measures* in this country, the observations here made are judicious, and well deserving the attention of those who might apply a remedy. It is the decided opinion of the surveyors, that corn ought uniformly to be sold by weight: a number of objections have been made, which are easily repelled.

In chap. 17. *Obstacles to Improvement* are brought forward; very important objects for consideration. In the first place, the surveyors say, “ We account it as demonstrable as any proposition in Euclid, that no real improvement can take place in regard to the waste lands of this district, without a previous division; and it is nearly as certain, that, without a general law being passed at once, for the whole kingdom, their division, according to the present system, will never be accomplished.” Here follows the humble petition, at length, of the freeholders, to the lord of a manor in the West Riding, which offers a plain statement of the present, almost insuperable, difficulties attending the inclosure of wastes, &c. so imperiously demanded by the “ *existing circumstances*” of this country. Archdeacon Paley is quoted at some length, in corroboration of the remarks of the surveyors. The *Tithes* are here also briefly mentioned as obstacles to improvements of almost every kind; the difficulties of settling which, in inclosures, form the strongest barrier
against

against the cultivation of the wastes. The want of *Leases* comes again into view as a signal discouragement, which is well illustrated by a correspondent, whose description of his own case must excite the sympathy of every cultivator. The *Limitations* upon *Management*, which obtain in many places, are justly considered as obstacles in the way of every experienced improver: for, as here stated, the tenant, under such restraints, and without a lease, is but a steward on his farm, if not a *slave*. Throughout the whole of the reasoning on the assigning or subsetting of land, and the various aspects of the relation of landlord and tenant, the author appears to point to a degree of independence, on the part of the tenantry, absolutely incompatible with the actual state of things; for if all the tenants had leases, what would become of the influence of landlords, in elections for Parliament, &c. the purity of which we are so much interested in preserving? Yet a clause in the lease might provide against this offence; but then other modes of dependence, attaching to tenures at will, stand unfortunately in the way of leases. The small size of farms is also mentioned as an hinderance to improvement; and while every little arable farmer must have a team of heavy horses, devouring a great proportion of his produce, there is not a doubt about it, but small grass farms are much wanted in many parts of the Riding, for which there is every encouragement, from the constant high price of their products, and the consequent high rate of the rental.

Chap. 18. is on the *Means of Improvement*, which we introduce in the author's own words:

“Agriculture is the parent of all the arts, and the practice of it may be considered as a standard for the flourishing of others. It has, for some years past, been a principal object in the several governments of Europe, to frame laws and regulations for its encouragement; and the establishment of a Board for promoting Agriculture and internal improvement, shews it is not neglected in our own country. We have, in the foregoing parts of this work, submitted to the consideration of that Honourable Board a state of the husbandry in this Riding: and also pointed out, for their information, the principal obstacles which are in the way of further improvements: We now proceed to suggest how these obstacles may be removed, and what alterations ought to be introduced into the husbandry of the district.

“The

“ The improvements we suggest are :

- “ 1st, That the nature of the connexion betwixt the landlord and the tenant should be changed, and leases of a proper duration granted.
- “ 2^{dly}, That the arbitrary and injudicious covenants generally imposed upon the tenantry, should be discontinued, and conditions, more favourable to improvements, substituted in their stead.
- “ 3^{dly}, That tithes should be commuted.
- “ 4^{thly}, That a general bill should be passed by the Legislature, for the division of the common fields and waste grounds.
- “ These are the leading means of improvement ; without which no material encouragement can be given to the husbandry of the district. In hopes that the Board of Agriculture will consider them in the same light, we proceed to recommend,
- “ 5^{thly}, More improved rotations of crops.
- “ 6^{thly}, Breaking up the old pasture fields, and frequent changes of corn and grafs.
- “ 7^{thly}, Drilling and horse-hoeing beans and turnips.
- “ 8^{thly}, Planting the waste lands which are improper for cultivation.”

Under the head of more improved rotations of crops, after having premised a variety of interesting particulars, indispensable to the management of a good farm, some valuable hints are offered on the best mode of cultivating land, and raising crops on different soils.

The drilling and horse-hoeing of *Beans* and *Turnips*, and those crops only, is strongly recommended as a real improvement. On planting certain parts of the wastes, it is observed that it ought to be “ a material object with every well regulated government, that no part of its territory be allowed to remain unproductive, but that every acre of it should be employed to some useful purpose or other. If the soil is the capital stock of the country, as several political writers have maintained, the interest of the country is neglected when any part of it is allowed to lie in a state of sterility.

sterility. There is no part of the earth but what may be adapted to some useful purpose or other; and, as there is a constant demand for wood in the West Riding, the proprietors are called upon, both by public and private motives, to plant every acre, not capable of being improved by the ordinary methods of cultivation."

The *Game Laws* are noticed, and the privilege of hunting is thus feelingly commented on :

" It really shocks the feelings of a farmer, to notice the injuries committed by a parcel of people, mounted on horseback, galloping like madmen after a poor fox, or an innocent hare. We are convinced, that no *real* gentleman will injure the property of the farmer, when engaged in this *diversion* : but, so it happens, that heavy losses are often sustained by those over whose fields the object of sport happens to run ; fences are tumbled down, the sown wheat fields rode over, the young grasses not spared ; and, in short, every thing must make way for these sons of Nimrod."

These remarks ought to engage the attention of the present supporters of those pursuits, more appropriate to a savage and uncultivated state of mankind.

Having now carefully reviewed the various parts of this interesting survey, we give the conclusion of it in our author's own words :

" We shall now bring this survey to a conclusion. In the course of it, we have endeavoured to describe the state of husbandry in the West Riding, as it is actually carried on — and this we have done, not only from a minute examination of its different branches, and the information collected during the time we remained in the Riding, but also for the very liberal communications of several intelligent gentlemen and farmers, since transmitted to us. It certainly has given us much pain to be under the necessity of censuring several prevailing practices, and to say so much against the nature of the connexion which at present generally subsists betwixt the proprietors and their tenants. Upon these matters, we have stated our sentiments with freedom, because we are sensible of their importance ; and have uniformly acted upon this maxim, that " those who are afraid of the public, are not the men by whom the public is to be served."

" With regard to the interest of that useful body of men the farmers, we have endeavoured to show how much their situation would be meliorated, and the practice of agriculture improved, by the proprietors granting leases of a proper duration,

free

free of those useless restrictions and covenants that now subsist in agreements for land, whether annual, or for a greater number of years.

“ These things we humbly submit to the consideration of the Board of Agriculture; and we entertain a sanguine hope, if the improvements we have suggested are sanctioned by their approbation, that this sanction will have great influence in correcting the abuses we have described, and contribute to improve the husbandry of the West Riding of Yorkshire; by which means the interest of the landed proprietor will be augmented, the peace and happiness of the farmer increased, and consequently the public good materially promoted.

There is a copious Appendix to the volume, of which No. 1. contains 49 pages of extracts from the journals kept during the survey, which forms a very proper, useful, and amusing addition to the work; and the facts observed during the tour through the Riding, afford comments corroborative of the principles laid down in the survey. No. 7. exhibits a curious, but melancholy picture; a statement of the waste lands in Yorkshire, calculated by John Tuke, land-surveyor, by which it appears they amount to 849,272 acres, of which 405,272 acres are in the West Riding alone; being above one-fourth of the whole surface of the district. Most of these lands are now existing as nuisances; while this country has been for many years importing grain to a very large amount; while, in some of those years, the common products of our soil, the absolute necessaries of life, have been scarcely acquirable by the lower classes; and while even several awful warnings of famine have been given. May these warnings have their effect, in calling forth the utmost efforts of those who have the power to remove every obstacle to the extension of our agriculture, and the consequent increase of the stock of the necessaries to human existence, before it be too late; for by no other means can even property itself remain secure, notwithstanding the objections of the half-learned ones in this important branch of political economy. No. 9. is an account of the different townships in the Wapentake of Claro; a similar account of the whole Riding would have been acceptable; it includes a short sketch of the actual management of the proprietors, &c, in each place. No. 10. and last, gives statistical information respecting many parishes in the Riding, which appear to have been gathered from the replies to the queries sent some years since to the clergy of the different parishes.

We

We have here an estimate of the number of acres in each parish, of their various application to corn, grass, &c. ; courses of crops, and number of inhabitants. These may furnish most useful and interesting documents for future observers on the state of this important district.

On the whole, this General View of the Agriculture of the West Riding of Yorkshire—for diligent research, candour and liberality, in the selection of matter from correspondents, as well as in the imparting of advice and opinion ; for the able and masterly manner in which the account is drawn up, and, above all, for the sound and practical knowledge pervading the whole work—merits the warmest acknowledgments of the inhabitants of that district in particular, and will obtain a distinguished place among the surveys of the other countries. We conclude our review of this article, with lamenting, that the Board of Agriculture should have restricted the surveyors, generally, from the discussion of the subject of *tithes*, in comparison with which, every other obstacle to the agricultural improvement of this country, is but as a *molehill to a mountain*.

W. P.



Travels through the United States of North America, by the DUKE DE LA ROCHEFOUCAULT LIANCOURT, Vol. 2. 686 pages, 4to. London, Philips, &c. 1799.

A CONSIDERABLE part of this volume is devoted to a description of the constitution, government, laws, commerce, and manners, of the United States ; which subjects are foreign to the general purposes of this work : But wherever the noble author enters upon agricultural details, we discern the same propriety of description, and justice of remark, as were strikingly displayed in the first part of this valuable and important work.

We lament sincerely that our limits preclude us from examining such an interesting publication with that minuteness which it deserves. We shall therefore confine ourselves to a brief sketch of the different routes taken by his Grace, extract one or two passages illustrative of American husbandry, and conclude with a few remarks upon the present state of rural economy in the United States.

After

After a most disagreeable and dangerous passage from Charlestown in South Carolina, the Duke de Liancourt landed at Norfolk in Virginia, where a considerable trade is carried on with Europe, the Antilles, and the Northern States. Agriculture can hardly be said to exist in the neighbourhood of Norfolk, and, with a few exceptions, is imperfectly practised throughout the whole of this extensive State. Having visited the most distant parts of Virginia, his Grace crossed the Potomack, and entered into Maryland, which appears rather worse cultivated than the former State.

The second tour is to the Northern States; and his Grace travelled in the stage from Philadelphia to New-York, where, in company with his old fellow-traveller Mr Guillemard, he took shipping for Providence, in Rhode Island. Being, by an adverse wind, forced into Stonington, State of Connecticut, he examined the husbandry of the neighbourhood, which is chiefly confined to pasturage and rearing young cattle. Afterwards they passed to Newport and Boston—paid a second visit to General Knox at Thomastown, in the district of Maine, whose extensive undertakings are amply detailed. Returning to Boston by water, his Grace proceeded to Portsmouth, in New Hampshire, and gives a comprehensive account of the constitution, laws, and commerce of that province.

Visiting Boston a third time, the Duke journeyed through the inland parts of Massachusetts, of which the description is generally very favourable. He entered the State of New York, about nine miles from Stockbridge; and, after examining the lands upon the side of Hudson's river, and giving a particular account of the estate of Major Prevost, son of General Prevost, who commanded at Savannah when that place was besieged by Count d'Estaing, he arrived at New York, which concludes the second tour.

His Grace, on the 26th March 1799, set out on his third tour, the object of which was to visit the Federal city, henceforth destined to be the seat of government. Passing the Schuylkill, he travelled by Chester and Wilmington to Brandywine, where from 60 to 80 mills are erected, chiefly for the manufacture of paper, gun powder, and flour. The constitution and laws of the Delaware state is next described; and, after making some observations upon Lower Maryland, he crossed Chesapeake-bay, and arrived at Annapolis.

Federal City, the site of which extends three miles along the banks of the Potomack, including 4120 square acres,
from

from the accounts here given, appears to have been planned out upon too expensive a scale for the circumstances of the country; to the prosperity of which, the sinking such an immense sum of money upon non-productive works, was certainly a matter of the utmost magnitude. In the execution of the design, a gross error seems to have been committed, by erecting buildings in all the different quarters at once, without finishing any thing like a street, or disposing of the lots as buildings for the accommodation of the inhabitants were required. Ruinous speculations were the certain consequence; and by far too much of the capital stock of America has been unnecessarily expended, in erecting what is meant in future to be their capital city. His Grace's observations on these matters are so just, that we recommend them to the attention of our readers. It appears, however, from a late motion in the American Senate, that he has erred in his prediction, that government would not remove to this place at the time fixed by the original law in 1790.

Leaving Federal City, the Duke passed on to Baltimore, which has increased prodigiously since the peace in 1783, and is now the third commercial town in America. Crossing the Susquehannah, he arrived at Elktown, and from thence proceeded to Philadelphia.

A very full and liberal account of the State of Pennsylvania is next given, which is well worth the perusal of every person who takes interest in the welfare of mankind.

The fourth tour is through part of Pennsylvania and States of New Jersey. A history of the colony of New York is presented, which is followed by an interesting account of its present constitution, trade, finances, manners, &c. A variety of general observations on the United States conclude the work.

We shall now extract two passages, which will throw considerable light upon American husbandry.

Speaking of Mr Jefferson's estate at Monticello, in the chain of mountains which stretches from James's river to the Rapahannock, his Grace says:

“ Mr Jefferson has divided all his land under culture into four farms, and every farm into seven fields of forty acres. Each farm consists, therefore, of two hundred and eighty acres. His system of rotation embraces seven years; and this is the reason why each farm has been divided into seven fields. In the first of these seven years, wheat is cultivated; in the second, Indian corn; in the

third, peas or potatoes; in the fourth, vetches: in the fifth, wheat; and, in the sixth and seventh, clover. Thus, each of his fields yields some produce every year; and his rotation of successive culture, while it prepares the soil for the following crop, increases its produce. The abundance of clover, potatoes, peas, &c. will enable him to keep sufficient cattle for manuring his land, which at present receives hardly any dung at all: independently of the great profit which he will in future derive from the sale of his cattle.

“ Each farm, under the direction of a particular steward or bailiff, is cultivated by four negroes, four negresses, four oxen, and four horses. The bailiffs, who in general manage their farms separately, assist each other during the harvest, as well as at any other time, when there is any pressing labour. The great declivity of the fields, which would render it extremely troublesome and tedious to carry the produce, even of each farm, to one common central point, has induced Mr Jefferson to construct, on each field, a barn, sufficiently capacious to hold its produce in grain. The produce in forage is also housed there; but this is generally so great, that it becomes necessary to make stacks near the barns. The latter are constructed of trunks of trees, and the floors are boarded. The forests and slaves reduce the expence of these buildings to a mere trifle.

“ Mr Jefferson possesses one of those excellent thrashing machines, which, a few years since, were invented in Scotland, and are already very common in England. This machine, the whole of which does not weigh two thousand pounds, is conveyed from one barn to another in a waggon, and thrashes from one hundred and twenty, to one hundred and fifty bushels a day. A worm, whose eggs are almost constantly deposited in the ear of the grain, renders it necessary to thrash the corn a short time after the harvest. In this case, the heat, occasioned by the mixture of grain with its envelope, from which it is disengaged, but with which it continues mixed, destroys the vital principle of the egg, and protects the corn from the inconveniences of its being hatched. If the grain continued in the ears, without being speedily beaten, it would be destroyed by the worm, which would be excluded from the eggs. This scourge, however, spreads no farther northwards than the Potowmack, and is bounded to the west by the Blue Mountains. A few weeks after the corn has been beaten, it is free from all danger, winnowed, and sent to market. The Virginia planters have generally their corn trodden out by horses; but this way is slow, and there is no country in the world where this operation requires more dispatch than in this part of Virginia: Besides, the straw is bruised by the treading

treading of horses. Mr Jefferson hopes that his machine, which has already found some imitators among his neighbours, will be generally adopted in Virginia. In a country where all the inhabitants possess plenty of wood, this machine may be made at a very trifling expence."

The following bears much affinity to the description of an old English township :

" Stockbridge is one of the richest townships in the state of Massachusetts. All its land is cultivated, except a very small portion, which will soon, in its turn, receive culture like the rest. No timber is here preserved beyond what is requisite for fuel. This township is, for the most part, situate in a valley, but extends also upon some hills of no great elevation. The soil is excellent, and almost all laid down in meadow. The cattle, butter, cheese, and such other productions as are not consumed on the spot, are generally sent to New York. Sometimes the certainty of obtaining a higher price at Boston, induces the farmer to give a preference to the latter place ; with which, however, the communication is difficult, because of the distance, and of the mountainous country that is to be traversed. In such cases, all the other articles, except the cattle, are sent down to New York by the North River, which passes within twenty miles of Stockbridge, and transported from New York to Boston by sea."

We shall now offer one or two remarks upon the present state of rural economy in the United States.

A line of distinction may be drawn betwixt those states commonly called Southern and Northern ones. In all the northern ones, property is more divided, the land better cultivated, and population generally more extensive, upon an equal space of ground. In the southern states, a great proportion of the inhabitants are slaves, which necessarily renders the system of cultivation materially different. The northern states appear to possess more of the comforts of life, and are much farther advanced in agricultural science, particularly Connecticut and Massachusetts, than the southern states of Virginia, Maryland, Carolina, and Georgia, where a few individuals may be richer ; but the great bulk of the people are dependent, ignorant, and uncivilized. In Virginia and Maryland, a change is rapidly taking place in the mode of husbandry ; for tobacco is yielding to wheat, which assuredly is a beneficial change ; but it has given us much surprize to observe, that the crops of that grain are, upon the whole, very insignificant, while the expence of cultivation is so great.

Very little attention seems to be paid to the important article of manure, which in general is too much neglected in the American States, and is a sure proof that agricultural science is but in its infancy.

It may be added, that the rate of labour will, for a long while, effectually preclude grain from being an article of export to Europe, unless in years of scarcity, when prices are necessarily much higher than usual. The medium price of Wheat in Virginia and Maryland, appears to be higher than it commonly is in Britain, even under the trifling value of land, which only will advance as population increases, and improvements are made.

We shall now finish our account of this highly interesting and important work, by expressing the deep sense we entertain of the noble author's laborious exertions, in collecting such a mass of information concerning the civil, political, commercial, and agricultural state of a country which promises, at no distant period, to rival old European governments in the arts and sciences, and in every article of polity advantageous to mankind. The information, copiously and judiciously given, will be of material use to those who may afterwards visit America, and instructive to every one interested in the welfare of society in these flourishing and well-regulated States.

N.

Remarks on the Cause and Progress of the Scarcity and Dearness of Cattle, Swine, Cheese, &c. &c., and of the articles of Tallow, Candles, and Soap; pointing out divers modes for remedy, and to prevent such calamity in future. Being the result of great experience, acquired by dealing at Fairs, Markets, &c. during the last thirty-seven years. Humbly dedicated to the Prime Minister of England, in behalf of the Community at large, more or less interested therein. Together with Hints for the consideration of persons having landed property, and dealers in cattle. 234 pages, 8vo. By J. MATTHEWS. London, printed for the Author; sold by Scarlet, &c. Price 6s.

THIS elaborate title-page excited our curiosity; and we entered upon the work, under the sanguine expectation of receiving

receiving satisfactory information concerning the important matters therein mentioned; but we confess that we have been utterly disappointed. This desultory and eccentric writer only tells us, that prices of beef, mutton, &c. are greatly increased since 1760, when he commenced business; a thing we are already practically acquainted with. The cause of this, he attributes to the great number of calves and lambs which are now killed; and suggests no other remedy than to prohibit such practices, which he thinks would render the market for cattle and sheep as plentiful and cheap as formerly.

Hark ye, Mr Matthews! do you suppose, when luxury is so vastly increased, that the like quantity of provisions will satisfy the national consumption, as was sufficient in the year 1760, when you opened shop at Bath? Or do you think that a pound weight of beef and mutton can be sold at the price then current, seeing that rent, labour, and public burdens, are now doubled? Let us try the question by the price prefixed to your book. In 1760, a bookseller would have been well paid with three shillings for 234 pages octavo; and yet you modestly demand double that sum for a work of equal size. If a page of print has risen in price, why should not a pound of beef rise also?

The work is dedicated to Mr Pitt, who is represented "to have had greater embarrassments to encounter, owing to great fallings off of income to the revenue, and perhaps greater outgoings, occasioned by scarcity and dearth of cattle, than any of his predecessors." And, in the body of the work, p. 161. those in power are fervently exhorted, *if they possess Christian charity, to attend to the next calving season!!!*

General View of the Agriculture of the County of Northumberland, with Observations on the Means of its Improvement: Drawn up for the consideration of the Board of Agriculture, by J. BAILEY and G. CULLEY. 209 pages 8vo. Sold by Messrs Robinson and G. Nicol, London; Bell, Newcastle; and Symington, Edinburgh.

THIS work is chiefly of a practical nature; and proceeding from two such eminent agriculturists as Messrs Bailey

and Culley, who are justly ranked at the head of the profession, deserves minute consideration.

Northumberland is a district of great extent, containing 1,267,200 acres; whereof nearly one-third is stated as improper for tillage. Of the cultivatable land, 800,000 acres are supposed worth 14s. *per* acre, and 450,000 acres at 2s., which gives an annual value of 605,000l. Sterling. The climate, in regard to temperature, is subject to much variation; and the prevailing soil is moist loam, accompanied with a portion of the several varieties which are to be found in this island.

Minerals constitute an important feature in the description of this county; and perhaps working the subsoil in such an extensive manner, has contributed more to the improvement of the surface, than any other circumstance. An increased population is the necessary consequence of these subterraneous improvements, which augments the demand for every article of rural produce. This stimulates the activity of those employed in field labour, raises the rate of rents, and, in short, occasions an influx of wealth among the inhabitants of all descriptions, greater than could have arisen from the most flourishing manufacture.

The export of coals from Newcastle, appears to have increased nearly one half since 1772; the quantity shipped in 1795 being 505,650 chaldrons, or above 950,000 chaldrons, according to the London measure. The value of a chaldron, in the first instance, is 15s.; the charges of putting aboard are 2s. 3d. The duties, insurance, &c. amount to about 22s. 3d.; and the freight and profit to the shipper, may be estimated at 23s. These several sums, except about 12s. *per* chaldron of duties, &c. are circulated in the neighbourhood, and prove the immense benefit of the coal-trade to the county of Northumberland.

The following extracts throw much light upon a question often agitated, viz. *Whether the British collieries are inexhaustible?*

“It has been asserted, ‘That the coals in this county are inexhaustible.’—Mr Williams, in his Natural History of the Mineral Kingdom, is of a different opinion, and thinks it a matter of such importance, as to deserve the serious attention of the Legislature. Towards elucidating this point, it may be of some use to estimate what number of acres are wrought yearly in this county, to supply the above quantity of coals. In order to accomplish this object,

ject, the thickness and number of workable seams of coal must be first ascertained; for which purpose, we have been favoured with sections exhibiting the thickness and depth of the various strata, in some of the deepest pits in the county; which will not only be useful for the present purpose, but we hope will be acceptable to many of our readers who are curious in researches of subterranean geography.

At St Anthon's colliery, (three miles east of Newcastle) the different seams are as follow:

Seam.	Thickness of each seam.			Depth to each seam.		
	Ft.	In.	—	Yds.	Ft.	In.
1. Coal	0	6	—	34	0	6
2. Ditto	0	8	—	41	1	2
3. Ditto	0	6	—	66	1	8
4. Ditto	1	0	—	82	2	2
5. Ditto	0	6	—	94	0	8
6. Ditto	0	8	—	101	2	4
7. Ditto	0	8	—	108	1	0
8. Ditto	1	0	—	128	0	0
9. High Main Coal	6	0	—	152	0	0
10. Coal	3	0	—	193	0	5
11. Ditto	0	6	—	200	2	2
12. Ditto	1	6	—	219	2	5
13. Ditto	3	3	—	247	0	2
14. Ditto	3	2	—	256	2	8
15. Ditto	0	9	—	258	1	5
16. Low Main Coal	6	6	—	270	1	8

In the above pit or shaft, which is nearly the deepest in the kingdom, there are no less than sixteen seams of coal. But many of these, from their thinness, are not workable. The 9th, called the *high main coal*, and the 16th, the *low main coal*, are the two principal seams for affording quantities of coal, being altogether $12\frac{1}{2}$ feet thick, and are those most generally wrought. But the 10th, 13th, and 14th, are all workable seams, and will afford considerable quantities of coal; the aggregate of the three making nearly $9\frac{1}{2}$ feet thick; so that the total thickness of the workable seams in this colliery amount to 22 feet.

In Montague Main colliery, (three miles west of Newcastle), the different seams of coal are as follow:—

Seams.	Thickness of each seam.		Depth to each seam.		
	Ft.	In.	Yds.	Ft.	In.
1. Coal.	0	4	—	5	2 0
2. Ditto	0	6	—	44	1 0
3. Ditto	0	9	—	63	2 9
4. Benwell Main	5	3	—	69	1 10
5. Coal	1	0	—	79	2 10
6. Ditto	0	8	—	133	1 6
7. Ditto	3	4	—	137	1 10
8. Ditto	1	6	—	143	1 3
9. Ditto	1	3	—	147	2 2
10. Ditto	0	8	—	162	2 6
11. Low Main Coal	2	11	—	176	0 4
12. Lower Main Coal	2	10	—	199	2 10
13. Coal	0	6	—	226	0 10
14. Ditto	0	5	—	233	1 5
15. Ditto	0	3	—	241	1 10

In this shaft, there are fifteen seams of coal, of which only four are workable; viz. 4th, 7th, 11th, and 12th, making together 4 yds. 1 ft. 7 in. of workable coal. If the medium be taken betwixt this and St Anthon's, it will be nearly 6 yards thick of workable coal, from which may be formed,

A Calculation of the quantity of coal in an acre of ground, supposing the aggregate thickness of the various seams amount to six yards.

An acre of ground contains - 4840 square yards;
 which, multiplied by the thickness, 6 yards,
 gives - - - - 29,049 cubic yards in an acre.

From which deduct one third for waste,
 and the part or pillars necessary to be left in working, - - - 9680

there remains - - - 19,360 cubic yards to be wrought.

And, as three cubic yards of coal, when wrought, affords a Newcastle chaldron,
 therefore 10,360 } gives 6,453 Newcastle chaldrons per acre.
 divided by 3 }

The

The coals exported yearly from the rivers Tyne and Wear, with Hartly and Blythe, amount to about 825,000 chaldrons, which, with the home consumption of the two counties of Northumberland and Durham, will make the quantity of coals raised yearly about 1,000,000 chaldrons.

And the chaldrons raised yearly $1,000,000$
 divided by the chaldrons per acre 6453 } gives 155 acres
 } nearly per year,
 } cleared of coal 6
 } yards thick.

And, by estimating the breadth occupied by the caking coals to be on an average 8 miles broad, and 25 miles long, in the two counties, we shall find there will be about 200 square miles, or 128,000 acres, of coals proper for exportation.

Then the whole area $128,000$
 Divided by the yearly } gives 825 years, the time
 consumption, 155 } before this space will
 } be wrought out.

But there are some reasons to think that a thickness of seam, equal to 6 yards, will not be obtained over an extent of 200 square miles; probably not more, on an average, than 4 yards; in which case, the coal will be exhausted in 550 years: And if the aggregate thickness of the seams to be obtained should prove only 3 yards, then little more than 400 years will be the term of continuance; but it is probable, that, before the half of that time be elapsed, the price to the consumer will be considerably increased, from the increased expence of obtaining them, and the increased length of carriage from the pits to the river. This last, we presume, may be reduced, in some situations, by adopting canals in stead of waggon ways, which, we have often wondered, have never yet been attempted.

From the above investigation, it appears that Mr Williams's apprehensions are not so chimerical as have been represented: How far it might be right for the Legislature to interfere, we leave to the consideration of those more conversant in political speculations.'

The *State of Property* is elucidated in the second chapter; and, though less is said on the subject than we could have wished, yet the just sentiments expressed deserve the utmost praise. The candour and discernment of the surveyors are strongly exemplified in the following passages:

' There are probably few parts of the kingdom where estates have made such rapid improvements as in this country; there being several instances of the value being more than trebled within the last forty years. Many causes have certainly been aiding to
 produce

produce this effect ; but the principal one is attributed to letting large farms on leases for twenty-one years ; by which means the tenants of capitals were encouraged to make those great exertions, from which such advantages have resulted, not only to themselves and proprietors of the land, but to the community at large, from the very increased produce, and superiority of its quality.

‘ The usual mode of letting farms is, to fix a rent under certain conditions and covenants, six or twelve months before the expiration of the lease ; but, upon one of the largest estates in the county *, the tenants have an offer of their farms two and a half or three years before the expiration of the lease, which is a mutual benefit to both landlord and tenant ; and is attended with so many advantages, that it is in a fair way of being generally adopted.

‘ On some estates, the practice of letting farms by *secret proposals*, is still in use. This is a dark and mysterious mode, which frequently defeats the end it is intended to accomplish ; and instead of obtaining an *excessive high rent*, the prize has often been gained at a *very inferior value* ; and, in the language of the turf, (where only one has entered the lists), ‘ by walking the course :’ And we have known some of the first farmers in the county forego their farms, rather than submit to contend in the dark.’

It has been a question with speculative agriculturists, whether large or small farms were most conducive to improvement, though, in our opinion, if facts were only adduced, the question would hardly bear a dispute. We are extremely glad to observe, in this work, indisputable instances of the utility of large farms ; and we believe, that if the condition of other districts was impartially investigated, the result would be exactly similar to what is here ably stated :

‘ The size of farms varies considerably in this county ; in Glendale and Bamborough wards, the farms are large, from 500l. to 1500l. a year ; very few under 100l. In the other parts of the county they are from 50l. to 300l. a year. Some tenants in the northern parts of the county, farm from 2000l. to 4000l. a year, and upwards. The capitals necessary for such farms entitle them to a good education, and give them a spirit of independence and enterprize, that is rarely found amongst the occupiers of small farms and short leases. Their minds being open to conviction, they are ready to try new experiments, and adopt every beneficial improvement that can be learnt in other districts ; for this purpose, many of them have traversed the most distant parts of the kingdom,

* The Earl of Tankerville.

dom, to obtain agricultural knowledge, and have transplanted every practice they thought superior to those they were acquainted with, or that could be advantageously pursued in their own situation: And scarcely a year passes, without some of them making extensive agricultural tours, for the sole purpose of examining the modes of culture, of purchasing or hiring the most improved breeds of stock, and seeing the operations of new invented and most useful implements.'

'The character of a farmer is here so respectable, that gentlemen, who possess landed property from 500l. to 1500l. a year, think it no debasement to follow the profession; and so high a name have many of the farmers obtained, for their superior knowledge in rural affairs, that they are seldom without pupils from various and distant parts of the kingdom, with whom they have very handsome premiums*. Amongst the present pupils may be reckoned the son of an earl, and the son of a baronet;—who, from their abilities, attention, and anxious readiness to learn and work at every operation, we hope will do credit to the profession, and render the most essential services to their respective districts.'

We have several objections against the *heads of a lease*, presented p. 32. as being best calculated for promoting improvement and the benefit of landlord than tenant. These we shall shortly enumerate. It is with diffidence we differ in opinion with such experienced agriculturists.

1st, We do not think it equitable to subject the tenant to the payment of all taxes, seeing that the burden is necessarily variable, and cannot be ascertained at the commencement of the lease. 2^{dly}, The prohibition against felling hay, is rather a hardship, in particular cases, upon the tenant, and detrimental to the public; for, under such a covenant, how are innkeepers, and others unprovided with land, to be supplied with this necessary article? 3^{dly}, We are clearly of opinion, that restraining the tenant from sowing flax, would be highly prejudicial to the manufacturing interest of the kingdom; for, if the covenant was universal, foreign flax would, in every case, be required, which would occasion a large sum of money to be annually lost to the country. By sowing at least a small quantity for farm servants and cottagers, the public interest is much promoted, as those people work up the produce at their leisure hours, which is a considerable national saving. 4^{thly}, The clause obliging the out-going tenant to thrash his last crop

* Generally 100l. per annua.

crop in an uniform manner, is so far right; but, when it is added, "and to deliver a daily supply of straw to the next tenant," it goes beyond what is practicable, when thrashing-machines are generally introduced; and might subject the way-going tenant to much inconvenience, especially if his successor was of a troublesome disposition. We know several instances of way-going tenants being disposed to thrash out their crop in an irregular manner; but, upon application to the Judge Ordinary (the Sheriff of the county), every such attempt has immediately been interdicted. The first part of the clause, therefore, in our humble opinion, is quite sufficient; the addition would only lay a foundation for disputes, which too often happen betwixt the parties. 5thly, The covenant respecting the application of lime, appears loosely worded, and would give room for dispute. If the tenant is to be sole judge, *where or when it was necessary* to apply lime, the clause is unnecessary. If he is not the judge, but must either bestow the quantity specified in his lease, or adopt the alternative of using so much dung in its place, then a burden is imposed upon him, which may prove of no advantage to the land; a previous clause having already declared, that the dung could not be carried off the premises. It rather gives us surprise to notice such judicious cultivators indirectly recommending the use of calcareous manures each time the land is Summer-fallowed, or under fallowed-crops.

We have, in former reviews, expressed our disapprobation of the section of *expence* and *profit*, which we judged improper subjects for public discussion; and the more we consider the matter, the more our original ideas are confirmed. It is obvious, that scarcely any two farms are cultivated at the same rate of expence; and that the profits are regulated by a number of circumstances which can hardly be celebrated.

The expence of a farm under the rotation of three years arable, and three years grass, is stated to be 12l. 3s. 6d. for six years, independent of rent, and the support of the farmer's family; the produce, for the same time, is taken at 20l.; which leaves a balance of 7l. 16s. 6d., or 1l. 6s. 1d. per acre *per annum*. We apprehend that this statement is materially erroneous; and that, under the present rate of rents, public burthens, value of labour, and increased expence of living, no farmer could carry on his business upon such terms. It does not present the highest character of Northumberland husband-

dry, that the value of the produce should not much exceed what is paid for rent in some other districts.

We confess we are not fond of analyzing the different calculations upon which the above balance is founded; because the gentlemen who offer them are undoubtedly better qualified to judge of their correctness, than we who reside at a distance, and are unacquainted with the rate of Northumberland markets. Still we must remark, that neither oats nor barley, under existing circumstances, can be raised by a farmer at the prices mentioned. Twenty years ago, such a scale might have been just; but, at this time, the farmer is not able to dispose of his produce, *during the currency of a lease*, at these low prices; though it may happen, that, during a particular year, when markets are low, he may only receive the value which is stated.

The decreased value of grass land, from suffering it to remain three years unploughed, is obvious, from what is stated in p. 36, and is nearly agreeable to what we have uniformly found to be the case in our practice. Thirty-three per cent. loss the second year, and double that sum the third year, are good arguments for breaking it up at an earlier period; though the surveyors, in another part of the work, assign strong reasons for the existing practice. We believe, however, that the increased value of the turnip crop will not compensate for 3l. Sterling, lost by the possessor, during the time he kept the land in grass, exceeding the Norfolk term of one year.

At the same time we admit, that a considerable proportion of Northumberland (perhaps three-fourths) is not naturally calculated for a regular course of crops, though the remainder, we believe, is managed in as complete a style as any other part of the island. The tenants are therefore in the right, when they adopt such a system, as is most consonant to the several varieties of soil which they occupy; and if it is found that turnips and corn cannot be raised in a profitable way without permitting the land to be previously refreshed by grass, for more years than one, it is certainly advantageous that the plough should be used sparingly in all such situations. It is upon this principle that we have constantly contended against restrictive covenants, because they necessarily preclude discretionary management, and occasion the same line of husbandry to be followed out, whether the soil and other circumstances permit such an uniformity.

The

The fifth chapter, upon *implements of husbandry*, will be an acceptable treat to every person who has made these matters his study. The opinion given upon wheel-carriages, is precisely what has occurred to us on the subject; and the use of waggons is, with great justice, severely censured, as being destructive to roads, and of little utility to farmers. The account of the swing-plough deserves attention, being, in our opinion, the best demonstration of the principles upon which such an useful and necessary implement should be constructed. It is, undoubtedly, a matter of surprise, that no fixed rules have been hitherto adhered to in the construction of the plough, which is evident from the difference of work of the several ploughs made by the same carpenter.

We observe, with satisfaction, that the ingenious authors have amended their account of the thrashing-machine, and that they have now done that justice to Mr Meikle, the patentee, which his merit deserves. A very full and accurate description of the machine is given; from which, and from an engraving annexed, any person acquainted with the principles of machinery, might, with facility, construct and erect such an implement. Indeed, it is the best description of the thrashing-machine that has come under our consideration. N.

(To be continued.)

PART III.

EXTRACTS FROM AGRICULTURAL PUBLICATIONS.

Extracts from the Agricultural Survey of the County of WILTS, respecting the Benefit of Water Meadows.

THERE is, perhaps, no part of this kingdom, where the system of watering meadows is so well understood, and carried to so great perfection, as in this district. This, which is so justly called by Mr Kent, "the greatest and most valuable of all improvements," was generally introduced into this district at the latter end of the last, and the beginning of this century. Many of the most valuable and best formed meadows, particularly in the *Wyley Bourn*, were made under the direction of one farmer Baverstock of Stockton, between the year 1700, and the year 1705. And, at present, there is scarcely a river or brook in the district that is not applied in some way or other to this purpose.

An

An imperfect scheme of watering had undoubtedly been practised before that period. Perhaps, indeed, its introduction into this district is almost coeval with that of folding sheep, with which it is intimately connected. But the *regular mode*, in which both systems are now conducted, is certainly not very ancient. Many old farmers, who have died within the memory of man, remembered when neither of the systems was conducted on any regular plan.

Theory of water meadows.—The idea of watering meadows, so far as it relates to bringing the water *upon the land*, was taken from *nature*. It must have been always observed, that Winter floods produced fertility, provided the water did *not* remain *too* long on the land. The idea of taking the water *off* the land *at will*, and bringing it *on again at will*, is the effect of *art*; and the knowledge of the proper time to do this, the effect of observation.

A water meadow is a *hot-bed* for grass. In what manner water acts upon land, so as to produce a premature vegetation, before natural vegetation begins, is a philosophical problem which it is not a farmer's province to solve. It was sufficient for him to know that the fact was so. Observation on the effects of water so brought on, soon shewed them at what period its good effects ceased, and when it began to do mischief. This observation, therefore, regulated the time of keeping the water on the land; and as this period was different, on different kinds of land, and at different seasons of the year, it became necessary that they should have such a command of the water, as to *take it off* immediately, as soon as they found the state of the land required it. This, by degrees, produced that regular disposition of the water-carriages and water drains, which, in a well laid out meadow, bring on and carry off the water, as systematically as the arteries and veins do the blood in the human body.

As water meadows are totally unknown in many parts of the kingdom, and but very partially known in others, it may not be thought improper, in an agricultural account of South Wiltshire, to speak a little more fully on their nature and properties. If it should tend to excite the same improvement in other counties, one of the great objects of the institution of the Board of Agriculture will be answered.

Nature and properties of water meadows.—It has been already premised, that the principle of a water meadow is, the power of bringing on and carrying off the water at pleasure. And, provided this great object can be accomplished, it is
not

not material what the shape of a water meadow is, or that the disposition of the trenches (provincially "*the works of the meadow,*") should be uniform. But, as very little land can be entirely commanded by water, unless its inequalities are reduced by manual labour, it has been found convenient to adopt two different kinds of water meadows; one for land lying on declivities, and which must in general be watered from springs or small brooks; and the other for low land near rivers, to be watered from those rivers.

The first kind is called, in Wiltshire, "*catch-work meadows,*" and the latter, "*flowing meadows.*" The latter are by far the most general in this district.

It is impossible to give any intelligible written description the mode of making these meadows. This operation must be seen, to be properly understood.

Catch-work meadows described.—But, to elucidate the distinction between the two kinds of meadow, and to give some idea what are the situations in which they may be introduced, it may be necessary to remark, that the "*catch-work meadow*" is made by turning a spring, or small stream, along the side of a hill, and thereby watering the land between the New Cut, (or, as it is provincially called, the Main Carriage), and the original water-course, which now becomes the "*main drain.*" This is sometimes done, in particular instances, merely by making the new cut level, and stopping it at the end; so that, when it is full, the water may run out at the side, and flood the land below it. But, as the water would soon cease to run *equally*, for any great length, and would wash the land out in gutters, it has been found necessary to cut small parallel trenches or carriages, at distances of twenty or thirty feet, to catch the water again; and each of these being likewise stopped at its end, lets the water over its side, and distributes it till it is caught by the next, and so on over all the intermediate beds, to the *main drain* at the bottom of the meadow, which receives the water, and carries it on to water another meadow below; or, if it can be so contrived, another part of the same meadow, on a lower level.

To draw the water out of these parallel trenches or carriages, and lay the intermediate beds dry, a narrow deep drain crosses them at right angles, at about every nine or ten poles length, and leads from the main carriage at top to the main drain at the bottom of the meadow.

When this meadow is to be watered, the ends of the carriages adjoining the cross drains are stopped with turf, dug on the

the spot, and the water if thrown over as much of the meadow as it will *cover well* at a time, which the watermen call a "*pitch of work*;" and, when it is necessary to lay this pitch dry, they take out the turves, and let the water into the drains, and proceed to water another pitch.

This kind of water meadow is seldom expensive: The stream of water being usually small and manageable, few *hatches* are necessary: and the land lying on a declivity, much less manual labour is required to throw the water over it regularly, and particularly *to get it off again*, than in the flowing meadows. The expence of making such a meadow, is usually from 3l. to 5l. per acre; the improvement frequently from 15s. an acre to at least 40s. The annual expence of keeping up the works, and watering the meadow, which is usually done by the acre, seldom so high as 7s. 6d. per acre.

Flowing meadows described.—The other kind of water meadows, viz. those usually called "*flowing meadows*," require much more labour and system in their formation. The land applicable to this purpose being frequently a flat morass, the first object to be considered is, how the water is to be *got off* when once brought on; and, in such situations, this can seldom be done, without throwing up the land in high ridges, with deep drains between them. A main carriage being then taken out of the river at a higher level, so as to command the tops of these ridges, the water is carried by small trenches or carriages along the top of each ridge, and, by means of moveable steps of earth, is thrown over on *each* side, and received in drains below, from whence it is collected into a main drain, and carried on to water other meadows, or other parts of the same meadow below. One tier of these ridges being usually watered at once, is usually called "*a pitch of work*;" and it is usual to make the ridges thirty or forty feet wide; or, if water is abundant, perhaps sixty feet, and nine or ten poles in length, or longer, according to the strength and plenty of the water.

It is obvious from this description, that as the water in this kind of meadow is not used again and again, in *one pitch*, as in the catch-meadows, that this method is only applicable to large streams, or to vallies subject to floods; and as these ridges must be formed by *manual labour*, the expence of this kind of meadow must necessarily exceed the more simple method first described; and the hatches that are necessary to

manage and temper the water on rivers, must be much more expensive than those on small brooks.

The expence, therefore, of the first making of such a meadow as this is, will be from 12l. to 20l. per acre, according to the difficulty of the ground, and the quantity of hatch-work required: but the improvement in the value of the land, by this operation, is astonishing. The *abstract value* of a good meadow of this kind, may fairly be called 3l. per acre; but its value, when taken as *part of a farm*, and particularly of a *sheep-breeding farm*, is almost beyond computation; and when such a meadow is once made, it may be said to be made for ever; the whole expence of keeping up the works, and watering it frequently, not exceeding 5s. per acre yearly, and the expence of the hatches, if well done at first, being a mere trifle for a number of years afterwards.

Supposed quantity of water meadows in this district.—The number of acres of land in this district, under this kind of management, has been computed, and with a tolerable degree of accuracy, to be between 15 and 20,000 acres.

Indeed, it has been found so very beneficial, that very few spots of land, capable of being watered, remain otherwise, unless where some *watermill* stands in the way, or where some person, who has the command of the water *above*, refuses to let it be taken out of its natural course to water the lands below.

Some new meadows might be made, and very great and beneficial alterations made in the old ones, if some plan could be adopted to get the command of water where necessary for this purpose, and particularly in the case of water-mills. A remedy for this will be afterwards proposed.

Water meadows do not make a country unhealthy—It has been alleged, by those who know very little of water meadows, that they render the country unwholesome, by making the water stagnant—Daily observation proves the fact to be otherwise in Wiltshire; and the reason is obvious. It has been already said, that a water-meadow is a “hot-bed for grass:” The action of the water on the land excites a *fermentation*; that fermentation would certainly, in time, end in *putrefaction*; but the moment putrefaction begins, vegetation ends. Every farmer knows the commencement of this putrefaction, by the scum the water leaves on the land; and if the water is not then instantly taken off, the grass will rot, and his meadow be spoiled for the season. The very principle of water-meadows, will not permit water to be stagnant

nant in a water-mead country; it must be always kept in action, to be of any service: besides, many of the best water meadows were, in their original state, a stagnant unwholesome morafs.

The draining fuch land, and making it fo firm that the water may be taken off at will, must contribute to the healthiness of the country, instead of injuring it.

Great advantages from water meadows.—It is frequently asked, how it comes to pass, that although water meadows are so useful, as to be almost indispensable in South Wiltshire, yet, in other counties, where they are not known, the want of them is not felt; nay, that there are, even in this district, many parishes who have none, and even breed lambs without them? To this I answer, that the fair question is not, “How do other counties do without them?” but, “How could the farmers of this district, who are happy enough to have water meadows, pursue their present system of sheep breeding, if those meadows were taken away?” A system which, I do not hesitate to say, is more profitable to themselves, their landlords, and the community at large, than any other that could be substituted in its room; and perhaps this question cannot be answered better, than by exhibiting the contrast between those who have water meadows, and those who have none, in the same district.

Every farmer, who keeps a flock of sheep, and particularly a breeding flock, in so cold and late springing a district as South Wilts, knows and feels the consequences of the month of April,—“That month, *between hay and grass*, in which he who has not water meadows for his ewes and lambs, frequently has *nothing!*” The ewes will bring a very good lamb with hay only; perhaps a few turnips are preserved for the lambs, which, in a favourable season, may last them through March; but if they are then obliged to go to hay again, the ewes shrink their milk, the lambs “pitch and get stunted,” and the best Summer food will not recover them. To prevent this, recourse is had to feeding the grass of those dry meadows that are intended for hay, the young clovers, and frequently the young wheat; in fact, every thing that is green.—And who will pretend to estimate what is the loss that a farmer suffers by this expedient?

The rye-grass, on the exposed parts of this district, is seldom “a bite” for the sheep, till May-day. If the season should permit any turnips to be kept till that time, (which can seldom be depended upon), they are not only of little

nourishment to the stock, but they exhaust the land so as to prejudice the succeeding crop. And it ought to be remarked by the way, that in many parts of this district, the soil is not at all favourable to the production of turnips. It therefore necessarily follows, that a farmer, under these circumstances, has no *certain resource* to support his stock during this month, but hay—and even in that he is sometimes disappointed, by having been obliged, in the preceding Spring, to feed all the land which he had laid up for a hay crop: he is then obliged to buy hay, and that frequently at the distance of many miles. And, to add to his distress at this critical time, his young ewes are then brought home from wintering, to be kept nearly a month on hay alone.

In this month, which so often ruins the crops, and exhausts the pockets of those sheep breeding farmers who have no water-meadows, the water-mead farmers may be truly said to be “in clover.” They hain up their dry meadows early, so as almost to insure a crop of hay; they get their turnips fed off *in time* to sow barley, and have the vast advantage of a *rich fold* to manure it. They save a *month's hay*, and have no occasion to touch their field-grass till there is a good bite for their sheep; and their lambs are as forward at *May-day*, as those of their less lucky neighbours are at *Midsummer*. And, after all, they are almost certain of a crop of hay on their water meadows, let the season be what it will.

Management of water meadows.—The management of water meadows (as nearly as it can be described in an account necessarily so concise as this), is in the following way.

As soon as the after grass is eaten off as bare as can be, the manager of the mead (provincially “the drowner”) begins cleaning out the main drain, then the main carriage, and then proceeds to “right up the works,” that is, to make good all the water carriages that the cattle have trodden down, and open all the drains they may have trodden in, so as to have one tier or pitch of work ready for “drowning,” and which is then put under water (if water is plenty enough) during the time the drowners are righting up the next pitch. In the flowing meadows this work is, or ought to be, done early enough in the Autumn, to have the whole mead ready to catch, if possible, “*the first floods after Michaelmas*,” the water being then “thick and good,” being the *first* washing of the arable land on the sides of the chalk hills, as well as of the dirt from the roads, &c. &c.

The

The length of this Autumn watering cannot always be determined, as it depends on situations and circumstances; but if water can be commanded in plenty, the rule is, to give it a "thorough good soaking" at first, perhaps a fortnight or three weeks, with a dry interval of a day or two, and sometimes two fortnights, with a dry interval of a week, and then the works are made as dry as possible, to encourage the growth of the grafs. This first soaking is to make the land sink, and pitch close together; a circumstance of great consequence, not only to the *quantity*, but to the *quality* of the grafs, and particularly to encourage the shooting of the new roots which the grafs is continually forming, to support the forced growth above

While the grafs grows freely, a fresh watering is not wanted; but, as soon as it flags, the watering may be repeated for a few days at a time, whenever there is an opportunity of getting water; always keeping this fundamental rule in view, "To make the meadows as dry as possible between every watering;" and to "stop the water the moment the appearance of any scum on the land shews that it has already had water enough."

Some meadows that will bear the water *three weeks* in October, November, or December, will perhaps not bear it a *week* in February or March, and sometimes scarcely *two days* in April or May.

In the catch meadows watered by springs, the great object is to keep the "works of them" as dry as possible between the intervals of watering; and, as such situations are seldom affected by floods, and generally have too little water, care is necessary to make the most of the water, by catching and rousing it as often as possible; and as the *top-works* of every tier or pitch will be liable to get more of the water than those lower down, care should be taken to give to the latter a *longer time*, so as to make them as equal as possible.

Custom of feeding meadows with sheep.—It has already been said, that the great object, in this district, of an early crop of water-meadow grafs, is, to enable the farmer to breed early lambs.

As soon as the lambs are able to travel with the ewes, (perhaps about the middle of March), they begin to feed the water meadows. Care is, or ought to be taken, to make the meadows as dry as possible, for some days before the sheep are let in.

The grass is hurdled out *daily* in portions, according to what the number of sheep can eat in a day, to prevent their trampling the rest; at the same time, leaving a few open spaces in the hurdles for the lambs to get through, and feed forward in the fresh grass. One acre of *good grass* will be sufficient for five hundred couples for a day.

On account of the quickness of this grass, it is not usual to allow the ewes and lambs to go into it with empty bellies, nor before the dew is off in the morning.

The hours of feeding are usually from ten to eleven o'clock in the morning, to about four or five in the evening, when the sheep are driven to fold; the fold being generally, at that time of the year, (as has been mentioned before), on the barley fallow. And the great object is to have water-mead grass, sufficient for the ewes and lambs, till the barley sowing is ended.

Meadows laid up for hay.—As soon as this first crop of grass is eaten off by the ewes and lambs, the water is immediately thrown over the meadows, (at this time of the year, two or three days over “each pitch,” is generally sufficient) and it is then made perfectly dry, and laid up for a hay crop. Six weeks are usually sufficient for the growth of the crop. It seldom requires eight; and there have been instances of grass crops being produced in five.

Nature of water meadow hay.—The hay of water meadows, being frequently large and coarse in its nature, it is necessary to cut it young; and, if made well, it then becomes of a peculiarly nourishing milky quality, either for ewes or dairy cows.

The water meadows are laid up for a second crop, in *some instances*; but this is only usual when hay is scarce: not that it is supposed to hurt the land, but the hay is of that herbaceous soft nature, and takes so long time in drying, that it is seldom well made. It is usually of much greater value to be fed with dairy cows. And, for that purpose, a flush of after-grass, so early and so rank, will be precisely of the same comparative service to the dairy, as the Spring feed has been described to be for ewes and lambs.

The cows remain in the meadows till the “drowner” begins to prepare for the Winter watering.

Water meadows safe for sheep in Spring, but will rot them in Autumn.—Water meadows are reckoned to be perfectly safe for sheep in the Spring, even upon land that would rot sheep if it was not watered; but, in the Autumn, the best water meadows

meadows are supposed to be dangerous. This is at present an inexplicability in the operations of nature; and a discovery of the reason might perhaps lead, in some measure, to a discovery of the causes of the rot in sheep. But the circumstance itself is rather an advantage, than a disadvantage, to this district; as it obliges the farmers to keep a *few dairy cows*, to feed the water meadows in Autumn, and to provide artificial grasses, or other green crops, for their sheep during that period.

Proper soils for water meadows.—From what has been so repeatedly urged, on the necessity of making water meadows dry, as well as wet, every reader might have inferred the advantage of having them, if possible, on “*a warm absorbent bottom.*”

The bottom, or subsoil of a water-mead, is of much more consequence than the quality or the depth of the top-soil.

Not but that land on peaty or clay bottoms may be considerably improved by watering; and there are many good water meadows on such soils; but they are not so desirable, on account of the difficulty of draining the water out of them, and making them firm enough to bear trading.

A loose gravel, or, what perhaps is still better, a bed of broken flints, with little or no intermixture of earth, wherever it can be obtained, is the most desirable bottom.

On many of the best water meadows in this district, where the bottom is a warm absorbent gravel, or rather a bed of broken flint, the soil is not six inches deep; and that depth is quite sufficient in those seasons when water is plenty, as the grass will root in the warm gravel, in preference to the best top-soil whatever; and such meadows always produce the earliest grass in the Spring. Nor is it so very material, of what *kinds of grasses* the herbage is composed, when the meadow is made; *That kind will always predominate, which agrees best with the soil and the water*, provided the supply of water is regular and constant *every Winter*; otherwise, *that kind will predominate which will bear wet and dry*; and some of the worst grasses, in their native state, will become the best, when made succulent by plenty of water.

WOBURN SHEEP-SHEARING.

It is with singular pleasure that we present a particular Account of the truly rational AGRICULTURAL FETE, lately given by his Grace the DUKE of BEDFORD, at Woburn Abbey, which cannot fail to be attended with the happiest consequences to the Husbandry of Great Britain. Compared with this rural entertainment, how contemptible do the innumerable details of balls, routs, &c. given this Spring in the metropolis, appear! His Grace has adopted a line of conduct creditable to himself, and useful to the public; and holds out a pattern which we earnestly hope may be extensively imitated.

ON Monday, June 16, the sheep-shearing and shew of cattle commenced; and this truly laudable institution attracted several hundreds of agriculturists and breeders from all parts of this country, among whom were several gentlemen, members of the well-known Society of Breeders from Leicestershire; a Baron from Germany, who is at the head of an agricultural establishment in that country: and four gentleman from Ireland.

His Grace the Duke of Bedford gave a public breakfast at the Abbey, at nine o'clock.

At about eleven o'clock, His Royal Highness Prince William of Gloucester arrived at the Abbey, from the seat of Sir George Osburne at Cheaklands, where he had been on a visit since the review, on Friday, at Hatfield. His Royal Highness was attended by Sir George; and, soon after their arrival, the company proceeded, in a grand cavalcade, to the New Farm-Yard, in the park, for the purpose of inspecting the sheep shearing, at which five of the best hands that could be procured were employed: They then proceeded to the building lately erected for examining the ewes that are to be let for the next season, which were viewed by the hirers of *tups*; but their prices were not fixed, as last year: they were to be shewn again on Tuesday, with the prices fixed on them.

The certificates were then opened by his Grace, and a Committee of the different candidates for the prize of fifty guineas, to be given by his Grace (for encouraging the introduction of the Leicester and South Down breed of sheep into Bedfordshire)

to the person in Bedfordshire who should, between June 1799 and Christmas, expend the largest sum of money (not less than sixty guineas) in the purchase of breeding ewes or theaves of the new Leicester or South Down breed, These were taken into consideration; but the successful candidate was not announced.

About three o'clock the company adjourned to dinner; and his Grace entertained near 200 noblemen, gentlemen, and yeomen, in the large hall, in the ancient part of the Abbey, where tables were laid, which branched out in three directions; but so contrived, as to have but one head, at which his Grace presided. Prince William of Gloucester sat as Croupier.

About six o'clock they left the Abbey, and proceeded to the farm-yard again, when a very fine hog, the property of Mr Pickford, waggon-master in Market street, was shewn, which was supposed to weigh about an hundred stone. During the whole of this time the men continued shearing sheep, in a place conveniently adapted for the whole of the meeting to see them. His Grace then conducted the company to a paddock, near the Evergreens, to see some select Devonshire oxen; and from thence they proceeded to the water meadow, near Birchmore House, in Crawley-lane, where there were some very fine Devonshire cows.

The meeting did not break up till near dark, when the Prince returned to Sir George Osburne's.

SECOND DAY.

On Tuesday, the Duke of Bedford, attended by his company, proceeded from the Abbey on horseback to the New Farm-Yard in the Park, where they were met by great numbers who had arrived from different parts.

The tups that were shewn yesterday were shewn singly again to-day, and they were described as follows:

Shearhogs, No. 1. to 8. by the Dishley L. Mr Stone's sheep.

No. 9. to 12. Two Shears, by a son of the Dishley L.

No. 14. and 15. Three Shears, by Mr Breedon's L. a son of ditto.

The Sweepstakes of five guineas each, made by the Duke of Bedford, Lord Winchelsea, Lord Sommerville, and Mr Bouverie, to produce at this sheep-shearing the best two years old heifers of the Devonshire breed: The Duke of Bedford's being dead, and Mr Bouverie not producing one, it rested with Lord Winchelsea and Lord Sommerville: and a Committee was appointed, consisting of Mr Smith of Tirmarsh, in Northamptonshire, Mr Stone of Loughborough in Leicestershire, and a Mr Warren; when, after a considerable examination, they declared in favour of Lord Winchelsea.

Mr Garrard the modeller of cattle, from London, exhibited the models of the famous shew of cattle, which were exhibited at Smithfield last Christmas, which were highly approved of: he likewise exhibited a number of other well-known cattle. Several improved implements in husbandry were exhibited, particularly a chaff-cutter, ploughs, harrows, &c. At three o'clock, the Duke entertained about two hundred of the company in the great hall in the Abbey with an elegant dinner, consisting of 160 covers.

About six o'clock, the company assembled again at the New Farm Yard, when the tups, shewn in the morning, were put up to be let for the ensuing season.

- No. 1. a 20 guineas, was taken by Sir John Sebright.
 No. 2. a 30 guineas, there were five Candidates for: they drew lots, and Mr Matson, from Kent, drew the prize.
 No. 3. a 30 guineas, there were six Candidates; and Mr Moore of Aspley, in this county, drew the prize.
 No. 4. a 15 guineas, was not let.
 No. 5. a six ditto, ditto.
 No. 6. a 50 guineas, there were thirteen Candidates; and Mr Matson, from Kent, drew the prize.
 No. 7. a 80 guineas, there were seven Candidates; and Mr Money, from Norfolk, drew the prize.
 No. 8. a 25 guineas, Mr Bithery, of Stoke Mills, in this county, was the only Candidate.
 No. 9. a 30 guineas, there were three Candidates; and Mr Pears, of Thorney Fen, near Peterborough, drew the prize.
 No. 10. a 40 guineas, was not let.
 No. 11. a 70 guineas, there were eight Candidates; and Mr Horton, of March, in the Isle of Ely, drew the prize.
 No. 12. a 100 guineas, was not let.
 No. 13. a 100 guineas, was not let.
 No. 14. a 20 guineas, let to Mr Mann, of Henloe, in this county.
 No. 15. a 40 guineas, was not let.

This business took up the whole of the afternoon, till near dark, during which several bets were made about Cattle.

THIRD DAY.

Wednesday, there was a greater number of people assembled than on the former days; and the weather proving fine, the sight of such a number of opulent men, assembled upon so laudable and rational a purpose, was highly gratifying.

About eleven o'clock, the company began to move in a grand cavalcade from the Abbey, and they were met in the park by a great number of others, who had come from different parts,
 horsemen,

horsemen, and others on foot, of the first respectability, when they proceeded to the New Farm-Yard.

Nine South Down two-shears, and one three shear, were exhibited in the Exhibition Room, and were examined by the hirers of the tups.

Two remarkable fine and fat cows, which had been fattened by poor feed, under certain management, the property of Mr Maxay of Knotting, in this country, were exhibited.

A machine for dressing corn in an expeditious way, was exhibited in the yard, for which Mr Cooche of Malston, in Northamptonshire, has lately obtained a patent.

As soon as the inspection of the rams, and exhibitions were over, the company, headed by the Duke, proceeded to a fallow field, near Birchmore-house, where experiments were tried by five different ploughs, namely, a Northumberland, a Surry, or Duckats, a Bedfordshire, a Norfolk, and a Scottish one, on which experiments were made in sowing turnips, by making the harrows wide apart. The manure was then regularly distributed in them; after which, a roller was drawn by an ox, and to the roller was attached a drilling machine, so contrived for the roller to cover the manure with the ridges of earth, and the seeds to fall on the earth which had fallen on the manure; and the machine was so contrived as to cover the seed with earth, so that the seed lay as on a hot-bed. After the inspection of the ploughs, the company proceeded to Ridgemoor-fields, where experiments were made with Mr Leicester's scuffling harrows; for the improvement of which he has lately obtained a patent. Experiments were also made on Mr Potts' improved harrows.

These experiments were made in consequence of his Grace (with that truly laudable zeal for which he is so eminently distinguished in the encouragement and improvement of agricultural pursuits) having offered a premium of twenty guineas to the person who should produce, at this sheep-shearing, the best and most newly invented implement in agriculture. It is left to a Committee to decide, which implement produced ought to have the preference; whether any of them merit the reputation that the acquisition of a premium would confer; and which will be made known by the Committee on Thursday. About three o'clock, his Grace entertained about two hundred gentlemen with an elegant dinner at the Abbey, at which his Grace presided.

A challenge was made by some Hereford gentlemen, to produce better cattle than any county in England, which was taken up by Sir Thomas Carr, High Sheriff for the county of Sussex, who undertook to produce as fine from Sussex.

After

After dinner, the company proceeded to inspect three fat wethers, two of them belonging to Mr Platt of Lidington, and one to Mr Cowley of Aspley, as candidates for a silver cup, value ten guineas, for one, and a premium for a second, of a cup value five, which his Grace has offered. They are to be sheared, weighed alive, killed, and weighed when dead; and, after all circumstances are taken into consideration by a Committee, they will determine which are the best.

The company then returned to the New Farm-Yard, when the ten South Down tups were let as follows: No. 1. for 10 guineas; No. 2. for 40 guineas; No. 3. for 30 guineas; No. 4. for 25 guineas; No. 5. for 30 guineas; No. 6. for 80 guineas; No. 7. for 50 guineas; No. 8. for 40 guineas; No. 9. for 120 guineas; No. 10. for 25 guineas.

An experiment was tried on the corn dressing machine, produced in the morning; when it completely dressed a bushel of wheat in six minutes.

FOURTH DAY.

Thursday morning, his Grace gave another public breakfast at nine o'clock; and about eleven his Grace and the company arrived at the New Farm Yard; when the following Leicestershire breed of tups was exhibited in the exhibition-room.

SHEARHOGS.

No. 1.	by a son of Dishley L.	was let for	10 guineas.
2.	by ditto ditto	ditto	10 ditto.
3.	by ditto ditto	ditto	10 ditto.
4.	by ditto ditto	ditto	10 ditto.
5.	by ditto ditto	ditto	15 ditto.
6.	by ditto ditto	ditto	15 ditto.

TWO SHEARS.

7.	by a son of Dishley L.	was let for	12 guineas.
8.	by ditto ditto	ditto	12 ditto.
9.	by ditto ditto	ditto	15 ditto.
10.	by ditto ditto	ditto	20 ditto.

THREE SHEARS.

11.	by Breedon's L.	was let for	15 guineas.
12.	by K. 4 shear	ditto	15 ditto.
13.	by L. 3 ditto	ditto	20 ditto.

The following South Down tups were then exhibited, and put up to be let.

No. 1.	at 10 guineas.	No. 6.	at 80 guineas.
2.	at 40 ditto.	7.	at 50 ditto.
3.	at 30 ditto.	4.	at 40 ditto.
4.	at 25 ditto.	9.	at 120 ditto.
5.	at 30 ditto.	10.	at 25 ditto.

All of which were let, except No. 7. and No. 9.

Mr Garrard exhibited a model of a piece of the loin of Mr Smith's fat three-shear weather, which won the premium at the sheep-shearing in 1799.—The fat measured seven inches.

Mr Johnson, an eminent farmer near Northampton, exhibited twelve fine ewes, and sold them all.

After three o'clock they adjourned to the Abbey to dinner; but on account of some engagements of his Grace, it was not served up till five o'clock.

After dinner, the following toasts and sentiments were drank—
The King—Success to Agriculture—The Thrashing Mill—
Small in Size, and great in Value—A good Crop of Wheat—
Drilling—Breeding in all its branches—Success to Experiments—
—The Fleece—The Plough—Grazing—The Tup Trade—To the
Memory of Mr Bakewell—Mr Coke—Lord Winchelsea—Sir
Charles Davers—Lord Lauderdale.

When the cloth was removed, the cups to be given by his Grace, as premiums, were put on the table; and his Grace informed the company, in an address, of the determinations of the Committee which had been appointed to investigate the different claims. He began with the premiums offered for the discovery of implements of husbandry; and stated, that the Committee had examined the corn-dressing machine belonging to Mr Cooche, and the scuffling harrow belonging to Mr Lester, both of which they highly approved; but, as they had obtained patents, they did not think them entitled to premiums; and they were of opinion, that none of the other implements exhibited were deserving of the prize.

The next premiums were for encouraging the introduction of the new Leicester and South Down breed of Sheep in Bedfordshire.

No. 1. To the person in Bedfordshire who should, between June 1799 and Christmas following, expend the largest sum of money (not less than sixty guineas) in the purchase of breeding ewes, or theaves of the Leicester or South Down breed, a premium of fifty guineas.

No. 2. A premium of twenty guineas to the person who should expend the next largest sum in the same object, and on the same conditions.

His Grace stated, that the candidates were, Mr Parkins of Dunstable; Mr Bailey of Marston; and Mr Runciman of Woburn: And the Committee, on investigating their claims, found that Mr Parkins had expended 163*l.* Mr Bailey 126*l.* and Mr Runciman 102*l.* He was sorry to say, they had not strictly complied with the conditions: however, under all these circumstances, the Committee determined that Mr Parkins was entitled to the premium of fifty guineas, and Mr Bailey to the premium of twenty guineas.

PREMIUMS FOR FAT WETHERS.

No. 1. To the person who should breed, and produce at Woburn Sheep shearing, 1800, the best two shear fat wether, the premium of a cup, value ten guineas.

No. 2. To the person who should breed, in Bedfordshire, and produce at Woburn Sheep-shearing, 1800, the second best two shear fat wether, a cup, value five guineas.—The same person not to have both premiums.

The former, the Committee adjudged to Mr Cowley of Aspley; and the second to Mr Platt of Lidlington,

PREMIUMS FOR THEAVES BRED IN BEDFORDSHIRE,

No. 1. To the person who should breed, in Bedfordshire, and produce at Woburn Sheep-shearing, 1800, the best theavé, a cup, value ten guineas.

No. 2. To the person who should breed, in Bedfordshire, and produce, at Woburn Sheep-shearing, 1800, the second best theave, a cup, value five guineas.

The former was adjudged to Mr Butfield of Postgrave, and the latter to Mr Bennet of Tensford.

His Grace then concluded, by congratulating the company upon the progress in Agricultural Improvement which had been made, and by exhorting them to persevere in their laudable exertions.

PART IV.

AGRICULTURAL INTELLIGENCE.

PERHAPS at no period within our remembrance, was it a more difficult object, to present an accurate description of the rural economy of Britain, than at present; and the causes which occasion this difficulty, may be supposed obvious to the most superficial observer. The state of the public mind does not lessen the difficulties naturally attending the arrangement of such diversified details, though it stimulates us to be as
corre

correct as possible in the different articles of intelligence which we are now to give. Distressed by the extraordinary prices of the necessaries of life, we are not surprised to find, that the judgment of the most liberal-minded individuals should be biased when the state of the country is under consideration. In their anxiety to procure relief, they eagerly cast their eyes upon the present crop, and fondly expect that the calamities under which they suffer will be effectually removed when it arrives at maturity. It would have afforded us the most heart-felt gratification, could we, at this time, have cherished such hopes; but while we will not exaggerate the distresses of the country, we are equally determined not to create expectations which, in all human probability, will not be gratified.

In this leading article, it is not our design to do more than give a succinct description of all rural affairs during the past quarter, and to offer a concise opinion respecting the probable consequences. This shall be formed from the best information which it has been in our power to collect.

The weather, during the months of April, May, and June, has, upon the whole, proved unfavourable to the growth of corn and grass in North Britain, which occasions every kind of grain to be a stage behind, at this advanced period of the season. The wind has generally blown from the eastern points, and been attended with an uncommon degree of cold, seldom prevailing for such a length of time. The month of April was friendly to vegetation, and appearances were then very promising. The first three weeks of May changed this flattering prospect; and a severe drought, accompanied, at times, with high gales from the west, has prevailed, upon the eastern coast, through the whole of June, which has checked vegetation in every quarter, and seriously threaten to diminish the crop of the most favoured districts.

The effects of the last deplorable season, upon the current crop, now appear, in various ways, in the several districts, according to the nature of the soil, the perfectness of labour bestowed, and the state of the weather when the seed was put into the ground. To speak in general terms, the rich dry lands upon the sea-coast, and the deep loams in the inland parts of the country, which were in good heart, have not apparently received any material injury from the excessive wetness of last Winter, unless the postponement of the wheat-seed till the Spring months, and the vegetation of immense quantities of weeds, are to be considered in that light: But,
upon

upon those extensive tracts, where clays of different varieties, and soft moorish soils, are predominant, the consequences are of a different nature. There the wheat could not, in numerous instances, be sown with the least prospect of advantage. The Spring grains have made an imperfect braird. The surface, after being harrowed, baked into a strong crust or paste when dry weather set in, which stunted the growth of the young plants; while the coldness of the subsoil, from the quantity of moisture lodged in the veins of the earth, lessened their pasture, and kept them in a languishing and unthriving state.

The grub-worm has, this year, made greater ravages than common, especially among oats sown after grass; and its increase may safely be assigned to the superabundant moisture of last season. Several fields have been nearly destroyed by the attacks of this destructive animal; and perhaps the loss sustained is greater than ever experienced in North Britain. In the northern counties of England, we learn that the Winter wheat has suffered in a similar way.

The markets for grain, notwithstanding the extensive importations, have not declined; and in the article of wheat, they have lately met with a considerable advance. Without this importation, it is indisputable that a degree of scarcity would have been felt in Britain, similar to that which prevailed at the conclusion of the preceding century, when corn could hardly be procured, during the Summer months, upon any terms. From the custom house returns, it appears that above half a million of quarters of wheat have already been imported into London; and it is believed that nearly the same quantity has been received at the outports.

Wool, from the intended union with Ireland, or an increase of manufactures at home, promises to rise in price. According to several accounts, very little is yet sold, though the sellers, in every instance, are looking for an advance.

Butcher-markets have, during this quarter, arrived at a pitch never known in Britain at the most perilous time; and though now somewhat reduced, since lamb became plentiful, yet, from the great failure of the grass crop, and the avidity with which purchases are made, it is more than probable that, in the article of beef, they will not soon return to their ordinary level. The rise has been general over the whole island, and has occasioned a number of half-fed beasts to be slaughtered, which, under different circumstances, would still have remained in the hands of the graziers.

It gives us pleasure to mention, that the most sedulous attention continues to be generally paid to the condition of the lower ranks; and we cannot avoid recommending that this should be steadily persevered in, so long as the prices of the necessaries of life continue at advanced rates. It is indeed physically impossible that such can support their families, unless relief is afforded them in this way, or the rate of wages increased in an equal manner to the rise upon provisions.—Were markets to remain stationary, the latter alternative would be most expedient; but as that is out of the question, every motive of duty and philanthropy calls loudly upon those gifted with the means, to provide for their wants. The uncommon exertions of the higher ranks, during this memorable year, do them the greatest honour, and ought to be recorded for the benefit of posterity, in case the country, at a future period, should be visited with a similar calamity.

Notwithstanding the extent of the present distress, there is cause to apprehend that a change will not take place so early as is devoutly to be wished. Independent of the scarcity and high rate of markets, which would operate with great weight against the effects of the most productive crop, several circumstances concur to render the prospect very alarming. A smaller quantity of wheat was sown this year than common; and the general look of that grain is much below a medium. Many fields of Spring grain were imperfectly managed, both in respect of cultivation and seed; and the extent of the ground under crop, in the higher districts, was necessarily curtailed. If we take into account the small quantity of barley, oats, and beans on hand, and view the aspect of the crop with an unprejudiced eye, the warrantable conclusion would not be such as to afford cause for expecting considerable relief. Still, after all, the crop may prove more productive than expected, as it is the state of the weather in July and August that regulates, in a great measure, both the quantity and quality of grain. In a word, the crop upon the ground threatens to be of less bulk, and the harvest in most places later than ordinarily happens. Yet it is impossible to speak with precision respecting its value, though the present appearances are far from being favourable.

EXTRACTS FROM PRIVATE CORRESPONDENCE.

SCOTLAND.

Ayrshire Quarterly Report.

The weather, during the months of April and May, when the greatest part of our corn is sown, was very bad, and of course a considerable extent of land received imperfect cultivation. This, joined with the bad seed sown in the higher district, occasions the fields to look ill, and, upon the whole, more backward than last year.

Not much wheat is raised in this county; but the fields carrying that grain may be considered as in a thriving state. Barley and beans are also not sown in quantities; but, for the season, these grains have a tolerable appearance. Oats are our principal grain, and look badly; much damaged seed was sown, and the grub worm has done much injury.

The potatoe fields were much enlarged this year, and at present they have a very favourable appearance. The disorder called the *curl*, is hardly known with us. Turnips are little sown in this county; and a greater breadth of ground is not occupied with them than in former years.

The grain markets in the month of May were ill supplied; but, during this month, a fuller quantity has been presented. Our current prices are as follows:

Wheat, <i>per</i> boll of 4 Winchester bushels,	48s. to 60s.
Beans, ditto ditto	48s. to 53s.
Barley, ditto 8 ditto	60s. to 80s.
Oats, ditto ditto	54s. to 60s.
Meal, <i>per</i> peck of 8lb.,	3s. 3d. to 3s. 4d.
Quarter loaf of bread,	1s. 7½d.
Potatoes, 14 pints to the peck,	2s.
Butter, <i>per</i> lib. of 24 ounces,	1s. 2d. to 1s 4d.

Fat cattle from 8s. to 12s. *per* Dutch stone, sinking the offal. Retail price of beef, 8d. to 11d. *per* lib. of 24 ounces. Mutton and lamb at similar prices; the quality very bad. Veal, from 3d. to 7d. Wool, from 5s. to 20s. *per* stone of 24 lib. English Hay, from 10d. to 1s. *per* stone.

The hay crop looks very ill; a great part of it will not cut; and the pasture grasses were never seen worse in this county.

June 21st.

Berwickshire

Berwickshire Quarterly Report.

The pastures of this quarter have, in general, exhibited a scanty appearance ; but this must, in some measure, be attributed to the operation of adventitious circumstances ; such as, the failure of last turnip crop, which threw an unusual quantity of stock upon pasture fields during the Winter ; the high price of corn and hay, which induced farmers to turn their horses early to grass ; while, in many cases, a want of fodder drove cattle from the straw yard, before vegetation was sufficiently advanced to support them in the field. The drought is beginning to be severely felt on the dry soils.

The hay crop, upon cold clay soils, is very light ; where the soil is free, the appearance is more favourable ; but, from the cold weather in May and June, and many fields having been pastured in the Spring, hay harvest must be late, and the produce will not equal the average of ordinary years. The young clovers of this year, in general, promise well.

The experience of 1800 will strongly inculcate the necessity of being particularly attentive in the choice of seed corn ; for never was the produce from seed of different qualities so eminently conspicuous, as in the appearance of the crops this season.

Winter wheats still continue thin and weak ; Spring sown fields are thicker ; and where the preceding turnip crop was weighty, the wheat is looking well.

Barley upon strong clay soils, is, in general, but a poor crop ; where it succeeded turnip, the appearance is in general favourable ; several fields are just beginning to show the ear.

Oats have a more promising appearance than any of the other grains, though, upon some wet clay soils, they also look weak and thin.

Peas are generally thin, and in many cases very bad ; both wheat and peas occupy a much smaller extent than usual ; and as neither of these crops are likely to make a large return per acre, the aggregate produce of this county, in wheat and peas, must fall greatly short of former years.

From so much of the land having been stirred wet, the fields everywhere exhibit an unusual blow of yellow annual weeds. In Lammermuir many of the fields make a very thin appearance, from having been sown with frosted grain ; and in some spots towards the east end of the lower district, considerable damage has been done by the snail and slug.

This quarter has been uncommonly favourable for the preparation of turnip-fallows ; which, from the high price of seed last Winter, will be sown to an unusual extent : The seed has every-

where vegetated freely, and the young plants have in general a healthy appearance. Potatoes are a fine crop, being free of the curl in general.

The prices of both fat and lean stock kept advancing till towards Whitfunday, since which they have been upon the decline : The demand for lean stock to the English market, has been rather less than usual during this quarter.

Nothing can yet be said with certainty as to the price of wool ; the sale of that article being scarcely commenced on this side of the Tweed.

From the small quantity of grain in the hands of farmers, very little has been doing in the corn markets of late.

Prices at Berwick, June 28th, per boll of six Winchester bushels.

Wheat, 60s. to 80s.

Oats, 40s. to 45s.

Beans, 65s. to 70s.

Barley, 40s. to 50s.

Butcher meat, which was at one time as high as 10d. per lb., has, during this month, been gradually on the decline. Prices at Berwick, June 28th, were as follows :

Beef, 8d.

Veal, 6d. all per lib. of 16 ounces English.

Mutton, 8d.

June 30.

Extract of a Letter from a Gentleman in the Eastern part of Berwickshire, dated June 29.

“ About three weeks ago, I was led, by business, to the western extremity of this county, at Leader foot, to which I went by Kelfo, St Boswell's, and Melrose, and back by Mellerstain, Greenlaw, and Dunse, by which I saw near 70 miles of country. To my view, things by no means looked well. Wherever the land is strong, or on a cold retentive bottom, the crops of corn and grass were wretched, and the pasture miserable. On dry-bottomed turnip soils, every thing looked well, but late. Since my return home, however, the crops on the last kind of land in my neighbourhood are pushing forward fast. Turnip work is backward, from the late Spring and worn-out state of the horses ; but it works famously. Without rain soon, I fear a great loss in that crop, as the *quicken* requires much working, which dries the soil sadly. Annual weeds everywhere abound far beyond common. Generally speaking, my farm is dry land ; and where the culture has been legitimate, the crops are excellent. Some that I got last year from the hands of a small farmer, one of your favourites of the theorist, and which I had to manage as I best could, till I worked to windward, is poor enough, yet better than the best managed cold bottomed. Hay crops on cold land, and all that was late eaten, does not offer any decent prospect.

On

On good dry land, Winter and Spring hained hay looks well ; but of these there is very little in this part. In Berwick bounds, a shilling the stone of 24lb. has been refused for hay from the rick : Not that any is yet cut ; but I believe I shall begin to cut next week."

East Lothian Quarterly Report.

THE weather which, in April, was friendly to vegetation, has during the greatest part of the two succeeding months, been remarkably cold and tempestuous, and the growth of corn and grass has consequently received a severe check : this, when added to the critical state of the ground, from the excessive wetness of last Winter, and the imperfect cultivation which circumstances, in too many cases, only allowed to be given, renders it highly probable, that the current crop will be much inferior to those of ordinary years.

A considerable less quantity of wheat was sown this year than usual ; and, perhaps, three-fourths of it was put into the ground during the months of February and March. The appearance of the greatest number of fields is such, that a short crop of this grain may be expected. Barley, upon dry healthy soils, is a tolerable crop. Some of it is already fully in the ear, and, upon the coast side, may be ready for the sickle in August ; but, upon thin clay, and soft moorish soils, it is hardly off the ground, and is, almost in every case, sickly and unthriving. Oats are looking better in the inland parts of the county than for some time past, the blanks occasioned by the grub being partially filled up ; but upon the dry coast side land, where they lately displayed a vigorous growth, the drought has injured them severely. Beans are worse this year than usual, especially upon close-bottomed soils, being generally thin, unhealthy, and getting into bloom before they are arrived at any length. Peas, upon clean lands, look well ; but, as the quantity sown is very trifling, their effects hardly deserve to be noticed in an estimate of this kind.

The hay crop, except upon the dry healthy land, is very light, and in few places will exceed 150 Scots stones per acre. Some of it is already cut, and will be of fine quality, if dry weather continues. Some fields have been set at 12l. to 15l. per acre ; but no price from the rick is yet settled, though 1s. per stone is spoken of. Present price of old hay 18d. but little remains on hand.

The pastures are generally very bare ; and without warmth and temperate rains, will not afford a full bite this season. The early stocking contributed to nip them up at the starting ; and the cold easterly winds blasted the young plants, extracted the moisture ne-

cessary for their growth, and hardened the surface so much as to prevent their future progress.

The potatoe fields never looked better; and promise substantial relief to the poor, during the following year. Much the same extent as usual is planted in this country; but the show being universally good, a double crop to that of the last may be safely expected. Notwithstanding the apparent badness of the seed, scarce a single blank is seen, and the *curl* is only in a few instances discernible. Perhaps the absence of this fatal and common disease may be attributed to the unripeness of the plant when taken up last Autumn, which is the only probable cause that can be assigned. In the high district of this county, where the climate seldom permits them to arrive at maturity, the *curl* is scarcely known; whereas, in the low districts, it is never missed after an early harvest, unless fresh seed is brought from late situations.

Though the coldness of the weather has been injurious to the growing crops, it has proved very advantageous in the working of the turnip and naked fallows, which have this season received complete justice. The repeated dry furrows given, will, in a great measure, counteract the bad effects of the last Winter, and remove the degree of acidity thereby lodged in the ground. Without moisture, however, the heavy lands will be all to *force* with the brake and roller; for they are so hard, that, without these auxiliaries, it will be impossible to reduce them to a proper tilth. Perhaps this is the manner in which the most of farmers incline to work their fallow, though it is severe upon the labouring stock, and increases the expence of this necessary operation.

The quantity of land sown with turnip, is this year greatly increased; but, if sufficient moisture does not soon fall, one half of them will not vegetate. Seed has been exceedingly scarce, and, in some places, could with difficulty be procured. The early sown fields promise well, and some are already thinned and set out; but the greatest number are either springing imperfectly, or making no appearance. Much loss was sustained upon the soft soils, from the drills being blown by the high westerly wind on Friday the 20th current.

The grain markets have fluctuated much in the course of this quarter, especially for wheat and oats. Wheat has, for a month past, steadily advanced, in the face of a large importation; which is a sure proof that the quantity on hand, of last year's crop, is not great. Current prices are from 50s. to 60s. per boll of 4 firlots, the firloft being about 3 per cent. larger than the Winchester bushel. Beans, per same measure, from 46s. to 53s. Barley, per boll of nearly 6 Winchester bushels, from 50s. to 56s. And oats, which

at

at one time, were as high as 57s. per boll, of same size, have, for several weeks, sold at 48s. and 51s.

The demand for fat cattle has fully equalled the number fit for killing; but prices, owing to inferiority of quality, and the plentifulness of lamb, have of late decreased from 15 to 20 per cent. In the middle of May, decent beef was worth 12s. 6d. per stone of 17½ lb. sinking the offal; but it now may be considered as not exceeding 9s. upon an average. Mutton is rather lower. Lamb, if good, much the same price as mutton. From the barrenness of the pastures, it does not appear that beef, in this district, will be plentiful during the season.

Gifford Summer fair (the only one of consequence in this county) was well attended; but the demand for lean stock was very limited. Few good horses were presented, and a great number of sheep remained unfold.

An unusual quantity of yellow weeds infest the greatest part of the arable fields this season, which from the strong drought, will prove pernicious to the several grains with which such fields are occupied. Even the clays are full of them. Perhaps their increase is owing to the wetness of last Summer, and the repeated black frosts which prevailed from December to March. The strongest soil was thereby loosed to such a degree, as enabled the seeds of these weeds at once to vegetate, after the ground was reduced by the harrow in the Spring months.—*June 30.*

Extract of a Letter from a Gentleman in the neighbourhood of Perth, dated June 28.

“The wheats in this district are generally considered as a light crop, and rather more backward than usual. The oat crop upon wet soils has failed much; and, in some places, the grub-worm has done a good deal of injury where the ground is dry: oats are tolerably good. The growth of barley is not so far advanced as to admit the forming of a precise opinion respecting that crop, especially upon strong soils. Beans appear to be a scanty crop.

The markets are not well supplied with grain; indeed, we have little or none, but what is brought from abroad. The price of oat meal is 3s. 2d., and barley 2s. per peck, of 8lb. Dutch weight. Bread is not sold in this county by the quartern loaf, as the weight varies according to the markets, but not the price. Hay is 1s. 6d. per stone of 22lb.; and as to the wool, I have not been able to learn, with any degree of certainty, the different prices, as the sheep are but newly shorn.

I am rather of opinion, that there are not so many acres sown with grain this season as usual; but think the potatoe fields considerably enlarged: in general, they make a promising appearance.

The butcher market in Perth is but indifferently supplied. Principal pieces of beef sell at 9d. per Dutch lib.; but there is little of good quality to be got. Lamb 9d.; veal 8d.

As to the crop of grass; the hay fields are very light, and the pastures much inferior to what they are in ordinary years."

*Extract of a Letter from a Respectable House in Glasgow,
dated June 30.*

" We shall endeavour to give you as accurate accounts of the current crop in this neighbourhood, and of the markets here, as in our power. In the vicinity of our city, the lower ward of Larnarkshire, there is little variation in comparison with last year, respecting the forwardness of the crop. We have only a small quantity of wheat sown this season, and it looks worse than common. Not much barely is sown; but the length it has come, only enables us to say, that the braird is middling. Such parts of the oat fields as were early sown, look tolerable; but all the late fields have a very poor appearance. Beans, in general, look well. There never was such a quantity of potatoes planted here: in general, they are very late, a great part of them only coming above ground, so that the curl cannot be distinguished. No contracts for a future delivery are yet made.

The few turnips cultivated here are in drills; but the quantity is so trifling, that they are not worth mentioning. Hay has a poor appearance, and promises, at most, to be only a middling crop. Present prices of old hay are from 10d. to 1s. per Tron stone of 22 lb. The pasture grass is very poor. Cattle, sheep, and lambs, all sell at high prices; and the retail price may average 1s. per lb. Tron weight.

We have had little or no grain imported *direct* to this market, as it is entered in general at Borrowstounness Customhouse, when ordered from the Baltic, and forwarded from thence in lighters. Such cargoes as are received from America and Ireland, are entered here; but there have been none imported from the former country as yet, except two cargoes of wheat, which were afterwards sent to the Irish market. About 5000 barrels of flour have been received from America, which sold from 70s. to 75s. per barrel of 196 lb. We have had no particular information respecting crops to the westward, but believe they look very middling.

Our

Our current prices here are,

Scotch	Wheat	48s. to 55s. }	} per boll.
	Barley	40s. to 48s. }	
	Bear	35s. to 42s. }	
	Oats	40s. to 45s. }	
	Beans	none.	
	Oat meal	46s. to 54s. }	
Foreign	Wheat	52s. to 65s. }	
	White Peas	63s. to 70s. }	
	Oats	42s. to 45s. }	
English	Wheat	50s. to 60s. }	
	Barley	45s. to 54s. }	
	Beans	52s. to 56s. }	
	Peas	60s. to 63s. }	
	Oats	45s. to 54s. }	
	Flour	100s. to 105s. per sack.	

Our wheat is all measured by the Linlithgow standard firlo, which is a trifle above Winchester; but the measure for beans is about $7\frac{1}{2}$ per cent. larger than the Linlithgow standard. Oats and barley are sold by the Stirlingshire boll; that is to say, our boll of these two grains is nearly one peck more than six Winchester bushels."

Extract of a Letter from a Farmer in Aberdeenshire, dated June 26.

"Cattle in good condition still sell high, though not so dear, by 1s. 6d. per stone, as in the month of May; but lean cattle are almost unsaleable, on account of a want of grass. Our grain crops, on light lands, look much better than the badness of the braird led us formerly to expect; but cold and backward soils are as yet making a bad appearance, and I am much afraid that the crop upon them will turn out very indifferent. As for the hay, it is hardly worth the cutting; and the pastures are exceeding bad, owing, in a great measure, to the state of the weather, which continues cold and dry. Our turnips are about all sown; and we have been favoured with a famous season. A greater quantity of ground has been prepared for this branch of husbandry than usual. There is not so great apprehensions entertained now about a supply of grain as lately: but, as the crop will be late, especially if growing weather does not set in, there necessarily must be a greater degree of scarcity before harvest than has yet been felt. Potatoes are this year planted to a great extent, and appear to do well, which will be the first substantial relief to the distressed poor. You would be astonished at the small quantity of meal which is consumed, even in large families,

milies, at this time, since milk became plentiful. Indeed, it makes good the old saying, That *want* is an excellent master for teaching economy.

I should have mentioned, that, of all our crops, *barley* and *bigg* are looking best: and an increased quantity of these varieties are sown this season in the whole of Aberdeen and Banffshires; which will make amends for a scanty crop of oats. I am afraid that *winter keep* for cattle will not be plentiful, unless a great alteration for the better soon takes place. In Murrayshire, the crops, upon the whole, look well; but they are sadly in want of rain. As for grass, they have little or none; and if the dry weather continues, I think they may have an early harvest, but that the crop will be short."

Mid-Lothian Quarterly Report.

From April 1st to June 30th, inclusive.

There have been few seasons wherein the operations of husbandry have met with less interruption than during the time above specified. The weather, although by no means remarkably genial, has always allowed the farmer the full use of his cattle and implements; and tillage, of course, has been carried on with spirit and vigour. The appearance of the crop is, however, not altogether so promising, as the favourable seed-time should have led one to expect. The wheat, as formerly noticed, sown in a very unfavourable condition, continues still feeble and languid, and, hardly yet beginning to shew the appearance of the ear, gives room to expect a late harvest, as well as a scanty return. The hay-lands are in general defective in clover, which alone would have the effect to make a light crop; were it not even still further diminished in bulk, from the stunted growth of the other grasses, owing to the intense drought, accompanied with a considerable degree of cold, which has distinguished the commencement of the Summer season. The bean and peas crop is very dissimilar, part being excellent, and part very bad; owing, perhaps, to the previous state of the seed when sown. On the other hand, the barley, sown in capital order, may still be a good crop, should suitable rains arrive in time; as would likewise the oats, if the same much wished-for occurrence takes place. The potatoes appear to be good; and, what is an agreeable circumstance, more of them have been planted than usual. Turnip has been sown to a considerable extent, and the land in fine condition: a most boisterous storm, however, from the north-west, on Friday June 20, is said to have occasioned much damage to this root, as
well

well as to other species of crop. But *farmers are always complaining*; which is the more unreasonable at the present moment, when we have it officially announced, as usual, in the newspapers, (founded on many well authenticated auguries from bee-hives and bird-nests), That the present crop is to be the **GREATEST IN THE MEMORY OF MAN.**

Prices continue not only high, but to increase: Of this, however, the farmers can now clearly wash their hands, as not one of them in twenty has a single grain to dispose of. To the port of Leith, the country now turns its eyes. The importation there has, happily, been very extensive; and, there is room to hope, will be able, at whatever price, to insure from famine; particularly owing to the exertions of the Friendly Societies, who have imported almost one fiftieth part of the whole.

The following have been the current prices of grain, &c.

	<i>April.</i> <i>Shil.</i>	<i>May.</i> <i>Shil.</i>	<i>June.</i> <i>Shil.</i>
Wheat, per boll, from	47 to 50	44 to 55	48 to 60
Barley, ditto	43 — 50	50 — 52	48 — 52
Oats, ditto	43 — 53	40 — 45	42 — 46
Beans and Peas, ditto	44 — 50	45 — 50	46 — 50
	<i>d. d.</i>	<i>d. d.</i>	<i>d.</i>
Oat-meal the peck,	35 — 42½	38 — 42	38

Potatoes, during seed time, as high as 2s. 6d. the peck; and even for the table have since not been under 2s.

Butcher-meat was also uncommonly dear, having gone as high as from 10d. to 12d. the lib.; but, of late, from the influx of lamb and other grass fed meat, is become more moderate. But nothing appeared so extravagant in price as fresh butter, which, during the months of April and May, sold at from 20d. to 2s. the lib. of 22 oz. Associations were repeatedly endeavoured to be formed to reduce its price, by refraining from the use, but to no purpose; for, although this conspiracy and combination was openly recommended from the newspapers, yet the rate continued undepressed, till, in the course of the season, (from the return of good pasture increasing the quantity), the price was reduced through natural means. It sells now at from 1s. to 16d.

Return of grain of all kinds, flour, meal, and hulled barley, imported and exported at Leith, from February 23d to July 5th inclusive. The whole reduced to quarters, of 8 bushels each, reckoning a ton of flour equal to 7 quarters of wheat; a ton of hulled barley equal to 8 quarters of barley; and 4 bolls oatmeal equal to 3 quarters of oats:

<i>Week ending</i>	<i>Imported coastways.</i>	<i>Imported foreign.</i>	<i>Exported coastways.</i>
March 1.	1654	none	93
8.	2297	none	976
15.	3560	none	815
22.	2403	none	667
29.	1048	none	466
April 5.	1742	none	558
12.	1900	none	821
19.	1367	none	1006
26.	7261	none	1322
May 3.	5307	1176	408
10.	3586	2860	1238
17.	5566	3343	2040
24.	8977	5837	2782
31.	5812	4435	2288
June 7.	3220	2972	3786
14.	1056	2771	1747
21.	936	2284	1220
28.	2202	8350	2656
July 5.	656	3180	1809
Total	60,550	37,210	26,699
	Coastways	60,550	
	Foreign	37,210	
	Total	97,760	
	Deduct exported	26,699	
	Remains	71,061	

It is computed, that the city of Edinburgh, town of Leith, and adjacent suburbs, consume weekly, in bread corn of all kinds, about 3000 quarters; and, for several weeks past, besides what is exported by sea from Leith, there have been about 1000 quarters weekly sent from thence, by land-carriage, into the interior of the country.

 ENGLAND.

Extract of a Letter from a Correspondent at Hull, dated June 20.

OUR wheat market has of late been supplied with foreign grain, of which the importation is considerable. Best Dantzic sort sold on Tuesday at 126s. per quarter, of 8 Winchester bushels which, the preceding week, fetched only 120s. Inferior qualities from other parts down so low as 100s.

Oats.—Few at Market. None sold this week: but prices on Tuesday se'ennight were from 44s. to 57s. Beans, none on hand. A few pidgeon beans sold last week at 78s. Rye 90s. to 95. Hay from 5l. to 6l. per ton.

Butcher meat very variable. The average may be, for pork 6½; mutton 7½d; beef 9d; veal 7d.; all per pound of 16 ounces. Beef to ships, taking the whole carcase, 68s. per cwt.

Flour.—Fine 5s. 6d. to 5s. 8d. per stone of 14lib. Bread 4s 10d. per ditto. American superfine flour, in barrels, sold to private families at 75s. per barrel, containing about 14 stone. Potatoes 1s. 3d. per peck; they were very scarce both with the farmers and dealers. New crop from 8d. to 1s. per pound weight.

Wool.—It is hard to speak respecting the price of this article. The farmers ask from 21s. to 25s. per tod of 28¼ lib.; but none is as yet sold higher than 22s.

Lintseed, 63s. per quarter.

Rapeseed, 52l. 10s. per last.

Lintseed cakes, 10l. 10s. per ton.

Rapeseed ditto, 7l. per ditto.

Grass on sheltered and dry lands promises well. On low or flat lands, where the water covered it in Winter, very indifferent. If warm weather commences soon, and moderate rains follow, there is no fear of a full bite.

Wheat has the worst appearance of the several grains. In low lands it is starving; but some of the dry soils have a promising appearance. Upon others it is indifferent, and much injury has been sustained by the slug. This as well as other grains, stands much in need of warm weather. A deal of bad seed was sown, which did not vegetate; and most of farmers think, that from one half to three fourths of a good crop is all that can be expected.

Oats

Oats look tolerably well. Beans best of all. Barley only middling.

Milk fell at 2d. per quart, equal to a chopin of your spirit measure. Butter 1s. per lib. of 16 ounces.

In our future communications, we trust we will be enabled to transmit you more extensive intelligence; and be assured, that, in the above particulars, we have studied correctness to the uttermost of our power-

Lincolnshire Quarterly Report.

The state of the growing crops of corn in this county is as follows: Wheats are very thin, and much inferior to what they have been for several years. A great many of the plants perished during the Winter months, which gives cause to fear that the present crop will be a deficient one. Spring grains are, in general, much as usual. Barley and oats have a promising appearance, with the exception of the marshes; for, in some parts of these, the condition of the crop is truly melancholy, having, in the first instance, been nearly destroyed by the coldness and wetness of the season, and latterly by the attacks of the grub-worm. It is an absolute fact, surprising as it may appear, that some farmers in these situations would at this time be considerably less for their crop than they gave for its seed. Beans and peas do not look so well as in ordinary years. Perhaps, taking the whole county, the crop, upon an average (making the above exceptions), may be considered nearly as good as usual.

The crops of artificial grass are not likely to be productive, on account of their growing in an irregular patched manner, having some parts well stored with plants, while others are naked altogether. This is pretty general, and can only be attributed to the wetness of the weather; for, if the seed had been bad, the effects would have been uniform. The natural meadows, it is to be hoped, will make up for the failure of the artificial grasses, as they, upon the whole, make a luxuriant appearance.

Fat beasts are scarce, and feed very slow, which is owing to the extreme coldness of the weather. Some of the pastures are quite starved, and, of course, very deficient of grass. Fat sheep are coming to be tolerably plentiful. Present prices of butcher-meat: beef 8½d. to 9d. per lib.; mutton 7d. to 7½d.; veal 7d. to 8d.; lamb 8d. to 9d. Of the last article, not many have been slaughtered this season.

The prices of grain are, wheat from 115s. to 120s. per quarter; barley 50s. to 70s.; rye 70s. to 80s.; oats 49s. to 56s.; beans 80s. to 90s.; all Winchester measure.

The

The clippings of sheep, or shearings, are now going on here; but the fleeces, in general, are thought to be lighter than last year. The prices are not yet ascertained; but 25s. per tod of 28 lib. is expected. Ewe wool is superior in quality to that of last year's growth.

Potatoes promise to be an excellent crop; and it is hoped that the goodness of this valuable esculent will, in a great measure, compensate for the apparent deficiency of the wheat crop.

The sowing of turnip has been general throughout the county; and, should the weather continue dry, good crops may be expected, where tolerable management has been practised. The broadcast method of sowing is customary in this county; and, when the manure is ploughed into the ground the same day it is laid on, it is found to answer best.

The small farmers of this county have suffered exceedingly from the late calamitous season, especially those upon the low fen lands, wet clay and heath soils, where their crops were not only deficient, but the grain of a bad quality. It is not to be supposed, but that the large farmer has had his share of the general calamity; yet from his extensive capital, he has been able to remedy the evil, by gaining in one way, what he lost in another; which was not the case with the small farmer, with whom all was loss.

Parish rates have become alarmingly high, partly from the dearth of provisions, and also from the increasing habits of luxury and extravagance among all ranks. This is alone what will bring ruin upon this happy and fertile land. Pity that luxury could not be checked before it has taken too deep a root; and that the primeval plain honest industry of our ancestors could not again be introduced. This, combined with their good morals, would lay such a foundation of real national wealth and prosperity, as would baffle all the attempts of our most inveterate enemies to undermine.——
June. 20.

Extract of a Letter from Ripon (Yorkshire), dated June 29.

‘ You may be assured of every exertion in my power being used, to promote the laudable undertaking in which you are engaged. I now transmit a short account of our crops and markets. The wheats in this neighbourhood are in general very unpromising, and spring crops very backward in their growth. Hay appears to be a good crop, and some of it is already cut down. The pastures are also good upon the whole. We are busy with our turnip seed, which is here mostly done according to the drill system, though not the common way in this county.

Our market this day is as follows :

Wheat, 16s. 17s. and 17s. 6d. per bushel.

Massin, 13s. and 14s.

Beans, 11s. 6d. 12s. and 13s.

Oats, 8s. and 9s. 6d.

Our bushel is a trifle larger than Winchester measure.

Old potatoes, 6s. per bushel, and very scarce.

Milk cheeses, 4½d. per lib. avoirdupois.

Butter, 48s. and 49s. per firkin of 56 lib. ditto.

Long wool, 14s. to 16s. 6d. per stone of 17 lib.

It is chiefly long wool which is grown in this district.

Extract of a Letter from a Yorkshire Farmer, June 25.

'The weather having of late been rather warmer, attended with some showers, occasions our corn fields to assume a better appearance; and, where the plants are thick enough, a fair crop may be expected. Hay upon good land, tolerable; but, upon soils of inferior quality, very indifferent. Pastures, upon the whole, but middling. Lean beasts and sheep selling pretty well. Fat stock has rather declined in Price; but I don't apprehend the fall will be considerable. Owing to a dulness of trade, and to a want of foreign remittances, wool has not advanced so much as expected. Have only got 6d. per stone for mine above last year's prices, being 13s. per stone of 15 lib. : my sheep are of the new Leicester breed. Some have sold at 14s. and 15s.; but these are not general prices for long wool. Short wool from 9s. to 20s. The first, of the coarse Scottish kind, the others from sheep bred on our moors and commons.

Our markets at Wakefield and Pontefract, for the following articles, are :

Wheat, 45s. to 50s. per load of 3 bushels.

Beans, 35s. to 36s.

Oats, 55s. to 63s per quarter.

Barley, scarce any of it fit for human use, and little else to sell.

Turnip seed, 2s. to 2s. 6d. per lib.; very scarce, a great quantity being sown this season.

Rape dust, 28s. per quarter.

Beef, 8d. to 10d. per lib.

Lamb and mutton 8d.

Veal, 7d.

Fine long wool, from 12s. to 15s. per stone of 15lib.

Fine short, 15s. to 20s.

Coarse, 9s. and upwards as in quality.

Norfolk.

Norfolk Quarterly Report.

THE backwardness of the last harvest retarded the wheat seed, and the unfavourableness of the after weather prevented the cultivation given from being equally good as in better seasons. Some wheats were therefore delayed till the Spring months, which is never reckoned so good, either in quantity or quality, as those sown in Autumn. The cultivation of the Spring crops was, however, as good as in the average of seasons, and the extent sown is nearly the same as usual; our mode of cropping preventing any material deviation. Both drilling and dibbling are certainly increasing in practice, being found highly beneficial.

A much greater quantity of potatoes are planted this year than common; and many farmers are forward in their turnip seed; some have a half, others a third sown. The drill system is not much followed, though it has been found to answer well, where properly conducted.

The appearance of the growing crops, as in all years, is extremely various, owing to a multitude of causes. The wheats are much mended in those places where they lately looked worst, and a very considerable part are as fine as in any season. Peas look remarkably fine, and bloom well. The barley and oats are also good, promising to make an abundant return; and, in forwardness, are much the same as in the best of years. I understand the grub has done much damage in some parts of the county, more than usually happens.

Grass of all kinds is a great crop, and hay harvest is now generally in hand. Some fields are ready for the stack; as yet, no price is fixed. Our markets for beef and mutton are very bare; the former sells at the enormous price of 10s. and 10s. 6d. per stone of 14 lb; the latter at 8d. per lb., and none really fat to be met with. The lambing season proved remarkably favourable; seldom equalled, and never exceeded, in this district.

At our market yesterday, the little wheat that appeared experienced a further rise of 2s. or 3s. per quarter; the millers were the only purchasers. Barley, oats, and peas, are exceeding scarce, and fully maintain their prices. Fine wheat, 134s., runs 116s.; Fine barley, 72s.; seconds, 60s.; oats 52s. to 56s.; beans 74s. to 76s. per quarter of 8 Winchester bushels.

An Agricultural Society has lately been established at Lynn, whereof Thomas William Coke Esq. is chosen President, and the Earls Cholmondely, Spencer, Montrath, Clermont; Lords Walpole, Petre, Wodehouse; Sir Richard Bedingfield, Sir Henry Lambert, and Sir Martin B. Folkes Bart. Vice-Presidents. The

purposes of the Institution are, the collecting of useful information, tending to the acquisition of a more perfect knowledge in agriculture; breeding of every kind of stock, grazing and planting; and, for attaining these objects, premiums are to be offered.

Two general meetings of the Society are to be held annually, viz. at Swaffham, on the day preceding Thetford wool fair; and the other at Lynn, on the Wednesday nearest the 20th of February.

Yorkshire Quarterly Report.

THE crops of wheat, in general, are more improved in their appearance than was expected by many. The straw promises to be strong on the ground; and, if the ears correspond with it, this grain may yet have a fair average produce, notwithstanding the thinness of most of the crops, and the utterly defective state of many of them. Barley and oats appear a full crop in many instances. The beans, pease, and vetches, have reaped all the advantage from the late showery weather, so favourable to these articles, that could be reasonably expected from the bad and unpromising state of the seed; yet many of them plant very thin, and scarcely any can be abundant. During the last two weeks, the mowers and haymakers have been busy with the grass, of which a part has been already hayed and stacked in different parts of the county. The produce appears abundant on the dry and well-manured soils; on the strong and cold soils, by no means so. Clover is late in flowering, but generally a full crop; very little is cut at present. Potatoes look uncommonly well; are nearly, if not perfectly, free from the curl, and bid fair for a good supply of that useful root, at a time when every article of human subsistence will, in all probability, be peculiarly wanted. Flax, on dry soils, is promising, but has suffered much from worms, &c. on the stiffer ones. Of rape, there is a prospect of an average produce. Yams, clover, and other seeds, plant thick and well.

Fallows.—From the cloudy and heavy state of the weather, of late, the turnip fallows, on soils not of the driest quality, are in a backward condition. Some of the best lands are however sown; but much remains to be done on the generality of them, before they can be in proper tilth: the present fine weather will assist the cultivators to finish this work in a very short time. The Summer fallows are, of course, in no great degree of forwardness.

Prices of Grain —The best samples of wheat command high and advancing prices, 18s. 6d.; barley at 8s. 6d.; and oats 7s. 6d. per bushel of Winchester.

Butcher-

Butcher-meat.—The best beef from 9d. to 1s.; mutton 8d.; and veal 7d. per lb. of 16 ounces.

Cattle and Sheep—Both fat and lean are at high prices, particularly the fat; perhaps no very considerable reduction of the price of these may take place soon, notwithstanding its present exorbitance.

Horses.—Good ones, both for the saddle and draught, are scarce and dear.

June 7.

Extract of a Letter from Stafford, June 25.

“ I have been in London for a month past, and, on my return, had the satisfaction of observing that the crops in the midland counties promise to yield great abundance. On Monday, my hay-harvest commenced, which will yield me a greater crop than I have got four years past. The weather is good at this time; and, if it continues, we shall soon get it into the stack. Wheat, barley, and oats, have all a fine appearance; and the tares, which I had from London at 20s. per bushel, besides carriage, promise to be a most luxuriant crop. We are now busy with our turnip-sowing; but seed is exceedingly scarce, and at an extravagant price. I paid 2s. per lb. for it, and used, in former years, to have it for 8d. and 10d. I have made every inquiry respecting the state of our markets. On Saturday, prices were, for wheat 20s. to 22s.; barley 9s. to 10s. 6d.; oats 9s. to 9s. 6d.; beans 13s. to 14s. per bushel of 38 quarts; beef 7d.; lamb 6½d.; mutton 7d.; veal 5½d. per lb. of 16 ounces. I have finished the shearing of my sheep and lambs, and have been very successful in the latter this season, having only lost two out of all my stock, which is of the large Leicester sort. The wool is coarse: I have been offered 25s. per tod of 30 lb., and 10d. per lb. for lambs wool; but, as higher prices are expected, have not sold. Next Saturday is our fair, when I shall be better able to inform you of the price of every article, though I doubt it will be too late for your next Number.

During the time I was in London, I visited Mr Adam's farm at Streatham, which is well worth the attention of every farmer. He has one of Mr Meikle's thrashing-machines, and several other curious instruments for agricultural operations. I likewise saw a number of new invented husbandry instruments, at M'Dougal's in Oxford Road, with which I was highly gratified.”

Extract of a Letter from London, June 30.

“ I have not yet been successful in opening a correspondence for you in the southern counties of Hants, Suffex, &c. but have the promise of reports for your next number. The wheat crops in Middlesex look but very indifferent; most of the soil being

a strong clay; the continued cold weather injured it much; in many places, there will not be half a crop. The field that you saw last Summer in fallow, near Moor Park, is so very bad and thin, that beans have been planted upon a great part of it, to make up the crop; the other half of the field is this year under Summer-fallow, and in as bad order as what you saw last year. The beans and peas, in general, promise to be an abundant crop, and the few oats sown are good: little or no barley is grown in this county. In Hertfordshire, the wheats, upon the whole, appear to be good, and are much more forward than in Middlesex, being now all shot and in bloom; while many of the Middlesex fields have the ear still locked up in the blade. In Surry, the wheats are good; the oats and barley also look well; and several fields of rye are so forward, that if the present fine weather continues, we will not be long in having new grain at market. The husbandry round the metropolis, is much in the same state as usual at this time of the year. In Middlesex, which I have had more opportunities of examining than the other counties, the fallows are badly managed; they don't appear to have been cross-ploughed, and are so full of couch, that the furrows are as green as a corn crop in the month of March. For three months past, our markets have been advancing, notwithstanding the large importation of foreign grain; of late, the quantity of fine English wheat at market being small, and the quality of the foreign being so indifferent, that but a small proportion of it can be mixed with the other in grinding, has occasioned fine samples to advance considerably. Good oats, from the same cause, are likewise advanced; while ordinary qualities, both of wheat and oats, have a very dull sale.

From the great demand from the north for the last two months, the prices of barley, hog peas and beans, have risen considerably. Smithfield market has been well supplied for the last three months; but, owing to the great demand for the navy, &c. prices at times have been very high. Vegetables of every kind have been sold in Covent Garden market for six weeks past; and, with green peas and other vegetables, are now in abundance; as are also strawberries, cherries, and currants. The hay crop round London is very good, and, having a fortnight of fine weather, a great part is got stacked in excellent condition. The look of the hop vines in Kent, at present, is unfavourable. The duty is only estimated at 90,000*l.*, which, some time ago, was thought might reach from 150,000*l.* to 200,000*l.*; but if the fine weather continue, the crop may be considerably better than what appearances indicate.

State of the several Markets this day.

 MARKLANE.

Foreign wheat, 100s. to 130s.
 English ditto, 120s. to 153s.
 Oats, 44s. to 58s.
 Stained barley, 46s. to 56s.
 Kiln-dried ditto, 50s. to 60s.
 Fine malting ditto, 60s. to 73s.
 Malt, 57s. to 80s.
 Hog peas (last week), 90s. to 100s.
 Tick beans, 66s. to 76s.
 Small ditto, 80s. to 86s.
 —all per quarter of 8 bushels Winchester.
 Flour, 5l. 10s. per sack of 280 lib.
 Bread, 18½d. per quarter loaf.
 New potatoes, 15s. per cwt. retailed at 2d. and 2½d.
 per lib.

SMITHFIELD.

Beef, 5s. to 6s.	Lamb, 5s. 6d. to 7s.
Mutton, 5s. to 6s.	Veal, 4s. to 4s. 6d.
Pork, 5s. to 6s. 8d. by the carcase.	
Retailed Prices, per pound of 16 ounces.	
Beef, 8½d. to 10d.	Mutton, 8d. to 9d.
Lamb, 10d. to 1s.	Veal, 9d. to 10d.

ST JAMES'S HAY MARKET.

New hay, 4l. 10s. to 6l. per load.
 Old ditto, 4l. 10s. to 7l. 10s.
 Clover ditto, 7l. 7s. to 7l. 10s.
 Straw, 2l. 14s. to 3l. 3s.

Sheep skins, 3s. 4d. to 6s. 6d.; lamb ditto, 2s. 6d. to 3s. 2d.;
 shearlings, 1s.; clover seed, 24s. to 90s. per cwt.; white ditto,
 40s. to 100s.; trefoil, 34s. to 56s.; rye grass, 16s. to 24s. per
 quarter; turnip seed, 40s. per bushel; rape seed, 46l. to 52l. per
 last; raw hides, 2s. to 3s. per stone of 8 lib.; market skins, 10s.
 6d. each; horse hides, 15s. to 16s. each; tallow, 3s. 8d. per stone
 of 8 lib.; hops, Farnham, 12l. 16s. to 14l.; Kent, 10l. 14s. to
 13l.; Essex, 10l. to 15l. 10s.; Suffex, 10l. 18s. to 15l.

The

The average Price of Corn, by the last returns, is

<i>England.</i>		<i>Scotland.</i>	
Wheat,	126s. 1d.	Wheat,	94s. 2d.
Barley,	66s. 8d.	Barley,	57s. 7d.
Oats,	48s. 7d.	Oats,	48s. 9d.
Rye,	88s. 7d.	Rye,	55s. 9d.
Beans,	76s. 8d.	Beans,	83s. 6d.
Peas,	79s. 8d.	Peas,	87s. 1d.
Big,	56s. 6d.	Big,	49s. 4d.

All per quarter, Winchester.

Oat-meal, per sack } of 280 lib. -	83s. 7d.	Oat-meal per } boll -	43s. 8d.
---------------------------------------	----------	--------------------------	----------

There were imported, last week, into London, 2000 cwt. of bacon, 51 tons of beef, 1500 cwt. butter, 1000 cwt. cheese, 700 lb. of hops, 1266 quarters of oats, 3188 quarters of wheat, 1984 lb. Spanish wool, 1650 cwt. rice, and 300 tons of pork.

Extract of a Letter from a Farmer in Wales, dated June 26.

“ I was happy to receive a copy of the Farmer’s Magazine, and shall be proud if any information, in my power to communicate, contributes to promote such an useful publication. Something of the kind is much wanted in this part of the kingdom, for we are far behind in point of improvement; and I know of no plan better calculated to spur on our farmers, than to let them see what is done by their brethren in other quarters.

We have here a great number of small farms, rented from 20l. to 60l. a year, on which are kept from four to ten cows: and perhaps not more than ten acres of the driest spots are ploughed, yielding little more grain in a good year than is necessary for the support of the farmer’s family. At present, there is not one in five of the farmers of that description, but what is under the necessity of purchasing corn, and even many of a higher class are in the same situation. We have a few farmers who rent from 100l. to 500l. of land; but, in general, we don’t like the plough, the expence being so great as to eat up all the profit; and, unless we can be brought to change our present customs altogether, it will never be otherwise. Our ploughing is chiefly performed with oxen; and the farmer who attempts sending his team into the field with less than six of these animals, may lay his account with being the *talk* of the country. It is common to see eight large oxen in one plough, stirring the barley land; so that the very best land on the farm is employed in raising hay and pasture grass, for the support of the working stock. There are more horses used of late than formerly,

merly, but four is the number usually yoked. Two horses in a plough was never heard of here till I came to this country; though, I think, under proper management, oxen might be employed with advantage; and I shall give reasons in support of this opinion, in a future communication.

A good deal of the land here is pared and burned, which is found to do well upon the old meadows. We don't pay much attention to dung, except when required for the turnip fields, which have of late greatly increased. Our chief manure is lime, with which this country abounds; the quality various. The general method is, to lime every fifth year; and the common rotation upon the dry land is, fallow, wheat, barley, clover, and wheat. This year, wheat after clover is looking better than after fallow, though the crop is in general very thin, and nothing like to what it was last year at this time: the late dry weather has been in its favour, and it looks tolerably healthy. Some fields are beginning to show the ear. The dry gravels have the best appearance, as the wetness of April and May was beneficial to land of that description; but the clays have suffered much, and, to all appearance, will not produce half a crop; the late sowing, and the bad seed used, being much against it. Our markets are high for every article. Wheat is 48s. and 50s. per bushel of 20 gallons (27 bushels Winchester); barley 30s.; oats not to be got, oat meal sells at 1s. per quart. but there is little used in this part of the country. Potatoes are very dear, both old and new; the latter sold in Cardiff market, on Saturday, at 6d. per lib.; beef from 6d. to 9d.; mutton 8½d.; veal 6d.; lamb 6d.; dry bacon 14d.; butter from 10d. to 1s.; cheese of new milk 8d.: ditto of ewe milk 9d.; ditto of skimmed milk 6d.; all per pound of 16 ounces; hay 6l. per ton; straw equally high in proportion. The crop of hay seems a middling one this year. The clover and rye-grass harvest is mostly finished, and we will soon begin to cut the meadows, which are generally sufficient work till the corn harvest arrives."

Northumberland Quarterly Report.

The crops upon dry soils are, in general, looking well; but upon clays,—strong loams,—wet, and cold-bottomed lands, the appearance is very unpromising: a great failure has been occasioned, on such soils, by the destructive effects of the *Beetle Grub* *, particularly in the wheat and oats sown upon clover leas. Many fields

* This Grub is from 1 inch to 1½ inch, long of a brownish grey colour. Some of them were put in a box with earth, and regularly fed, but have not yet made any change; others have been opened, and the embryo of the Black Beetle taken out of them.

fields have been so completely eaten off, that they have been ploughed up again for fallow; some were sown with barley, which has also been very much injured, and, in many places, entirely destroyed. The loss, I am afraid, is much more extensive than is at present imagined. A good deal will depend upon favourable weather, and a fine harvest; but, from present appearances, the crop, upon such soils, cannot be estimated at more than half of the usual average; and the harvest will not be early.

Turnips, sown the beginning of June, are looking very healthy; what have been sown the latter end of the month, and in July, want rain, to bring them forward, particularly upon adhesive soils, which were so saturated with wet last year, that they have wrought very unkindly for turnip fallow, and could not be brought to that mellow pulverized state, so necessary for the vegetation of small seeds.

Potatoes are looking well, and appear to have little of the curl.

Pastures have been very bad, and hay is expected to be a light crop, unless favourable rains come very soon.

The young clovers, in many places, have been much injured by the small grey snail.

The markets for fat stock were at their height about the middle of May, when beef was from 12s. to 13s. per stone, sinking the ofal; and mutton 9d. per lib.; but have been coming down ever since. The prices of beef are now from 7s. to 10s. per stone, according to fatness, and mutton 7d. to 8d. per lib.

The wool-growers expected a considerable advance on last year's prices; but the buyers do not seem willing to give more, that is, 9d. to 10d. per lib. for long wool, and 1s. 1d. to 1s. 3d. for short wool. The fleeces take off very light; and the crop of wool, in respect to weight, is thought to be considerably under the average.

The corn markets have kept advancing. The present prices are,

Wheat,	14s. 6d.	per Winchester bushel.
Barley,	8s. 4d.	ditto.
Oats,	7s. 6d.	ditto.
Peas,	14s. 4d.	ditto.

Extract of a Letter from Newcastle, July 2.

“Our crops here, and in the neighbourhood, are far from being so promising as in the southern counties. The oat crop, in particular, looks ill; and, in many parts, the first sowing was ploughed down, and fresh seed sown. Our prices are, Conningsberg wheat, 120s. per quarter; rye, 80s. to 86s.; barley, 60s. to 63s.; oats 56s. to 80s., peas and beans, hardly any at market.”

Postscript

POSTSCRIPT TO SCOTS INTELLIGENCE.

NORTHERN REPORT.

Regarding the present state of our crops, I am sorry to say that nothing very favourable can be mentioned. Not more than half the usual quantity of wheat was sown; or, in other words, what with the difficulty which attended the sowing, and what has been ploughed down, not half the usual quantity remains; and we cannot promise half of an average crop from its produce. Barley and oats look tolerably well, and are greatly improved by the late rains, which were much wanted before we received them. Some of the barley is in the ear. Peas, in general, are very indifferent. Hay harvest is begun, but the crop is light. The Summer has hitherto been cold and ungenial. Some demand has lately been for cattle, which have sold at pretty high prices. Beef and mutton fell at 6d. per lb.; oat meal from 40s. to 50s. per boll of 9 stones Dutch; bear meal from 32s. to 40s. per boll of 10 stones, oats 40s. to 50s. per boll of 5 firlots; barley, per boll of 4 firlots 40s. to 48s. I believe little wheat and peas have been sold for these three months past. The late rain was very seasonable for the turnip crop, which will now in all probability turn out a good crop. I heard of few complaints in this quarter from the slug or worm, that has been so much noticed in other parts. I trust it will be in my power shortly to send some important information respecting the sheep husbandry of the northern counties, which I expect from a gentleman who has extensive concerns in that line, and is well qualified for communicating such information.

July 5.

Haddington, July 11.—Our wheat market was rather dull, and prices were lower this day than last. Highest prices 63s. 6d.; but only six bolls sold at that rate. Current prices were from 55s. to 58s. Oats much as formerly; highest 50s.; but the quantity was not great. Barley advanced 2s.; and likewise peas and beans.

OBITUARY.

April 3. At London, William Hall, Esq. of Whitehall, parish of Chirnside, county of Berwick.

A correspondent in Berwickshire, to whom we applied for information respecting Mr Hall's agricultural operations, says, "Before my arrival in this county, Mr Hall was become very old, and in a great measure incapable of attending to agricultural affairs. I have been told, and I believe with truth, that his pursuits in that line were extremely injurious to his fortune; and that he farmed away a great part of a fine estate. I should rather hold him up as a terror to gentlemen against becoming farmers, than as an example for their imitation—I mean in farming. Some very good hedge management was practised on his estate, but by no means regularly followed out. I have seen the same, a kind of basket-work plushing in England. He had tolerable notions about lining out roads, but was almost always opposed by the other gentry; so that his ideas, if good, were seldom, if ever, carried into execution."

Mr David Cooper, farmer at Clarey, county of Wigton, much regreted.

Peter Dudgeon, Esq. of East Craig, farmer at Byres, county of East Lothian, an extensive and skilful grazier.

The following particulars concerning this gentleman, are extracted from the 2d volume of Wight's "*Present State of Husbandry in Scotland*," published in 1778.

"Peter Dudgeon, tenant at Byres, has a great character in that country, for skill both in corn and grass. I would be reproached by our bretheren, if so eminent a cultivator and grazier were not particularly taken notice of. He rents 1000 acres from the Earl of Hopetoun, and about 800 from others, by his own account, for which he pays about 1600l. Sterling of rent. Mr Dudgeon is held to be the best grazier in this county. He has commonly 1400 acres under grass, and knows how to improve his stock as well as his land. His chief rule is that of stocking lightly, to afford at all seasons plenty of food. And, by the thriving of the stock, the land is also improved."

At Newton, near Barnistone, Yorkshire, aged 90, Mr Francis Ellerton, an eminent farmer. He was carried to his grave by eight grandsons, and attended by twenty nephews.

At Barran upon Trent, Derbyshire, Mr Joseph Sharpe, farmer; who fell into a ditch in his own grounds, and was drowned.

At Adney, near Newport, Shropshire, aged 83, Mr Leverfage, a very respectable farmer.

At Broughton, Northamptonshire, Mr John Waters senior, an eminent salesman, and dealer in cattle.

At Lenham, Kent, aged 77, Mr Robert Mercer, a wealthy and respectable farmer.

THE
FARMER'S MAGAZINE:

MONDAY, 20. OCTOBER 1800.

(N^o IV.)

PART I.
ORIGINAL COMMUNICATIONS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Letter concerning the Management of a Late Crop of Oats.

GENTLEMEN,

I NVITED by the introduction to your First Number, I beg leave to offer to your consideration some observations and experiments, made in the management of a late crop of oats, during the last unfavourable harvest, which may perhaps be of use to some of your readers, under similar circumstances.

Having been induced to break up about eighty acres of a sheep-pasture, in a pretty high situation, consisting of a light dry soil, upon a whin-stone gravel, that was very much overrun with fog, I had the whole of it ploughed last Spring by the middle of February; but as none of it had ever been in tillage, I was afraid to risk a crop of early oats, and unfortunately determined to sow the whole with common oats, which I began to do during the last week of February. I had got a few bolls sown in very good order, and another break half harrowed, when a fall of snow, with a pretty severe frost, set in, which continued betwixt a fortnight and three weeks. Upon a change of weather, I found such part of the seed as had been covered with snow so far advanced in vegetation, that I allowed it to remain in that state, rather than disturb it with additional harrowing. The whole was completed early in April; and, when the braird made its appearance, I was agreeably disappointed, to find no apparent difference on what had been exposed to the severity of the weather, from the

other parts of the field; and this I mention as a proof that there is no danger, upon a dry soil, in sowing oats much earlier than is generally practised.

The cold barren Spring gave the whole so unfavourable an appearance, that, by the middle of June, it scarcely covered the clod, and I despaired of ever reaping a crop; but, during the month of July, which was the only favourable weather we experienced in 1799, the vegetation was so rapid, and the whole became so luxuriant, that I laid my account with at least six or eight bolls per acre. But when the rains in August set in, the whole field still continued to vegetate, and became so strong in the straw, that the greater part of the crop lodged, without coming to maturity. As the weather continued very unfavourable, I delayed cutting it till the middle of October; by which time, it was so much *edge-grown*, or full of after-shoots, that it must soon have rotted on the ground; and I then determined to cut it, without any regard to the weather.

Such part of it as could be cut dry, was stooked in the ordinary manner; but the greatest part of it was *gated or set up in single sheaves*, a method which I take for granted is known to every farmer.

It continued a long time upon the ground, in hopes of more favourable weather, and people were constantly employed in setting up the stooks or gates as they were blown down; but from the dews or hoar-frost during the long nights, and the little influence of the sun during the day, I found it was not getting any drier, and resolved to have it off the ground at any rate. Such part of the crop as had been in stooks, was put into small stacks, with chimneys for a draught of air in the middle of them. The gates that were tolerably dry, were bound into sheaves, and stacked in the same manner; part of them were also bound, and built in *rive ricks*, or small stacks, about four feet diameter, and seven or eight feet high, with a single sheaf, with the head downwards, spread over the top of it. Such of the gates as were in the wettest state, were put up in the same manner, without being bound into sheaves; and the whole remained in this state till thrashed out during the Winter.

When the crop came to be taken in, I found, that what had been put in stacks, either from stooks or gates, was very much heated, and part of it rotten upon the west side, which had been least exposed to the wind, although some of the stacks had been once or twice cast. The *rive ricks*, built of
the

the gates that had been bound, were not heated, but musty and moulded in the heart; but those that had been made of the loose or unbound gates, continued in the same, or were rather in a drier state than when put up; and I am confident, that, if the whole crop had been managed in this last manner, immediately or soon after being cut, a great deal of trouble and expence would have been saved, and a much less quantity of grain lost, by being so long and often tossed about in the field.

One great inconveniency attending these *rive ricks* is, their being so liable to be blown over by the wind; and I am of opinion, that a preferable practice would be, to ridge up a piece of dry ground with the plough, in a direction from south to north, in the form of a high turnip-drill, and to place the gates upon it in rows, with their heads overloping one another, and as high as a man on each side, standing upon the ground, could easily build them, and then cover them with a row of sheafs, sloping a little from the centre to each end; and, to prevent them from being blown over, a few stakes or props may be placed at proper distances, on each side of the rows: this, I am persuaded, is the best possible method of preserving a late crop in such a wet and unfavourable season as the last; but, not having made the experiment, I only state this as matter of opinion.

It may not be unsatisfactory to mention, that the straw produced from the above crop, although wet, and part of it much heated, had such a quantity of green corn in it, that it was eaten greedily by a stock of Highland cattle, and kept them in better condition than they usually are upon dry straw. The corn was so wet and light, that I considered it not worth grinding: I therefore converted a line into a corn kiln, on which it was dried, dighted, and then laid up for my work-horses; and by which, without any other corn, they were kept, through the season, in perfect good order.

I am, &c.

A FARMER.

June 1800.

P. S.—Since writing the above, part of the stubble of the field had been accidentally set on fire; and when burnt, I discovered a very considerable quantity of corn, equal at least to two seeds, scattered upon the ground; a proof how much had been lost by the above management.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the present State and Management of Common Fields and Waste Lands in Yorkshire.

GENTLEMEN,

THE present state and management of these lands, are little favourable to an improved and liberal plan of cultivation. The open fields are held by so many owners, and in such small patches, scattered over an extensive tract, at great distances from each other, that their cultivation is rendered extremely troublesome and expensive; added to the insuperable obstacle to an improved rotation of crops, by the discordant humours of so many holders, who can scarcely ever be brought to agree with their neighbours, upon any uniform plan of management.

The waste or common lands in this county, are in a deplorable and most disgraceful state; management is a perfect nonentity here; nine parts in ten of them are covered with rushes, furze, fern, moss, &c.; and even where good herbage exists, it is for the real advantage of none, but the prey of all. Where there is a stint or limitation of pasture, according to the respective claims, the case is somewhat better; there are even a few solitary instances of tolerably useful common pastures; on which, with proper care, every improvement of the herbage might be made, short of cultivation by the plough.

Of the open fields, some, on the drier or turnip soils, are cultivated, in the regular course of, 1. Turnips, eaten on the ground by sheep. 2. Barley. 3. Clover, or Beans. 4. Wheat. These instances of the good sense and good-humour of the occupants, concurring so obviously for their own benefit, in a rational system of management of these fields, are very rare. Hence, the good farmer, having the misfortune of holding lands so situated, has, at times, the mortification of finding his valuable crops of turnips, &c. liable to the depredations of cattle, from the supineness of those who will perhaps have a Summer-fallow in the same field; and who, of course, do not feel themselves interested in repairing the fences for that year. Hence, the motley stripes of turnips, fallow, beans, clover, wheat, barley, and oats, at once in the same field, garnished with a variety and profusion of field-flowers and noxious weeds, to the manifest injury of the whole
body

body of occupiers, while no mode exists of compelling the few refractory ones to an improved style of management and culture. In short, the condition of these fields is such, on some of the best turnip-soils in the island, that no intelligent cultivator would give half the rent for them, that he would for the same land, if inclosed, or managed under a different system. Every one is convinced of the necessity of some remedy; but, whether it would be expedient to *compel* the inclosure of the fields, along with that of the commons, in all future inclosure-bills, the writer is not competent to decide.

There is in this county, an instance or two, where, the township containing four open fields of the same sort of soil, the rotations are regular, and of course exhibit a noble pattern of cultivation on an extensive scale; for, in these instances, a most singular spirit of emulation is excited, which almost insures complete management throughout the whole; as the mismanagement of a single field never fails to call up the satire and sneer of the neighbours, at the expence of the poor slovenly holder. There is a much-admired instance of this laudable method of cultivating open fields, with this so pleasing harmony of management, at *Wath upon Derne*, four miles north of Rotherham, which deserves a record, to the credit of the place; and better grain is no where grown. At *Hotfield*, seven miles east of Doncaster, may be seen the direct reverse of the picture, on a gravelly soil, equally well adapted to the turnip-husbandry, and where even the turnip-hoe appears almost unknown.

On the strong, or clay soils, the management of the fields is generally more uniform, perhaps of necessity; the barren, or Summer-fallow, occurring every four years, renders unanimity indispensable, even to the most stupid of the possessors. The most approved course of crops is, 1. Wheat, after fallow. 2. Beans, or Clover. 3. Wheat. Many other, and perhaps worse rotations, obtain in different places; and as it frequently happens, that a farmer of twenty acres has them scattered about in thirty or forty different and distant places, it may easily be conceived how troublesome and expensive their cultivation must be. The great utility, nay, necessity, of inclosing these open tracts of land, must be obvious to every one the least conversant in rural affairs: for, while they are in their present state, the open-field lands in this county, amounting to not less than a million of acres, as well as those throughout the island, are certainly much less productive than they would be under an improved mode of culture, ever consequent on an inclosure. I

do not here mean to exclude the exceptions which may be found; exceptions which, in some degree, really speak in favour of open fields when properly managed, as, in some such situations, grain of most excellent quality is raised. But, as the general state of them is very little adapted to good husbandry, and as they cannot have the necessary changes of grass, pasturage, &c. their present situation ought to be reprobated, and altered as soon as possible; no other mean occurs than a general inclosure-bill for this salutary purpose: To this measure, no objection can be opposed in sound policy; and it is really astonishing it has not been resorted to long since.

The waste lands of this county, and indeed of the island at large, are in a state most disgraceful to its policy; they are positive nuisances to every improvement around them. Their surface is covered with such wretched trash, so much occupied by bog and marsh, and in fact with every thing but the useful, that the poor animals, which are turned out upon them to shift for themselves, become, for want of food, such depredators on the adjoining fields and inclosures, as no fence of common height and strength can oppose. The loss to the community, by this wretched mode of rearing a few starvelings of cattle and sheep, is incalculable; and that on the very ground, which, by culture, would support above double the number, besides abundant crops of grain, for which it would soon be in the very best and most fertile state.

The whole amount of these waste lands in Yorkshire, is calculated at 849,272 acres; of which, about 500,000 are capable of cultivation; the remainder supposed to be incapable of any improvement, except by planting. The above 500,000 acres, on a moderate calculation, might be made to produce at least 1,000,000 quarters of grain, of the various sorts, at the same time with a much improved flock of cattle and sheep, giving the best employment to numbers of hands, who are now compelled to resort to pestiferous manufactures, or to remain idle half their time. These commons are, for the most part, pastured by the cattle of the inhabitants *ad libitum*; some few are more regularly and moderately stocked, by what is called a stint or limitation to each landholder, according to a certain rate: and, in these cases, the pasture is sometimes a tolerably good one; but they are so rare, that they can never form an argument against the necessity of the general improvement of the wastes; for even these stinted pastures are in a sad condition, compared with what they might be brought to by the plough.

Immense tracts of these lands are now lost, for want of draining; lands of the most valuable quality, under that improvement. Large and valuable tracts might be gained from the sea, by embankments, &c. which are utterly neglected in the present state of things, to the very great loss, nay injury, of the community. All these circumstances strongly impel the consideration, that the leading interests of this county could not better employ their attention, than by endeavouring, by all possible means, to bring these lands into a state of cultivation; especially at a time when the commonest necessaries of life, the growth and produce of the country, are nearly out of the reach of the middling and lower classes of the people. It is an awful consideration, and ought deeply to impress the minds of the rulers of any country, that while objects of comparatively trifling importance, perhaps remote or foreign interests, engage such anxious and expensive attention, the real interests of home may be neglected.

In regard to the history of this particular distribution of the territory of parishes, it may appear, by the peculiar mode of allocation, to have been introduced with the feudal system. Three or four large fields of arable, and one tract of pasture or common, no doubt were the original domains of the lord of the manor, who had the labour on them performed for him by his vassals, who had afterwards different allotments or parcels of land, scattered over various parts of the lordship, granted, probably, for particular or eminent services, or in other ways alienated: as we see, in most uninclosed townships, a number of small inclosures, indeed much too small to be otherwise easily accounted for. Hence, there is reason to believe, that a considerable change in the management and occupation of land, was one effect of the feudal institutions, at the time our Norman Conqueror forced them over the head of the much more excellent Saxon laws of our more remote ancestors: and we cannot but with pain observe, that greatly too much of the malignant spirit of those institutions remains, checking, if not blasting, the rising efforts of improvement, and, in a thousand instances, absolutely prohibiting the inclosure and superior cultivation of such open and wild districts. Yet, here, let us observe, that some open fields might not be much improved by inclosing; but, as such fields are in very particular circumstances, they are by no means to be considered but as the

trifling exceptions generally occurring on general rules and observations.

Many difficulties would occur to respect in the inclosure of these fields and wastes. The interests and opinions, generally discordant, of the different claimants; the claims, frequently unreasonable, of the lord of the manor and titheholder, added to the certainty of an enormous expence of commissioners, solicitors, &c. have rendered, in some late instances, lands inclosed by act of Parliament, as dear as if actually purchased in fee-simple. These present discouragements are almost insuperable in the way of these most important improvements, in too many cases; so that it has actually become a problem, whether it would not be a measure of sound policy, for the government of any country so situated, to assume the power of alienating the waste lands as public property, for the real benefit of the public, and to sell them to such as might incline to become purchasers; reserving a preference in some way to the claimants: But, whether or not so, is matter for discussion; as there is no doubt those who have lands adjoining, would purchase the contiguous lots, and the remainder would readily be sold by public auction. The respective claimants, by this mode, at the same time that they would render an essential service to the finances of their country, would also inclose and gain possession of their lands at a much cheaper rate than by the ordinary mode. The great difficulty at present is in the finding of the average value, and fair and impartial allocation, in due proportion to the value of claims, which is now scarcely ever satisfactorily done in any one instance; whereas, by the other mode of disposal, nothing farther would be necessary, than simply to make sale of the lot next adjoining that last sold. Here, nobody would be wanted but a surveyor, and a jury of the neighbourhood, to determine any question that might arise from particular circumstances. Thus might the barren wastes, now the opprobrium of our national agriculture, be converted into fruitful fields, the joy and glory of an enlightened and ameliorated cultivation.

W. P.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Strictures on Hedge-Management.

GENTLEMEN,

IN some late journies through several English counties north of London, I have observed frequent and shameful neglect, in the state and management of the hedges in many places; I may almost say everywhere. Should the following cursory remarks on the subject merit insertion in your Miscellany, they are offered as my mite to the treasury of husbandry, the most useful of the arts.

The first circumstance that strikes an observant stranger, accustomed to the regularity of modern inclosure, is, the great inequality in the sizes of fields, in the anciently inclosed districts of England, the crookedness of the hedges, and the strangely irregular shapes of the inclosures. But the object which I have particularly in view, in these strictures, and which merits the severest reprehension, is, that almost everywhere the hedges have been permitted to run wild, overspreading an irregular breadth of surface with a belt of useless and cumbrous brush-wood, while they scarcely half fence the fields, which they disfigure greatly, and the value of which they lessen very materially.

In very extensive, old, and inclosed districts, I am fully convinced these crooked belts of brush-wood, improperly styled hedges, occupy a breadth of not less than eighteen or twenty feet, on every side of all the fields, one with another. Allowing considerably less than this supposition, as the waste of land beyond what ought to be occupied by a straight-lined and properly dressed hedge, and supposing the old inclosed fields to consist of ten acres each, on the average, which I believe is rather above than below the truth, this loss of productive surface will amount to about half an acre in each field, or five acres in the hundred, upon the whole extent of such inclosed districts. When in pasture, these belts produce little or nothing to the cattle in the fields, besides tearing off a great deal of valuable wool from the sheep; and, when the fields are in hay, or under aration, they preclude the employment of the scythe and plough, from a much larger proportion of the land than has been stated above.

The

The waste or loss produced by these hedges, is still farther and largely enhanced, by giving shelter to an immense number of small birds and other vermin, which destroy considerable quantities of the growing crops, especially when in corn. This species of loss cannot be appreciated: But as rents are always calculated upon some practically known, or estimated average produce, it must proportionally diminish the rents which the lands would otherwise yield to the proprietors.

In many places, the originally dividing hedges of two or more fields have been altogether neglected, allowing wide gaps to form in many places, so that cattle can pass freely through them: But these hedges are still allowed to remain, serving no other purpose than to occupy, uselessly, a considerable portion of ground, and add to the shelter for vermin of all kinds.

Every where, these old hedges seem to have been originally formed of a great variety of different kinds of plants, besides the white thorn, taken indiscriminately; many of which are very ill suited to the purpose. The consequence of this, and of neglect in training, has invariably been, to produce a great number of weak places and gaps, which are obliged to be perpetually mended up by various unsightly and expensive contrivances; such as hurdles, pales, stake and adder, and so on.

On an estate not fifty miles from London, which I had occasion to examine minutely last year, besides the evils already noticed, I found uniformly a good ridge-breadth left uncultivated, next the hedges, round every field under the plough. In this instance, (and my information was, that the practice was universal for many miles round), the loss of productive surface was not much less than ten *per cent.* of the whole in-field fertile land. On that estate, I observed one solitary instance, of having recently grubbed up a useless broad cross fence, which was then carrying a much heavier crop of hay than the rest of the field. I had the satisfaction to convince the occupying proprietor of that estate, of the great waste of good land, by these cumbrous broad belts and uncultivated ridges; and have reason to believe, they are all now in course of being extirpated, and the ground cultivated.

I do not pretend to be a political arithmetician; but, from what I have observed, I cannot estimate the loss of valuable land, in consequence of the neglected state of old hedges in England, at less than an hundred thousand acres: besides the
the

the destruction produced by harbouring vermin, and the want of a free circulation of air. Were this loss only to fall upon the proprietors, to whose negligence it is owing, the injury would be immaterial: But, as every part of the general property, which is improvidently wasted or neglected, is a real loss to the public, this object becomes worthy of serious reprehension. If my suppositions are well grounded, the public loses annually, through this circumstance, not less than the value of half a million Sterling; and the land thus left waste, might employ eight thousand families of labourers and artificers, giving employment and bread to forty or fifty thousand human beings.

STIVA.

Merse, }
August 1800. }

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Inequality of Weights and Measures.

GENTLEMEN,

I AM a country man, who cannot boast of much learning. An education at one of our parish schools brought me the length of reading, writing, counting, and *Penna*. But though I was reckoned clever, and a great favourite of my master, who was in hopes of establishing his character, by the figure which my genius, brought to light by his ability, should make in the world, just as I was beginning to learn *Dominus*, I was taken from school by my father, who wanted such a lad to herd his cattle. This change was at first very agreeable to me. But two or three days soon made my time hang heavy, and I regretted my books and my play-fellows. These, however, were in time forgotten; and my chief employment was, tending the cattle, or holding the plough, (to which my strength soon promoted me), and my chief delight consisted in reading the scriptures. In this way, several years passed away, when my father's death made me heir both to his tack and stock.

Having now more money, and being sometimes obliged to go to market, I bought some books, which at leisure hours might gratify my favourite inclination. Some of these (the
 Gentleman

Gentleman Farmer in particular) gave me a new light in my own profession. Consulting with some very sensible men, neighbours of mine, we set about trying a new method. The rotation of cropping which we have adopted is fourfold, viz. oats, turnips or potatoes, bear, hay. We do not, however, keep more ground under tillage, than is required to keep our stock through the Winter. With our turnips, we fatten some beasts for the butcher. This mode is now almost generally followed throughout this district, and answers so well, that, though situated in a rainy and high country, our harvest is generally finished before that of other places more favoured by nature.

In my dealings with several counties, and even with different parts of the same county, I have often been puzzled by the inequality of the weights and measures by which grain is sold. I cannot see any thing which prevents the Legislature to correct this abuse, by ordering the same standard to be used throughout the kingdom. But, on communicating these my sentiments to others more wise than myself, I am informed that it has already been in vain attempted. I acquiesced in this answer, as I always do in every opinion of my betters, where they are more able to judge than I can possibly be. For this evil, I hope there is still a remedy left. You, Gentlemen, must know, if there be any table of the proportions which the different bolls, bushels, &c. in use at different places, bear to each other. If there is none which contains such useful information to the farmer, I beg leave to suggest, whether it would not add much to the utility and circulation of your publication, (at least to such as myself it would be infinitely more valuable), if it contained a table such as I have mentioned. By comparing the size of the different measures used, we could obtain a much more accurate knowledge of the prices of grain, and of all the articles of common consumption at different places, as reported in your Magazine and the newspapers. Such a knowledge, universally circulated, would be attended with most beneficial effects. It would put the honest, but not so far travelled farmer, on a footing with the knowing corn-dealer, or sharp butcher. It must tend, in a high degree, to the extension of theoretical, as well as practical knowledge of husbandry, and, in these times of scarcity, would have considerable influence on the equal reduction of all the commodities of life. Nor would the information requisite be very difficult to obtain. Your numerous correspondents and readers, in different parts
of

of the kingdom would contribute their aid; and I am persuaded that nothing is required but the formation of a proper plan, to have it quickly completed.

Of these observations you are at liberty to make what use you please. I have only farther to say, if you can furnish us a table, it will be highly acceptable to your well-wishing

COUNTRY MAN.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

New Galloway, 16th June 1800.

GENTLEMEN,

As it is believed a great deal of fruit was lost last year, from the persons, who had it, not knowing the best mode of preserving it, it might be doing a considerable service to the public, to insert in your next Number, an account of the best method of storing it up. As this must be a matter well known to those who are in the use of keeping great quantities, I presume you can easily furnish the necessary information.

It would be also obliging some of your correspondents, to acquaint them where the best kind of dioptrical bee-hives are to be had. I am,

GENTLEMEN,

Your most obedient,

A—— ———n.

Note by the Conductors.

It would have given us much pleasure to have furnished our correspondent with the information required; but the management of fruit is so little understood in this northern part of the island, that we must refer the query to our southern friends, who, we trust, will be kind enough to give a satisfactory answer.

N.

FOR

FOR THE FARMER'S MAGAZINE.

An Essay on the Proper Size of Farms.

THIS will best appear from observing the *effects* of the different classes of farms as at present existing, and which may be arranged under the following heads :

- I. Of Farms altogether under *Tillage*.
- II. Of Farms altogether in *Pasture*.
- III. Of Farms *partly in Tillage, and partly in Pasture*.

HEAD I.

Of farms altogether under *tillage*, yet including as much pasture as may serve the milch-cows for the family-use alone.

These may again be subdivided under the following classes :

- 1st, Of small farms in the occupation of *mechanics*.
- 2d, Of small farms in the occupation of *husbandmen*, having no other profession.
- 3d, Of *two or more* farms contiguous, cultivated by *one* farmer.
- 4th, Of *several* farms *separated* from one another, but in one man's occupation. First, then,

Of small Farms in the Occupation of Mechanics.

These are generally to be met with in the vicinity of towns or large villages ; there are some examples of them also in the smaller villages scattered over the country, in which the wright, the smith, the webster, or the futor, have their bit of land.

The husbandry of all these, without a single exception, is bad ; the more inexcusable, when it happens to be in the immediate vicinity of a populous town, where, from market and manure, they ought to be in the best state : but there is an inherent vice in this system, which no situation can counterbalance. For agriculture, in such hands, can never be more than a secondary object, or rather a by-job altogether : But, unhappily, this is not all the mischief ; for even their primary profession suffers in their unavoidable distraction of attention between the different occupations : And thus, from commencing their agricultural career, as bad husbandmen, they commonly

commonly dwindle down, in the end, to be sorry mechanics likewise.

It would, however, be wrong to prohibit this species of husbandry. Why should a man be hindered from giving vent to his folly in this line, as well as in any other? His time, to be sure, is very ill bestowed on such a speculation; but it would be worse *spent* in the *tavern*, on the *turf*, or in the *cock-pit*; and if there be any truth in the notion, that the *health* of such people is promoted by rural operations, it may compensate, in some degree, to the state, what it thus loses by their wretched cultivation.

There are, indeed, some examples of farms on a larger scale, that are occupied by *townsmen*, in which the cultivation is by no means bad. Some people, however, are ill-natured enough to remark, that the original profession declines in proportion as the farming advances: but the consideration of this is foreign to the present question.

2. Of *small Farms* in the hands of *Husbandmen* having *no other profession*.

By a farm of this description, I mean one of a *single plough-gate* of land, containing from 30 to 50 acres.

In this situation, the farmer cannot afford to *lye idle*, as it is termed; he must be a labourer himself, and is commonly the hardest wrought labourer on his farm. He is indeed the only able-bodied man about his *town*; his servants consisting of a raw lad to assist him in the field-operations, and a boy to take care of the cows. In Winter, he may have an old man, supernumerary, to assist him four or five months to thrash out his crop; but at all seasons, he receives much assistance from the female part of the family. The women are ever kept in full employment. They *redd* the barn to the old man; they fork the dung, and spread it along with the lad; they muck the byre, and fother the nolt with the boy; they carry the seed-corn to the *gudeman*; and, in company with the *gudewife*, they weed the lint, and dress it; and, besides spinning, and the daily operations of the *dairy*, and making of the *porridge* and *kale*, they have the occasional drudgery of the washings to perform too. Nothing, indeed, can exceed the industry of this part of the family, but the cheerfulness of their disposition, and their unaffected simplicity of manners.

With

With regard to the agriculture of this plodding class of farmers, it depends very much on the practice they have been educated in. No improvement almost was ever known to originate with them. They have even a reluctance to adopt any that may be suggested to them. This does not arise, however, from any perversity of disposition, or failure of intellect but it is the natural consequence of their confined situation, and scarcity of transactions. They cannot afford to mix with the world from curiosity: even their indispensable absence from home, on account of business, is peculiarly inconvenient and expensive, as it lays the full half of their home-operations at a stand, while the little business they have to transact abroad is not full employment for the time.

There are, however, many examples of good cultivation in this class, (in well established modes of good cultivation they are indeed excelled by none); but it will always be found, that the most intelligent of them are those who have had, from some specialty in their circumstances, an unusual intercourse at an early period with society; or who, living in the vicinity of a great town, have hence acquired, at little expence, a knowledge of mankind, and of the principles of improvement, which, in a remote situation, in their limited sphere, they never could have attained.

Whenever our country is so completely cultivated, that there will not remain a single improvement that can be made, either by inclosing, draining, watering, &c. or in cattle, implements, or rotation, then may it be laid out into such small farms, and consigned into the hands of these little tenants, who will be able, perhaps, without any great loss, to retain the soil in fertility. Such an arrangement may be even necessary, from a regard to the morals of the people; as, from the dissipation which will naturally accompany such a state of prosperity, there would be no class of men so apt, from their circumstances, to retain the simplicity of manners and laborious industry of ancient times. Even at the present day, they may be placed in the vicinity of great towns, where the land is already, for the most part, in an improved state, as their habits of industry and temperance would, for some time, prove a barrier against the spread of the enervated licentiousness of city-depravity; though it might still be necessary, from time to time, to renew the race from more remote parts, in proportion as the present possessors become contaminated with the vices of a more luxurious life. This change of tenantry would be of advantage, were it mutual between the parties;
for,

for, if those who have been living for a series of years in the neighbourhood of a great town, were removed to a more remote situation, their more intelligent ideas in their profession would operate to the more rapid melioration of the less improved lands on which they might choose to settle, while they would lose the habit of dissipation, from being less in the way of temptation to indulgence.

At present, the produce brought to market from small farms, is always less in proportion, than from farms of a larger size; because a greater proportion of it is consumed at home, by the more proportionably numerous stock of unproductive cattle; an inherent evil in little farms, which no genius in the occupier can obviate: and, in general, there is even less produced on the ground, from the circumstances before stated, with regard to the abilities of the husbandman himself. With regard to the effect of small farms on population, that will best appear from the next subdivision.

3. Of two or more farms lying *contiguous*, occupied by one farmer; being the general means by which *great* farms have originally been formed.

Though this system of letting lands has ever been a grievous subject of lamentation with half-witted politicians, it has nevertheless, in practice, been found to be the most beneficial to the country, and still continues to add to the general prosperity.

When two or more farms are conjoined, the following effects arise: 1. The *expence of labour is reduced*, in so far as the peculiarities in the soil in one, are contraited by those in another farm; so that when the land is not in a condition of being laboured in one, it may with propriety be laboured in another; as in the example of one of the farms being of a dry soil, and the other of a wet; and which is commonly a conducting reason for the conjunction. Even where the soil is all of the same nature, there arises an advantage in the labouring of a great farm, from the concentrating of the strength of men and horses at any particular operation, by which it is got finished in proper case, with less risk of being spoiled, from the uncertainty of weather, &c. 2. The *expence of house-keeping* is reduced, in proportion as there are fewer families of farmers to maintain. 3. The farmer, having more business, is more abroad in the world; is conversant in a higher line of life; and thus, having more opportunities of information,

he, in fact, becomes better informed; and as he has, 4. The profits of a greater quantity of ground in his hands, he is thence more able to introduce an improvement in practice or in stock, from another quarter, or better enabled to propose it himself, from his own observation and experience.

The real produce of the lands becomes thus augmented; and as there is less of it consumed at home, (there being fewer men and horses to maintain), a still greater proportion goes to market.

The population on the land is also augmented; for although it be true, that the common operations of the farm are conducted by fewer hands, yet there is always some extra work going forward in the various operations of improvement; such as, in hedging, ditching, levelling, draining, building, &c. which the little farmer never would have thought of, or never have performed. The great farmer also excels the little tenant in a circumstance, which, more than any thing else, conduces to the population of the country; which is, that the greater part of his servants are married, and have families of their own: and this he chooses, not from any affectation of patriotism, but from a principle, of more effective influence—a regard to his own interest; as he finds, that a numerous household of unmarried servants are very unmanageable, and that he is better served with sober married hinds, who board in their own houses, at less expence, and more to their satisfaction, as well as his own.

The following state, in regard to this point, of a farm in the vicinity of Edinburgh, consisting of about 280 Scottish acres, and which, prior to 1736, was in three farms of two ploughgates each, and which has since been united into one, shows this in a more explicit manner.

1735.		1793.	
Families of farmers	- 3	Family of the farmer	- 1
Ditto of cottagers	- 6	Families of cottagers	- 14
<hr/>		<hr/>	
Total families	- - - 9	Total families	- - - 15
Horses	- - - 33	Horses	- - - 16

At this period, the increase from the married servants, was not sufficient to keep up the number of unmarried servants, who, of course, were obtained partly from the neighbouring

At the present period, the increase from the married servants does much more than supply the population necessary. Their sons and daughters are therefore sent to supply

1735.
bouring villages; being sons
of weavers, tailors, &c.

Rent about 230l.

1793.
ply the neighbouring towns,
or to the smaller farms in the
neighbourhood which cannot sup-
ply themselves! There are also
at this time, four young men
from this farm at sea.

Rent 636l.

As to the question, *How large ought a farm to be?* I can perceive no bounds, in point of propriety, except those which nature has set to the genius of the farmer, and Providence to his fortune; for the larger that the farm be, if the tenant has capital, and abilities answerable, the better it will be, in every respect, to the community; as not only more produce is brought to market, but actually more is produced, from the superior advantages the great farmer enjoys, of being more able to make improvements, because more wealthy; but also better inclined to do so, from being more intelligent. We even see, that the population of a country thus occupied, is augmented, from the circumstance of his interest being concerned, in giving the preference to married servants, instead of lads and boys, and superannuated men, with which the small farms are peopled. That he does not employ the whole progeny of these hinds, is a favourable circumstance to the public, as they serve as an excellent nursery for the supply of the mechanical branches, which not only cannot be recruited from a country laid out in small farms, but are themselves drained of their youth, to keep up the population of that unproductive system*.

Instead, therefore, of inquiring what ought to be the size of a farm, an assize ought to be held on the judgement of the farmer, and the capital he is able to command; for although it may be remarked, that the powers of the mind, even in the same person, expand and contract, according to the situation in which he may for some time be placed, yet there can be no doubt, also, that there are people whose ge-

K k 2

nus

* It is curious to observe the cant of declamation (for depopulating the country) which has, for these last forty years, been kept up against the uniting of the small farms, which has taken place chiefly in that period, which has not only been an æra of great agricultural improvement, but the population, from actual investigation, has increased, in Scotland, near 300,000 souls, or about one fifth of the whole.

nus far surpasses the general run, in whatever circumstances they may be placed. Thus, while it would require a man of considerable abilities to manage, in the best manner, a farm of 300 acres in tillage, I should suppose, that were the vast abilities of a *Fox*, or of a *Pitt*, to be concentrated on agriculture, with an inclination to the profession, they could, with equal ease, manage a farm of ten times the extent: at least, those who undertake such a charge, and do justice to the subject, might be considered, in agriculture, as those two great characters are in politics, among the most enlightened of their compatriots.

A farm in the vicinity of a great town, requires more abilities to manage, in proportion to its extent, than a farm in a more remote situation; because the branches of operation are more minutely divided, and the sources, from which the revenue is obtained, flow in more various channels; while the general economy of the whole is regulated by more uncertain and variable principles.

4. Of *several* farms in the possession of *one* farmer, lying at a distance from one another.

In this system, the advantages are not altogether so great as when the farms are contiguous: For, *1st*, The contrast in the soil gives no advantage in the labour; nor can the strength of the whole be concentrated on one object: of course, a greater expence in labour is incurred. *2d*, As the master cannot oversee the whole personally, he must delegate his authority in part to an overseer, which seldom turns out so effective. But, in other respects, the advantages are nearly equal; and in population it is superior; for more people are required to do the same work. The profit, of course, will be diminished; but as the farmer will be more in the practice of traversing the country, he will naturally become more intelligent, and thence carry on his plans more judiciously.

HEAD II.

Of Farms altogether in PASTURE, including a small proportion of Tillage, for raising Corn and Potatoes for the residents.

These may also be considered under the same subdivisions as in the former head.

1st, With respect to mechanics interfering with this system, there is hardly an instance, though it would be much more for their advantage, if they converted their pitiful possessions to the maintenance of a milch cow, or the rearing of a young beast, than, in their present wretched system of tillage, oppressing themselves, and disgracing the country. But, for this purpose, it would be necessary that their patches were inclosed: But that would be by far too great an exertion for their genius; and so I shall leave them to their own mismanagement.

2d, Of *small* pasture farms in the occupation of tenants having *no other occupation*.

There cannot well be a very small farm of this description, as the attention required would not be sufficient employment, neither would the profit to be derived be a sufficient recompense for constant attention. They must necessarily, therefore, be of greater extent than the small arable farm, where there is always abundance of employment to the little tenant; and although there may be little recompense to him as a *master*, yet he is generally understood to be sufficiently remunerated for the labour which, as a *servant*, he bestows upon it.

The same circumstance which promotes the prosperity of a corn-farmer on an arable farm, and the consequent prosperity of the country, will, I am persuaded, operate in the same manner upon a cattle-farmer in a pasture farm, viz. that the larger that the concern be, if the tenant has abilities answerable, the more enterprising will he become, and the country will the more speedily be improved in the breed of cattle, and melioration of pasture lands.

3d, Of *two or more* farms lying *contiguous*, in the occupation of one tenant.

That the tenant in this situation will be more wealthy and more intelligent, and hence, being more enterprising, will be more beneficial to the country, has already, in the foregoing article, been noticed; in addition to which, the following remarks occur.

A man will be able to manage a pasture farm of greater value and greater stock, on a rich soil, than on a poorer one, which must be more extensive to yield the same produce,

and will therefore require more exertion to oversee. The quantity of land and quantity of stock that a farmer may have abilities to manage in a pasture farm, may be vastly greater, than in a farm under tillage; as there are fewer servants to oversee, and as the process of breeding and feeding cattle is much less complex than that of raising corn.

The effect on population, of uniting two or more pasture farms into one, will be much the same, as formerly stated, with regard to farms in tillage; for, although the tenant may be enabled to keep fewer herds, yet he will naturally choose that these should be married men, boarding in their own families: even were this to produce no increase of population, it ought to be held as beneficial to the country; for the great farmers herds have a better chance of getting full employment, than in a small farm tending a small flock,

“The herd diminutive, of many hues.” THOMSON.

where they are little better than half idle: for a population of idle people ought to be exploded; as not only are the faculties of these people themselves locked up for want of exertion, but the money which their maintenance requires, is thus diverted from the channels of enterprise and improvement into which it might otherwise have flowed.

4th, Of several pasture farms, at a distance from each other, in one tenant's occupation.

The effects in this case are almost the same as if the farms lay contiguous, provided each separate farm has all the varieties of pasture, and proper shelter for the cattle; but if this is not the case, it were better for the farmer (and for the public) that they lay conterminous to one another, as they thereby could afford accommodation, to the mutual advantage of the whole. So far, also, as loss may arise from the master not being able to superintend the whole, so far will there be a disadvantage in having distant farms in pasture, as well as distant farms in tillage; but, on the other hand, as was before observed, the farmer himself will become more intelligent, in proportion as he has to traverse a greater range of country, from which he will the more readily introduce or make improvements in the breed or management of his flock.

HEAD

HEAD III.

Of Arable and Pasture United.

Whatever has been said respecting the *size* of farms, in the two former heads, is equally applicable to this; the larger that the farms are, the more intelligent and enterprising will the farmer himself be; and hence, from his more spirited and judicious exertions, the community at large will derive a greater advantage.

This mode, or system of farming, is the most judicious of the whole, as it promotes the interest of all parties concerned, the proprietor, the tenant, and the public at large, more than either of the two modes separately. It promotes the interest of the proprietor, by affording him a greater rent: It promotes the interest of the tenant; because he will be able to manage a greater extent of land, than in a farm wholly in tillage; and he will have more intercourse with the world, than in a farm wholly in pasture; and hence, performing more business, and being more enlightened, he will become more wealthy: Finally, it promotes the interest of the public; because a greater proportion of the produce will be brought to market, and even a greater crop produced. This arises from two causes: *1st*, There will be fewer unproductive cattle to eat up the produce at home: *2d*, The lands being alternately in tillage and in grass, they will be kept in better condition; and the crops of corn, and of hay or pasture, will be more luxuriant, and of a better quality.

With respect to *population*, this system is unfavourable in one case, and favourable in another. It is unfavourable in the case of converting a farm, that had been wholly in tillage, into part tillage, and part pasture; for pasture-land always requires fewer people to manage it, than lands in tillage; but, for the same reason, it is favourable to, or increasive of population, when pasture lands are converted to the production of grain. In a great proportion of the best lands of England, it would be highly for the advantage of all parties, that this system were adopted, instead of the grazing system, which prevails without variation. In Scotland, however, the case is different; there, the greater part of the arable lands, which formerly were kept wholly under the plough, have been most judiciously improved, from the introduction of this alternate

system, and which has, to a certain extent, diminished the number of people employed in agriculture, greatly to the mortification of the gloomy-minded declaimers against the present times, who, in the blindness of their rage, denounce the uniting of small farms as the cause of this mistaken national calamity. But, even were this notion to be well founded, (and it would not be difficult to shew that it is not), yet surely it is not solely the *numbers* of people employed in any profession, that ought to render them respectable in the State; regard must also be had to the *ingenuity* with which they are actuated, and the *industry* with which they carry on their operations. People, not judiciously employed, are little better to the State than if they were not employed at all. H.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

As a reader of the Farmer's Magazine, and a well-wisher to that Publication, I send you the following observations and experiment, anent the raising of cabbages and open kail.

Owing to the severity of last Winter, and inclement Spring, kail plants of every description were scarce, and ill to be got in the north of Scotland; in particular, the different species of cabbage plants; and what remained, were so weak and small, as scarcely to be worth planting. Having some roots of the early kind of last year remaining in the ground, which were beginning to put out young shoots about the end of April, the idea struck me of pulling these old roots, and, after stripping them of all the young shoots, except the strongest and healthiest-like one, to replant them on another piece of ground, in the following manner: I caused a small furrow be made in the ground of the plot I intended for them, and put the old stock on its side, covered it up with earth, keeping the shoot above like a young plant. They never went back, grew remarkably fast, and have closed very well; and were several weeks earlier than those planted from young plants before them.

I tried the same experiment with open kail, and find they answer equally well.—If you think this may be of any use to the public, or considered worthy of a place in your publication, you are welcome to use it. I am, a wellwisher to agricultural improvements.

July 15, 1800.

A Perthshire Farmer.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

I take the liberty of sending you some observations on the use of lime in Yorkshire; which, if they meet with your approbation, may be inserted in the next Number of the Farmer's Magazine.

The common way of using lime in the West-Riding of Yorkshire, is to lay it upon Summer-fallow that is intended to be sown with wheat, in the proportion of from 100 to 150 bushels of shell-lime, brought from the neighbourhood of Pontefract; it is applied at any time during the Summer that suits the convenience of the farmer. Some farmers lay the same quantity upon the turnip-fallow, with the addition of *farm-yard dung*, bones, or *rape-dust*; in either of which cases, when it is laid upon land that has been long in tillage, and previously limed, it is of no service; and if the Summer months are warm and dry, it is often destructive to the turnips. This error arises, partly from an ignorance of the properties of lime, and partly from a want of due attention to the state of the soil to which it is applied. There is a lime of another kind in the West-Riding, got at Emsfall near Doncaster, which is often used for wheat, generally upon leas after oats or barley: it is spread upon the stubble before the sud-furrow is given, and generally found serviceable; as in that way it meets with abundance of vegetable matter, upon which its action is exerted. This lime is said, by a person who examined it chemically, to contain clay, in the proportion of one third of its weight. From sixty to eighty bushels are laid upon the acre. From its strength, it does not appear that the land will bear more; as, in most instances where a greater quantity has been applied, it has been found to hurt vegetation. This is the result of the experience of almost every farmer in the circuit where it is used.

The Pontefract lime is mixed with sand, nearly in the proportion of one third of its weight, and, being of a milder nature than that already described, requires to be laid on in greater quantity; 200, and even 250 bushels, unslacked, are frequently laid upon the acre with advantage, especially when well watered.

It appears that no correct idea has yet been formed, either of the qualities of lime, its operation upon the substances it meets with in the soil, or the quantity required for different soils. Owing to a want of this knowledge (a thing surely attainable)

tainable) much money is uselessly expended, and much labour bestowed, which, under the direction of better information, might be saved. The principal error of our farmers, consists in supposing lime to possess fertilizing qualities in itself; and that, without operating upon the soil, or the substances it meets there, it is an enriching manure. Chemistry has discovered no other principle in limestone, but calcareous earth kept together by fixt air, with the addition of clay in some instances, and sand in others. Mr Anderson of Aberdeenshire says, "Lime can have no manure within itself; but operates only as an alterative or stimulus to other manures."

In this place, I am sorry to differ in opinion with Mr Anderson, to whose disquisition I am in a great measure indebted for the little knowledge I have of its nature; as to its operation, I speak from experience and observation. In Vol. I. p. 484, Mr Anderson says, "Calcareous matters act as powerfully upon land that is naturally poor, as upon land that is more richly impregnated with those substances that tend to produce a luxuriant vegetation." If Mr Anderson meant barren moor land, that has never been in a state of cultivation, covered with bent, heath, lyng, and other vegetables, I agree with him; but not upon poor soils that have been long in tillage.

Mr Anderson further observes, "Writers upon agriculture have been long in the habit of dividing manures into two classes, viz. 1. Enriching manures, or such as tend to render the soil more prolific, however sterile it may formerly have been; of this class, dung holds the first rank. 2. Exciting manures, or such as are supposed to have a tendency to render the soil more prolific, merely by acting upon those enriching manures that had been formerly thrown into it, and, for want of a proper stimulus, had remained dormant." Lime is unquestionably the foremost of this class. With this doctrine my own experience in a great measure agrees; as every observation I have made, confirms my belief of its being a stimulus only. The same author further observes, "That, in consequence of this theory, it would follow, that lime would only be of use as a manure, when laid upon rich soils; and that, when it was applied to poor lands, it could produce no good, and in many instances hurtful effects."—"I will frankly acknowledge," says he, "that I myself was so much imposed upon by the beauty of this theory, as to be hurried along with the current, in the firm persuasion of the truth of this observation; and for many years did not sufficiently ad-
vert

vert to those facts that were daily occurring to contradict it. I am now, however, convinced, that lime, and all calcareous manure, produce a much more immediate improvement upon what are termed sterile soils, than upon such as are richer; and that lime alone, upon such soils, will produce a greater, as well as more lasting degree of fertility, than even the best dung."

This assertion of our author, is not quite in unison with the other parts of his work; where, after a very learned disquisition upon the qualities of lime, and its formation in the bowels of the earth, he concludes in a manner that does not warrant the idea of its operating in the way he mentions; and I can with truth assert, that I have never found it to repay the expence, when laid upon wore-out lands, and such especially as had been previously limed.

My own experience enables me to recommend the use of lime, in the following manner: Let the farmer consider well the state of his ground, and its management previous to putting on a dressing of lime. If it has been ploughed out of grass, either having lain long in meadow or pasture, a heavy dressing, of from 250 to 300 bolls per acre, put on a good Summer-fallow, will be of very great benefit, as, upon such soils, it will meet with abundance of vegetable matter, upon which it will act in such a manner as to increase its fertility. It may also be used with advantage, every eight or ten years, upon land that is kept under the plough; provided it is well manured with stable-dung, bones, or rape-dust, especially if such lands are under a proper rotation, such as, 1. Turnips; 2. Barley, with grass-seeds; 3. Pasturing with sheep; 4. Wheat. Where it is used in this manner, I would recommend it to be laid on in the early part of Winter; in that way, it will become perfectly effete before the turnips are sown; a matter of more importance than is generally imagined.

It will also be highly beneficial upon strong and wet soils, where a suitable rotation of crops is followed. The rotation I would recommend is, wheat or barley after fallow, broad clover, white clover and grass seeds; pasturing with sheep as much as possible; afterwards wheat. This is at present the practice of the best farmers. I am,

GENTLEMEN,

Your obedient servant,

A YORKSHIRE FARMER.

 FOR THE FARMER'S MAGAZINE.

Letter from a Scots Farmer, during a Tour through England, to his Friend in Edinburgh.

LETTER IV.

HAVING now seen several of the best cultivated English districts, I proceed, with great satisfaction, to detail my remarks on the husbandry of Essex, Suffolk, and Norfolk; and I am truly sorry that the condition of some of the conterminous counties prevents me from bestowing equal praise upon the management therein generally practised.

Leaving London upon the last day of June 1799, we travelled through the heart of *Essex*, by *Rumford* and *Colchester*, and in our progress saw much to commend, and very little to censure. The general soil of the district through which we passed, appeared to be of the kind usually called *loam*, though of many varieties; the greatest part of it, as we were informed, was under lease; and the possessors are eminently respectable.

You will easily figure, that a passing stranger ought always to speak with diffidence upon those matters. It is only a small part of the country which he can personally examine; and he is necessitated, in numberless instances, to take his information from persons, who, perhaps, are unqualified for communicating it in an accurate way. Still, under these circumstances, if he sees a country well cultivated and uniformly productive; if he discerns good houses, good fences, good implements, and good roads; he may fairly pronounce its rural economy to be in a comparatively perfect state: and all these things are to be found in the county of Essex in a superior style.

Very little naked Summer-fallow is discernible in Essex; nevertheless the ground is generally in a clean and husbandman-like condition. The anti-fallowists bring this as an argument against the necessity of fallow in other districts, without reflecting that the soil, climate, and practices, are materially different from almost every other part of the kingdom, and cannot be imitated, unless perhaps in five or six counties. The argument, in fact, cuts two ways. A want of fallow, either proves, that the land is very well or very ill managed. In Essex, we admit, it is a proof that a proper system is practised; but many other counties have as little fallow

fallow as Essex; the consequences of which are,—the ground is dirty, being stocked with annual and perennial weeds, instead of corn and artificial grasses; unproductive to the possessors, because the strength of the soil is carried off by the aboriginal inhabitants, who enjoy an hypothec preferable either to the Crown or Landlord; and incapable of receiving suitable cultivation, until they are dispossessed.

The great object of the Essex Farmer appears to be, to raise wheat; and, in our view, three eighths of the arable land were carrying that golden crop. We saw few oats; not a great breadth of barley; while perhaps one half of the district was under the meliorating crops of clover, beans, peas, potatoes, and turnips. If there be a just principle in farming, it is to have culmiferous and leguminous crops alternately; and in Essex this principle seems to be adhered to steadily. It is not a matter of great importance, which of the varieties, that is to say, whether wheat, barley, or oats, are taken as the culmiferous crop; but the selection ought to be made in conformity to the soil, season, climate, and markets. These circumstances all operate here in preference of wheat, and the Essex farmers very judiciously bestow their chief attention to its culture.

We were, in truth, greatly delighted with the husbandry of Essex, as it is, in a manner, all cultivated like a garden. The possessors are in a flourishing state, and marks of opulence are discernible among the great body of them.

After viewing the town of *Ipswich*, which is a large place, we proceeded through the county of *Suffolk*, which, making allowance for local circumstances, is under similar good management with Essex. The soil, however, is not so deep; a great part of it is incumbent upon sand and chalk; and the distance from London lessens the value of the commodities produced. The cultivation was admirable, the rotations excellent, the lands clean, and the crops which covered the soil were weighty and luxuriant.

Here the *wheel-plough* came under our inspection; but it shall be noticed at greater length, when we enter upon the husbandry of Norfolk. The best breed of *horses* for country use is to be seen in Suffolk; they are not very tall, but broad, full barrell'd, well shouldered, and generally of a chestnut colour. They are of an excellent size and strength for rural employment, and, except in the difference of colour, bear a greater affinity to our best Lanarkshire horses, than any other breed in the island.

The management of *dung* is here well understood, as none is laid upon the ground, but what is in the most perfect rotten state. It appeared that a year's dung is in most cases kept on hand, or otherwise it is difficult to conceive how the preparation of it could be so forward. The farmers were busy in driving it out to their turnip-fields, upon which dung in no case should be applied, unless fully ripe.

Every agriculturist has heard of *Norfolk*, and its husbandry; and perhaps no more has been said in its favour than is justly merited. With a large portion of sandy soil upon a bottom of chalk, it is one of the most productive counties in the kingdom, and, acre for acre, exports more produce than any other district. To what cause can this superior produce be assigned? Other counties have better soil, as good a climate, superior local advantages, and yet are undoubtedly far behind this celebrated district, in the extent of rural commodities carried to market.

Many causes may be assigned for this celebrity, which we shall slightly notice: *1st*, The greatest part of the land is under lease. *2dly*, The farms are of considerable size. *3dly*, As few manufactures, except at *Norwich*, are carried on, the capital stock of the inhabitants is chiefly employed in cultivation. *Lastly*, The turnip system being early introduced, proved of essential service, in bringing the numerous and originally barren sands of the district into a fertile and productive condition.

The defective parts of the *Norfolk* management (and we state them with diffidence) are, the general use of wheel-ploughs; the common mode of raising turnips, viz. in the broad-cast way; and the folding of sheep. These are undoubtedly antiquated practices, and ought to be exploded by such enlightened cultivators.

Wheel-ploughs have certain properties which are not possessed by the *swing-plough*; such as—they may be pitched to any deepness necessary, and the breadth of the furrow may be regulated with almost mathematical exactness. They are also capable of being wrought by unexperienced ploughmen, which is not the case with the *swing-plough*; but, perhaps, to this source may be traced the very general bad ploughing practised in many parts of England. Without, however, enlarging upon this topic, it may be added, that the increased friction of the wheels overbalances any benefit gained by the uniform deepness with which the instrument goes; and that a *swing-plough*, provided with a
similar

similar share, and in the hands of a good ploughman, is capable of executing as much work, and is easier drawn, than the wheel-plough.

As for broad-cast turnips, we are at a loss to conceive what advantage can be gained by this mode, in preference to drills, especially upon such soils as prevail in the county of Norfolk. That it is an easier business to clean the crop by horses, than by manual labour, we suppose, will not be disputed; and, that a weightier crop may be gained from a regular planted field, than from one where it is physically impossible the plants should stand at equal distances, we should also suppose equally indisputable. To the force of custom, the prevailing practice can only be assigned; for in no part of Britain could they be raised at less expence, in drills, than in the soft, pliable, and easy-wrought sands of Norfolk.

The folding of sheep, at one period, when so much of the county remained in an unproductive state, might, in all probability, be a very necessary practice; and the breed generally kept, undoubtedly possesses properties which eminently qualify them for this treatment. In the present improved state of this county, it scarcely admits a doubt, but that sheep of superior qualities might be introduced; and, indeed, many farmers already prefer the Lincoln and Leicester breeds, as being cleverer feeders, and easier kept within the inclosures, than the original stock.

Lynn, Yarmouth, Blackney, and Wells, are the chief ports from whence grain is shipped in this county; and the value, in ordinary years, we are informed, amounts nearly to one million Sterling *per annum*. The value of the cattle, sheep, lambs, &c. sent out of the county, has been calculated at nearly four hundred thousand pounds Sterling, in the same period; which is an astonishing produce from a district, the greatest part of which is far from being naturally of a good soil, and affords a convincing demonstration of the extent to which Britain is capable of being improved, providing the legal disabilities, which presently obstruct it, were removed.

About *Lynn*, the soil is of a heavy nature, but rich, and carrying good crops, and, from the lowness of situation, numerous ditches, or open drains, are found necessary for carrying off the superfluous water. The hundred of *Marshland*, which lies to the Westward of *Lynn*, is composed of a rich water-fat soil, (probably, a deposit, in former times, from the sea), but stands much in need of drainage.

Before leaving this celebrated county, which well deserves the attentive examination of every agriculturist, it is proper to notice the practice, recently introduced, of *dibbling* wheat. We did not find it to be upon the increase; and, from an examination of several fields managed in this way, it did not appear that the crops would be superior to those sown in the broad-cast manner. One of the chief advantages, viz. that of hoeing, was generally neglected; and the saving of seed, in the first instance, is compensated by the extra expence attending the process.

From *Lynn*, we came to *Wisbeach* in *Cambridgeshire*.—The whole of the land is of a marshy description, carrying fine grass, and also corn, where it was tolerably drained. On entering *Lincolnshire*, we found a continuation of the same rich soil; and, about *Long Sutton*, the natural quality is superexcellent. Travelling on by *Holbeach*, *Spalding*, and *Sleaford*, we viewed the finest pastures imaginable; and, where the plough was used, which was but sparingly, the crops were equally good, unless in those places where the Spring floods had occasioned the seed-time to be too long delayed. There is an extent of ground, nearly fifty miles in length, of this kind of land, before we reached the dry upper parts of this county, through which the roads are uniformly made with sand, digged from the subsoil of the adjacent fields; and this mode of repairing them, occasions a heavy expence to the traveller. Perhaps, no tract in the kingdom is capable of supporting a greater stock, during the Summer months, than the one just examined.

Before our arrival at *Lincoln*, we passed through many barren heaths, and numerous rabbit-warrens. *Lincoln* is a large city, and the cathedral an elegant piece of architecture. We did not hear of any manufactures being carried on here; though the raw material being more plentiful in this county, than in any other part of the kingdom, led us to think the woollen manufacture might be successfully introduced.

Leaving *Lincoln*, we found an extensive common-field, all in fallow, at the very gates of the city, which appeared to have got two ploughings, and was carrying a strong crop of thistles. Numerous flocks of sheep were folded upon this fallow-field, which certainly gave fine encouragement for the possessors to clean the ground. It is no wonder, that so many English writers declaim against fallow; for, under such management, as practised upon the field before us, the loss of a year's rent, and value of the labour, would scarcely be compensated by the superior value of next year's crop.

But

But of all the fallow fields which came under our observation, one, a short way from *Brigg*, was under the most wretched management. It was an extensive common field, of good soil, but very foul, and had received only a single ploughing, which was given by cleaving down the high broad ridges. To our utter surprize, though in the first week of July, the possessors were covering the quick weeds and thistles with dung; they had not so much as given it a harrowing; but with their three and four-horse teams, were driving out the manure in all directions. We held up our hands in amazement at such barbarous conduct: and one of my friends was for clearing the country of such *Goths*, and transporting them at once to Botany Bay, where indeed many have gone, who were nuisances to their country in an inferior degree.

The upper parts of Lincoln are crowded with these common fields, and they in reality entail shame upon its husbandry. The improvements made upon those lately divided, give the most convincing proof of the benefit attending the laying them in severalty. At Barton upon the Humber, where a large common field was lately divided, we saw as well managed land as could be desired. A Mr Graburn now possesses considerable portions of this field, which are well inclosed, carrying crops of excellent quality, clean, and in the most perfect order. It is a real pleasure to examine such management.

Crossing the Humber from Barton, we landed at Hull, which is a populous town, and carrying on an extensive trade to the Baltic, and other parts. From this place, we came up to the East Riding, by Beverly, to York, and were rather disappointed with the country through which we passed. About Hull, the land is chiefly in grass, as is indeed a considerable proportion all the way to York. Some of the land is of a dry moorish kind, carrying heath and gorse; and at the gates of York we viewed a common field of fine dry deep loam, which was in a condition not much superior to those already mentioned.

As the remainder of our route homeward was through the tract of country described in the first of these letters, it is unnecessary to trouble you with our progress northward; and shall conclude with the following observations:—That, wherever we have found common fields, the husbandry was uniformly bad, though in different degrees: That, wherever the land was possessed without a lease, its condition was

good or bad, according to the confidence reposed in the proprietor: and, where held under that security, the management was generally good. In the grazing line, the English farmers may be considered as superior to their Scottish brethren, though the latter will not lose in comparison, wherever the plough is introduced.

I am, yours, &c.

N.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Abolition of Tithes.

GENTLEMEN,

THIS subject having already attracted considerable notice in some of your preceding Numbers, I trust to the impartiality you profess, that what I have now to remark, although perhaps differing in some degree from your own sentiments, may, nevertheless, find a place in the Farmer's Magazine, which seems to be, of all other periodical works, the fittest for discussing this important question.

Whether tithes should be abolished or not, may perhaps best appear from inquiring how they affect the interest of the parties concerned, who may be arranged into the following classes: *First*, The Proprietors of the ground which is liable in tithe: *Second*, The Clergy, whose revenue is at present payable from it: *Third*, The Farmers or Tenants, from whose crop and cattle the tithe is taken: *Lastly*, The Community at large.

First, then, as to the PROPRIETORS. To me it appears, that their interest is strongly affected by the tithe, and that they are particularly interested to get it abolished, because they do not get a fair rent for their land, or as much as it would otherwise bring, (exclusive of an equivalent to the clergy), were there to be no tithe drawn at all. My idea is, that were a farm, including the tithe, to be intrinsically worth 130l. a-year, and that the tithe itself amounts to 30l.; yet the proprietor, instead of getting 90l. of rent, as he ought, for such a farm, would not get more than 80l., and not even so much; for, as the drawing of tithe in kind is always a harassing circumstance, the tenant, in making his bargain, will
have,

have, not merely a deduction from the full value of the farm, equal to the amount of the tithe, but also an additional allowance for the trouble and inconvenience he is put to, from the drawing of it in kind.

Second, With respect to the CLERGY, they are of all parties the most interested to see the tithe abolished; for, of all modes of receiving their salaries, the most disagreeable and vexatious must be that of gathering in the tithe in kind, the very quantity being altogether undefined, and continually changing from one species of crop, or of stock, to another; thus placing them in a situation in which they have hardly any alternative, but that of perpetually quarrelling with their flocks, or of submitting to be cheated by them out of their lawful revenue.

Third, With regard to the FARMERS or TENANTS, I should imagine, that these are rather more interested to retain the tithe, than to see it abolished, notwithstanding the outcry they make on the subject; for, if it be true, that the proprietor does not receive the full value of his lands, (exclusive of the allowance to the clergy on account of the tithe, which I should think is indisputable), it must follow, that what is thus lost to him, will go into the pockets of his tenants. It is the exacting of the tithe in kind, which I take to be the chief cause, that, in England, the lands are not only lower rented than in Scotland, in proportion to their real value and produce, but likewise, as a natural consequence of this, that the English tenantry are, in general, in more easy circumstances than the Scottish tenantry are.

Lastly, So far as regards the COMMUNITY at large. It has been urged vehemently, that tithe has an effect to prevent the improvement of waste lands. If such were really the case, tithe would, no doubt, in this instance, be prejudicial to the public interest. I am, however, inclined to suspect, that the clamour on this point is altogether without foundation. Let us suppose land, in a waste or unimproved state, feeding geese, sheep, or milch cows, (the usual stock on an English common), and to produce to the value of 5s. the acre yearly, of which the titheman draws 6d. leaving 4s. 6d. to the occupiers of the soil. Now, supposing this land improveable, to the extent of yielding yearly 5l. the acre, of which 10s. would go for tithe—could the drawing of this tithe be a rational excuse for not improving this land, when, instead of 4s. 6d. the acre, the cultivator would have 4l. 10s. to himself?

In like manner, I hold it to be a mere excuse for indolence, to say that lands, already partially improved, cannot be further

ther meliorated, from the dread of increasing the tithe; for whatever addition is, in this manner, made to the income of the Church, the improver himself adds nine times the sum to his own. That lands highly adapted for alternate cropping, in pasture and in tillage, may be kept perpetually (to their loss) in the former state, is, in England, I believe, the fact, entirely on account of the tithe, which is more moderate in the one case than in the other; but, still, whatever bad consequences may ensue to the community from this propensity in the husbandmen, should not so much be imputed to the operation of the tithe, as to their obstinate mulishness, who, rather than the *parson* should derive any benefit from the *tenth* part of the improved produce, will deprive themselves of all the other *nine*!

I know, however, that much may be said on the other side of this question, and not a little declamation may be used against the clergy themselves, for "gathering where they did not scatter, and reaping where they did not sow." But, leaving speculative opinion entirely to itself, I would fain know the fact. There are many estates and farms in England, and in every county in it, which are *tithe-free*. Now, what I would wish to know, is this, Are these tithe-free lands universally, or even generally, better cultivated under every other like circumstance, but liable in tithe? This fact, as it may turn out, should go farther towards conviction, than a whole volume of argument.

That tithes were abolished as completely in England as in Scotland, and the revenue of the English clergy (without diminution) were to be collected in as unexceptionable a manner as amongst ourselves, are circumstances, in my mind, very desirable. But the English farmer is not the party most concerned in the abolishing of tithe. Let him rather try to abolish some of his own practices, that are as much repugnant to good husbandry, and more within his reach. Let him abolish his own English fallow, (land left to *rest itself* both from crop and tillage). Let him abolish his broadcast; 5 *tons* the acre turnip; the plough with 5 horses in a line; and *oke* the plough with oxen 8, and stout men 3; and (if one durst mention it) his notable practice of burning his hay, which this season has required no little dexterity to accomplish. But, alas! why should I advise him to all this? The tithe, already a grievous burden, being through these means *doubled*, would become insufferable!

A SCOTISH FARMER.

Mid-Lotlian, September 5. 1800.

=====

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

THOUGH the greatest part of the following letter, from a servant of the Earl of Stair, written a short time after the battle of Dettingen, to his friend in Ayrshire, may appear rather incongruous with the general design of your publication; yet, as it was written by a farmer's son to a farmer, and contains some information relative to the state of husbandry in Germany, I hope it will procure a place in your next Number. I am,

Your's, &c.

N.

Hanau, July 20. N. S. 1743.

DEAR SIR,

I HAD the favour of your letter of the 5th April, a few days before the battle of Dettingen. I thought to have written to you by the messenger that carried the news to England; but I had neither time nor conveniency till it was too late. As you will have, long before this time, got the true relation of that affair in the newspapers, I shall not take up your time with any accounts of it, farther than adding the abstract of the whole killed and wounded on our side, which, I believe, you will scarce have got till this comes to hand.

British men, killed and wounded,	821	Horses,	482
Hanoverians, ditto, - - -	553	- -	71
Austrians, - - - - -	977	- -	50
	2351		603

The day after the battle, we marched to this place, where we continue. It belongs to the Prince of Hesse, and lies on the river Mayne. The army is encamped between this and Frankfort. The French encamped for a fortnight on the other side of the river. About a week ago, they marched off, and left us this part of the country to ourselves. We hear, they have crossed the Rhine at Worms. The Marshal Broglio has likewise left Bavaria with his army, and is crossing the Rhine about the same place: some say, they are going back to their own frontiers. Prince Charles is following Broglio at the heels with his army; and, if your old master had

got his will, he would likewise have followed the Duke de Noailles with his army, and, I believe, would have given a very good account of them. But our Ministry are not blood-thirsty: most people here wish they had stayed at home*. The Emperor has declared himself neuter, and a peace is negotiating between him and the Queen of Hungary. The French are doing all they can to hinder it. The French minister at Frankfort assures the Emperor, that France will never lay down her arms till she see him right; but it is every body's opinion, he will trust himself no longer in their hands. The 20,000 Dutch are on their march to join this army; the last troops sent from Britain are likewise on their march from Flanders, and expected here soon; it will be a fine army when they are all together.—So much for news.

You flatter me with coming home a great man;—it is what I don't at all expect, and have as little thought of soliciting any thing from his Lordship. Since I have been refused advancement in his own family, I can expect nothing after that. M. — and some more French rogues have the whole management of the family, under Captain D., whom his Lordship has never yet been able to provide for; by which you may see commissions are not so easily got. We had another French rogue for our master of horse; but, on the day of the King's accession to the throne, Lord Lowdon and he had some words about his managing of my Lord's horses. That afternoon, the whole army fired three rounds on account of the day; and, after dinner, the Marshal went, with all his attendants, to the camp, where his Majesty was. Just as we were got out of the town, the master of horse, who rode foremost, and Lord Lowdon next him, turned about to his Lordship, drew a pistol, and desired his Lordship to draw; which he refused, as being below his dignity to fight with a servant of my Lord Stair's; upon which the rogue let fly at, but, by good luck, missed his Lordship and all the company. He thought to get off to the French camp, but was soon dismounted, and put in irons. He was set at liberty on the morning of the battle, with orders never to be seen about the family.—Your old acquaintance Cornet — of my Lord's regiment, has got his place; so that nothing can happen that can push your friend D. higher than a valet-de-chambre. I wish with all my heart I had stayed
at

* The Earl of Crarville, Secretary of State, was then with the King.

at home at the weaver trade. Pray let me hear from you as oft as you please, with all the shire of Ayr news, and how affairs go on in Galloway; for I correspond with nobody in that country. The knight of Lochnaw and his men behaved very gallantly;—poor Sandy Maxwell was killed on the spot. I do not know how G—— behaved, but he came off scart free; and young French was in the heat of the fire, and was not hurt. My kind service to Mrs A——, and all your family; to Mr S——, if you happen to see him; and to honest A——, and all friends at Lowdon. Their Lord is made one of the King's aid-de-camps since the battle. On that day he acted as one of my Lord Stair's.

As I am writing to a farmer, which I had almost forgot, I must not end my letter without saying something about the manner of labouring here. All I have seen of Germany is an exceeding fine country; the mountains are covered with wood,—the plains with all sorts of excellent grain and fruit-trees. The grain they deal most in is rye and wheat, which they are now cutting down; but their oats and barley are very late. They have likewise a great deal of rape-feed and Indian corn, in great perfection. The soil is a light sand, and consequently easily laboured. Their plough is a very light thing with one stilt, and two little wheels which support the end of the beam. It is generally drawn by one ox; some use two, who draw by the horns, which is certainly a far better way than ours. One man holds and drives the plough, and I have counted twenty of them in one field. By shifting the mould-board, they go up and down the same side.

We have destroyed as much corn this Summer, as would raise a famine with you, were the like to happen. We sometimes camped in fields of corn as long as between the
and Edinburgh, that would have covered the highest man in the army;—some they cut down to the horses, and the rest they trod under foot, which gave me a great deal of pain, not being used to that way. For these two weeks past, we have had a good deal of rain, and the weather is pretty cool.

When you are so good as to write to me, put your letter under cover to Andrew Mitchell, Esq. at the Marquis Tweedale's office, Whitehall, London.—I am, most sincerely,
Yours, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

WHOEVER has been in the habits of conversing with practical farmers, must have observed the universal complaint, that few farms can produce a sufficiency of manure to go over the whole of their fallow-lands. This opinion is so generally adopted, that it is probable, nine tenths of the farmers of this kingdom are persuaded that the evil is without a remedy. I therefore beg leave to offer the following hints to their consideration; being convinced, from experience, that, wherever they are adopted, and properly pursued, the most beneficial effects will ensue.

A farmer may obtain an extra supply of manure, by being situated near the sea-coast, and procuring sea-ware, &c. ; or, by being within a moderate distance of a large town, where he may purchase manure of different kinds—as stable dung, nightsoil, scrapings of streets, foot, bones, tanners bark, &c. ; but a cultivator, not blessed with such local advantages, must look out for other resources.

The first that occurs, is, watered meadows; which not only produce hay, without requiring any return of manure, but add greatly to the fertility of the adjoining fields, by the stock being carried into them every night, that are employed to consume the Spring grass and aftermaths. And it is not one of the least advantages that the manure obtained in this manner, for laying upon the arable grounds, accumulates, somewhat like money put out to compound interest; for, whatever increase there is in the quantity of straw, hay, or green crops, upon the uplands, by the increased manure from the watered meadows, will also increase the quantity of dung in the same proportion.

But it unfortunately happens, that this most advantageous species of improvement can only be adopted in particular situations where water can be had, and that of a proper quality; for there are some waters so much injured by mineral particles, as to be highly inimical to vegetation: this will be more particularly the case, in the vicinity of many species of coal-mines, where the waters are strongly impregnated with vitriolic acid: But such waters are confined to particular districts, and are small, in comparison with those of a more
fertilizing

fertilizing quality. Water from calcareous soils is probably the most proper for vegetation; but this is not absolutely necessary; for the Cheviot mountains, and hills towards the heads of Tweed and Teviot, are destitute of chalk or limestone, yet the waters issuing from them are highly fertilizing; and there is no doubt, that innumerable streams are now running waste, in many parts of the island, which might be applied with the greatest advantage, and be a never-failing source for increasing the quantity of manure for the arable lands.

The quantity of manure might also be very much augmented, by substituting drilled leguminous crops instead of naked fallows, upon lands adapted to the growth of those species of grain. Every one allows, that the quantity of straw from a good crop of beans, will make a much greater accumulation of manure, than they would have had, if the same land had been naked fallow; but then they will contend, that the succeeding crop of wheat will not be so good, nor the land so clean, nor so well prepared, as if it had been naked fallow.—This objection is a very natural one from people who have been accustomed to fallow every third year, and have got, from habit, a prejudice in its favour: with such people, nothing but experiment, or ocular proof, can be expected to make any change of sentiment. I would therefore beg leave to recommend, that fair experiments be made; and, if properly conducted, I believe they will find their crops of wheat equally good as after naked fallow, and their lands equally clean.

But I must particularly observe, that when I speak of drilled beans, it is not such as are drilled at twelve or eighteen inches intervals, and hand-hoed, but at thirty inches intervals, and horse-hoed; being fully convinced, that upon strong lands, and in dry Summers, hand-hoeing would be little more than skimming along the surface, while a proper formed horse-hoe would penetrate, and completely remove the soil, from four to five inches deep, and much more effectually eradicate weeds, than it is in the power of hand-hoes alone to accomplish.

Another source of raising manure, which may be practised upon every farm, and in all situations, is that of giving cut clover, vetches, or tares, to horses, in the house, or sheds, through the Summer-months; by this means, a considerable quantity of excellent manure is made, which would be in a great measure, if not totally, lost, were the horses suffered to depasture

depaſture at large ; the dung in the Summer months being moſtly conſumed by insects. This beneficial practice is alſo attended with other advantages ; a leſs quantity of land will maintain the ſame number, and the horſes thrive much better, as they ſooner get themſelves filled, and, of courſe, have more time to ſleep and reſt ; and, by being in the ſhade, are freed from the plague and teazing of flies.

This practice might, in ſome caſes, be alſo extended to cattle. In many parts of Germany, their oxen are kept conſtantly in the houſe, or ſheds, and thrive equally well with thoſe depaſturing at large.

A conſiderable loſs of manure ariſes from turning cattle out of the fold-yard, in Winter, to water or graze : it is a very miſtaken practice, and tends materially to leſſen the quantity, as well as quality, of the fold-yard manure, by the loſs of dung and urine, and treading, while they are thus out, in many places, for ſeveral hours a-day. Every fold-yard, if poſſible, ſhould have water brought to it, and the cattle never ſuffered to go out.

There are many diſtricts, where the above practices are unknown or totally neglected : to ſuch, I hope, theſe few hints may be of uſe. And am, &c.

C. —.

Northumberland, Auguſt 25.



TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

THE very great damage occasioned by the ravages of the grub, to the wheat and oat crops, sown upon clover lea in the Spring of this year, made many people desirous of knowing the species of fly, from which this destructive reptile originated. From those that were opened in April and May, the embryo appeared to be of the beetle tribe; but, though this seemed probable, yet nothing certain could be determined from the appearance in so early a stage of its existence. In order, therefore, to ascertain the matter, I put some of them into a box with earth, and fed them daily with blades of wheat and oats, of which they ate considerable quantities, for five or six weeks, when they got into a dormant state, and continued so till the last week in July, at which period

period the flies extricated themselves from the husk, and, to my great surprize, were of the *Diptera Class*, and of that species known in the North by the names of *Jenny Spinners*, or *Long-legged Taylors*, &c. &c.

The drawing, which I send you, (Fig. 2.) is made from one supposed to be a female, with a truncated tail. Those which I conjecture to be males, have a sharp-pointed tail like a sting.

I also send a drawing of the grub, (Fig. 1.) of a medium natural size; they were from an inch to an inch and half long, of a brown greyish colour, having two streaks of a lighter colour passing from the neck to the tail, about half way between the back and sides.

Their depredations were mostly performed in the night, when they came out of their holes, and fed upon the green blades of corn; and, not content with what they devoured on the surface, they frequently dragged their food into their holes along with them, to allay the cravings of their voracious appetites in the day time.

In several places, they were so very numerous, that the surface of the ground was comparatively as full of holes as a riddle, and ten or twelve of them would have turned up by a single scrape with one's foot.

It may be proper to remark, that their destructive effects were principally upon strong lands and moist soils: Sandy dry soils were perfectly free from them. A singular instance of this happened in a field of my own. A strip of dry loam, about forty yards wide, run diagonally across the field, upon which the oats were not in the least injured, nor any grubs to be found; but, upon each side of this strip, the soil was a strong marly clay loam. Here the crop was in a manner totally destroyed, as far as this kind of soil reached; and this with so much precision, that, in the latter end of May, those parts of the field looked as brown as a bare fallow, while the crop, upon the dry loam, flourished with the most luxuriant verdure. Many fields of wheat were so completely destroyed, as to be obliged to be ploughed up for fallow. Some were sown with barley, which were also destroyed. The loss by the ravages of this species of grub, was, this year, almost incalculable, and such as no farmer living ever before experienced. I hope they will never suffer a similar calamity. And am, &c.

J. B.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

IF the following observations on the practice of paring and carrying off the surface, for inclosing, and covering cottages, and other purposes, so common in the highlands and uplands of Scotland, appear worthy of notice, they may be inserted in your next number.

Few practices are productive of equal mischief, or call more loudly for redress, than that of paring and carrying away the surface, a practice almost universal in the highlands and uplands of Scotland, whole districts being by that means rendered, in a great measure, useless for ever after, either for tillage or pasture. In every situation, however great its natural advantages may be, such waste and robbery of the soil induces a degree of poverty that can hardly be made up by the labour of ages. Accordingly, in England, where paring and burning has been practised to a very great extent, the soil has, in many instances, been reduced to a *caput mortuum*, notwithstanding the plentiful use of the best manures afterwards; an evil that has now become so apparent, and is so well understood, that the practice is interdicted by many proprietors, under very severe penalties.

Paring and burning, however pernicious it may be, (and upon thin soils it is ruinous), falls greatly short of the mischief done in the north of Scotland. In the one case, a part, at least, of the useful principles contained in the turf, is returned to the soil, by which means several good crops are obtained: in the other, the whole surface is carried off, and lost to the soil for ever.

Those who are able to estimate the extent of the injury that is thus produced, will view, with pain and disgust, the immense tracts that have been robbed of their surface, throughout a great part of the north of Scotland, where, in many places, only a few solitary tufts remain, to inform posterity, that these wastes, now so naked and desolate, were once covered with herbage.

Were this deterioration of the surface a matter of necessity, an excuse for the practice would arise out of that necessity. Even as it is, were the soil, of which the surface is thus deprived, afterwards applied to any useful purpose, something might be said in favour of the practice. No
such

such alleviation can, however, be produced. When used for cottages, the wretched hovels, constructed with seal, exhibit an appearance impressivè of nothing but misery in the extreme; nor is their interior more comfortable. Perhaps, none, but those who have seen these cottages, would credit the description: taken altogether, they convey an idea of dirt and wretchedness, little short of what is met with in the caves and earthen hovels of the Esquimeaux. The walls abound with insects and vermin of every description; and, by continually crumbling down, keep every part of the hut covered with dust, and give it a most intolerable smell. The appearance, by fire or candle-light, is of the gloomiest nature, and such as it is impossible to associate a single idea of comfort with. This is the case, only where the walls are made of turf: When the roof is constructed of the same materials, the matter is still worse; for, along with the circumstance of its being unable to defend even a slight shower, the inhabitants are annoyed with vermin, and bits of the decayed soil, perpetually dropping down upon their persons, their beds, and even into their victuals. It will, no doubt, be observed, that custom has reconciled them to such habitations, and that they do not feel these uncomfortable circumstances in the same degree with people who have lived in cleaner houses from their infancy. Good and bad are, no doubt, comparative ideas; and the mind, accustomed only to a habitation capable of affording shelter from the inclemency of the weather, does not, without having seen something better, carry its ideas beyond it. This, certainly, is the case with the inhabitants of the north, in their early years, and while they remain in their native districts; but, when they grow up in life, and visit other parts, they appear fully sensible of the comfort of clean warm habitations, and, on many occasions, express a lively regret at the comparison between their own wretched hovels, and the clean comfortable cottages met with in the south.

Where the happiness and *comfort* of that numerous and valuable class of men are considered as objects worth attending to, (and humanity, as well as sound policy, require that they should have every possible pain bestowed upon them), the circumstances mentioned cannot fail seriously to impress every humane proprietor. To such, the pleasures arising from improving the condition of so many of their fellow-creatures, will be a rich gratification; but, when that is coupled with motives of a different nature, immediately connected with their

their own and the public interest, no additional stimulus seems necessary.

A hut or hovel, such as has been described, is erected with greater labour, and perhaps expence, than would be required to build one with stone, and cover it with thatch or tiles. A great deal of soil, that might be rendered productive, is deprived of its surface, and either entirely destroyed, or very much injured, in procuring the materials. After all, the habitation is an uncomfortable one, and does not last a tenth part of the time that one constructed of stone and lime usually does.

The case is the same with fences made with this material. These, in their most perfect state, never look well, and are, for the most part, found very unequal to the purposes of confining either sheep or cattle, or even of protecting corn crops. They are affected by every circumstance of the weather: moisture easily penetrates them; frost, in that state, swells, bursts, and throws them down. A Summer sun acting upon an earthen fence, that has been thus swoln, and rendered loose by frost, parches, and causes it to moulder down. Its perpendicular surface is, by that means, lost; the fence becomes a sloping bank, and must then be either completely rebuilt, or the inclosure abandoned.

In the Highlands, and indeed over the greatest part of the north, there are at present many thousand fences of this description, that are now nothing but banks and mounds of earth; which, though they are no longer useful as fences, and though the fields from whence they were originally taken, continue to reproach the occupier, no attempt is made to render them useful, or repair the injury done, by carrying them off. The same blameable neglect prevails in regard to the ruins of their houses, it being by no means an uncommon thing to see the roofs fallen in, and the decayed walls standing, of whole groups of cottages, which, with a small degree of labour, might be converted into excellent manure; it being now well ascertained, that when turf has been used even for fences, and remained in that state for a year, or even for a few months, it is found to have acquired fertilizing properties, partly by the decay of the vegetable substances it originally contained, and partly by absorption from the atmosphere. Witness the good effects of fold-dikes, when used in that way.

When turf is used for constructing the walls of cottages, stables, &c. it is found to have acquired very high fertilizing powers,

powers, being richly impregnated with animal effluvia, and other matters. With this knowledge of its valuable properties, it must appear strange to see the materials of so many decayed fences, and ruinous cottages, lying in heaps all over the north, which might be rendered so valuable with little trouble, and almost without expence.

To convey some idea of the nature and extent of the mischief arising from this practice, it is only necessary to notice the component part of the soil thus taken away. In all situations where land has been long undisturbed by the plough, the surface is found to consist chiefly of vegetable earth, arising from the annual decay of the leaves and other parts of the plants growing upon it: These falling down and rotting yearly, in process of time form a soil, whose principal constituent part is vegetable earth, and which, under proper management, is the best of all soils. If this is admitted, it must follow, that, upon waste lands, or even lands of a better quality, the preservation of the sod is an object of the first importance; and that every attempt to *pare, burn, or carry it away*, for whatever purpose, ought to be strictly prohibited. In many instances, the mischief already done upon thin soils is such, as must for ever prevent their improvement.

Even in districts where agriculture is pretty well understood, and where improvements have made considerable progress, it is no uncommon circumstance to see the proprietor or occupier carrying away the surface of the field he is inclosing, to build the dikes, leaving little behind, in many places, but gravel or rock. Were the mischief arising from this practice out of the question, one would be tempted to smile at the absurdity of lavishing so much trouble and expence in erecting a temporary fence to inclose fields, the future improvement of which is, in a great measure, if not entirely, defeated, by paring and carrying off the most valuable part of the soil. What adds to the folly of the practice is, that every purpose for which turf is now used in these districts, may be answered much better by other materials that can be had upon the spot. Stones are every where plenty, and may be applied, with advantage, to the building of cottages and dikes; and, where straw is scarce for making the roofs, heath may be obtained in abundance, without any other expence than the trouble of cutting, which, when properly laid on, forms a very comfortable and lasting covering, both for cottages and stables. In this place, it is impossible to pass over a circumstance, which almost exceeds belief, viz. that in most cases,

cases, where such inclosures are making, and where many people are employed in paring the surface, immense quantities of stones are left in the field; the removal of which would answer the double purpose, of forming a lasting and useful fence, and clear the land of a nuisance, which, in all cases, ought to precede any attempt to bring it under the plough. Another practice remains to be noticed; that of paring their best pastures, and mixing the turf with their dung, to make what is called seal-muck. The numerous heaps of earth formed by decayed cottages and fences, have already been noticed; indeed, there is scarce a farm where some of them are not to be met with: the valuable qualities of turf and clay, after having been used for such purposes, have also been noticed: common sense, it might be supposed, would naturally point out earth of that kind as preferable to fresh sod; yet, strange to tell, in place of being applied to a purpose for which it is so well adapted, it is left in a neglected state, and an additional proportion of land deprived of its surface, to answer the same end.

This being in some degree a new subject, the strictures upon the practice will no doubt be unfavourably received by the tenants and cottagers in the districts where it is followed. Men, wedded to particular customs, are with difficulty brought to think, that they and their ancestors have so long followed a practice at once hurtful to the country and themselves: in this, as in many other instances, the united powers of habit and education form an obstacle too powerful for reason to remove, and which is proof even against the most convincing experiments. These observations, however, are not addressed to minds of that description: upon the enlightened proprietors in the North, they will have all the effect that could be wished: and, though they may not, with all their knowledge, be able to reason their tenants out of their prejudices, they have it fully in their power to alter their practice; which, it is hoped, they will be able to do at no distant period.

A. Z,

Fig. 1.

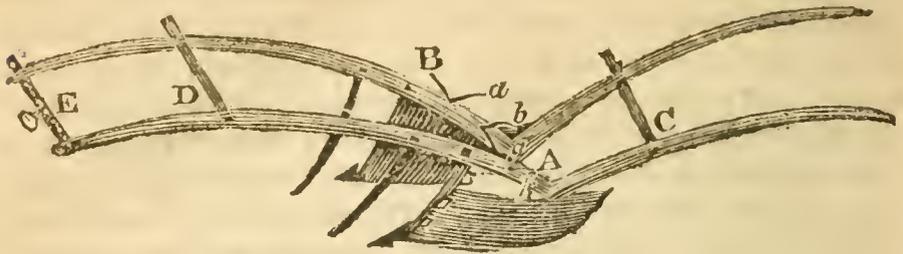


Fig. 2.

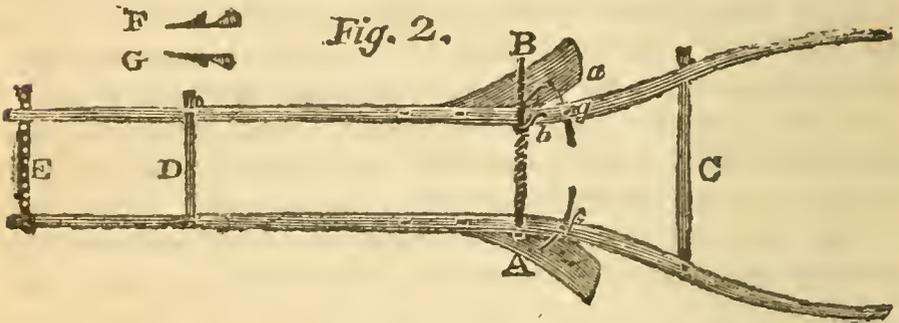


Fig. 3.

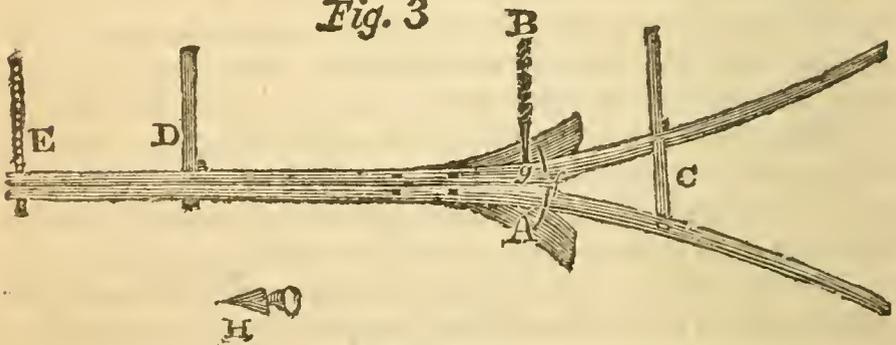
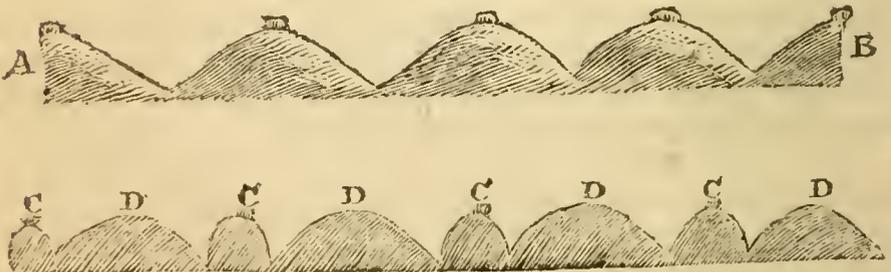


Fig. 4.



Scale of Feet.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Description of a Plough for Cleaning Turnips.

GENTLEMEN,

I KNOW not whether it falls within your plan, to give plates of useful instruments in agriculture, or of such as are not generally known. To disseminate the knowledge and use of improved utensils, must conduce very much to the progress and advancement of agriculture; but of many it is not easy to give such accurate descriptions as can be perfectly understood, without the aid of drawings. There is a plough in *pretty general* use in Roxburghshire, in the culture of turnips; a description and drawing of which I have not seen in any agricultural book which has fallen in my way. In hopes that it might be agreeable to your plan to insert it, I have attempted the following description and sketch of it. The advantage is well understood, of going round each drill of turnips with the plough, and *taking the earth from* the turnips, previous to their being hand-hoed. This plough is constructed to *take the earth* from both sides of the drill at once, and also to ridge or *set up* the turnips again.

It consists of two ploughs, of a smaller size than the common plough, each of them without the small stilt or handle, but joined together with bars of wood and of iron; by means of which, the two ploughs can be fixed at any required distance from each other, when used in *taking the earth from* turnips; and when the two are brought close together, they then form a common double mould-board plough, for going betwixt the drills, and ridging them up.

Fig. 1. is a view of the plough, when ready for taking the earth from turnips, as it appears to a person standing on one side, and towards its front. Each beam has its separate coulter and feathered sock. AB is a pretty strong rod of iron, formed into a screw, in the greatest part of its length; which, being firmly fixed to the left-hand beam at A, passes through the other beam, to which it is fixed by means of two nuts with handles, which, screwed firm on each side of this beam, fixes the two at any required distance. C and D are

two bars of wood, (sometimes of iron), fixed in like manner to the left-hand beam, and passing through the other, where they are fixed by means of wedges. E is a bar of iron, also passing through both beams, with holes in it for the purpose of fixing the bridle by which the plough is drawn. The mould-boards are fixed to the sheaths by hinges, and are placed at any required width, by means of two iron pins, *f* and *g*; which, going down through the beams, pass through holes in a thin bar of iron fixed to the inside of each mould-board. F and G are the two feathered socks. Fig. 2. is a view of the same, as seen from above; in which, the way of altering the mould-board is more distinctly perceived. The plough, when used in this way, is drawn by two horses. Fig. 3. is a view of it from above, when the two beams are brought close together, and they form one double mould-board plough; the coulter is then taken out, the two socks taken off, and the sock H put upon the points of both the sheaths, which cleans the bottom of the furrow betwixt the drills, and keeps the two sheaths firmly together. It is now drawn by one horse.

Fig. 4. is a rude sketch of a section of the drilled turnips; A B their form before the turnips are cleaned.

CCCC their form when the earth is taken from them with this plough.

DDDD is the soil taken from each side of the drill, and formed by this plough into a ridge in the bottom of the former furrow. When placed together, for setting up the turnips, it goes in the middle of this small ridge, and lays back the soil to the roots of the turnips.

When the common plough was used, it went first along the one side of the drill, and then the other; and, being too wide, it laid the soil too much upon the side of the drill.—It will be seen at once, that this plough does double the work of the common one.

I understand they are sometimes made with other two moveable mould-boards, which hang on by hooks, when the two beams are separated, as in fig. 1. and 2.; and it then will also set up two drills at once: but, in this case, they require two horses, and are made stronger.

They are also often strengthened by a bar of iron going diagonally from the hinder end of one beam to the fore part of the other, and which is fixed by a screw and two nuts, as the rod A B, in fig. 1. and 2. I am, &c.

S. E.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

I HAVE perused with satisfaction, and not without instruction, the three first Numbers of your Magazine ; which, if it continues to be conducted upon the principles laid down in the introduction, promises to be useful to the agricultural interests of Britain. No part of the work is entitled to more credit, or appears to be drawn up with more judgement, than the last Quarterly Reports of the state of our agriculture: these undoubtedly are derived from the best sources, and convey a faithful detail of the state of the several districts mentioned. I say this, not from the perusal of your correct and accurate account, but from ocular evidence in many cases, and the best information in others.

It is, therefore, with a mixture of indignation and disgust, that I have lately perused the paragraphs inserted in many of our newspapers respecting the state of the crops, and the future prospects of the country with regard to provisions. At a pretty advanced period of the present year, vegetation was so backward, that farmers of the best judgement did not expect the harvest would be earlier than last year ; and certainly nothing short of the uncommon and long continued heat and dry weather, during the months of July and August, could have shortened the period of our expectation, or altered the prospects of the country. About four weeks ago, owing to the early part of the crop having whitened (it would be absurd to say ripened) prematurely, and the rest advancing rapidly to the same state, there was, till the late rains, every appearance of an early and a general harvest. At that time, the newspapers, without attending to the circumstances that had gone before, inquired, " what had become of the predictions of those who foretold that the harvest would be a late one, and the grain ripened under all the disadvantages of a declining sun ?" Had the Editor of the paper, or the Author of the paragraph, looked back at the period at which the observation was made, and calculated the probable chances in favour of its fulfilment, the inquiry would have appeared unnecessary : Experience, dearly earned, indeed, to the country, affords a distressing proof, how far even a week of bad weather may alter the most flattering prospects ; for, though we can now reckon five weeks

since the commencement of our harvest, four fifths of the crop remains uncut, and so much altered, both in quality and appearance, as to be incredible to any but those who have been daily and attentive observers of the injury.

In another paper, notice is taken of the account given of the wheat crop, which is stated as not exceeding two thirds of an average crop; a statement, says the editor, given for the express purpose of aiding Forestallers, Regraters, &c. Were such observations only to find their way into the best-informed circles, no mischief would arise from them; as good sense, aided by better knowledge, would form an antidote to the poison: But when it is considered what a wide range newspapers now take, and that they are perused even by the lowest orders of the community, who, from their ignorance, and the want of other information, are unable to detect the fallacy of the statements held out, and whose resentments are quickened by their necessities; the propagation of such statements ought not to be pardoned, upon the plea of misinformation, or defect of intellect, but should be viewed as offences against the peace of society, and punished accordingly. Every village has its weaver, cobbler, or tailor, who reads the newspapers to an ignorant audience, and explains the different paragraphs, in a manner calculated to produce the most baneful effects.

To what is the spirit of discontent, unfortunately so prevalent in many parts of the island, on account of the scarcity and high price of provisions, owing? The answer is short—to newspaper misrepresentation. My situation in life affords me more than common opportunities of intercourse with the lower orders of the community; amongst whom, especially in towns, I have beheld the most complicated scenes of misery and distress, for many months past, notwithstanding the unequalled exertions that have been made by the superior ranks to relieve them. Upon many of these occasions, where I have met with wretches destitute of the most common necessaries, my compassion has given way to a degree of indignation, at observing, that, in consequence of the misrepresentations daily propagated through the medium of newspapers, these poor suffering creatures have been taught to believe, that a calamity, owing entirely to a severe dispensation of Providence, was occasioned by the avarice of farmers and forestallers. Upon such occasions, I have attempted to destroy the idea, by calling
to

to their remembrance the long series of distressing weather that had occasioned the deficiency of the crop. The uniform answer was, Look at the newspapers; see what fine crops they have in England, and elsewhere; and hear what is said about forestallers. It is in vain that I tell them, the authors of the paragraphs they lay so much stress upon, are, many of them, so grossly ignorant of country affairs, as to be unable to distinguish a horse from an ass, or a sheep from a hog; and that the editors, in order to fill up a corner, take any thing that is offered them; and, rather than want materials, will insert an old ballad, or an extract from Satan's Invisible World, or Pilgrim's Progress. My arguments, however, are for the most part unavailing, and very unequal to the task of combating the strong plea of hunger, sharpened by false and poisonous statements.

Last year, a season that will long be memorable in the annals of our history, at the commencement of the harvest, the newspapers announced a plentiful crop, and held out the most flattering prospects of cheap and wholesome Winter food. The squalid looks, and emaciated bodies, of thousands of half-famished human beings, by destroying the credit of these assertions, ought, in my humble opinion, to have served as a caveat to those concerned, or at least dictated a more prudent conduct in future. The scarcity of last crop, by its formidable appearance, became the subject of national inquiry, at a very early period of the season; and the labours of the Committee of the House of Commons, aided by the opinions of those who had the best opportunities of information, in every district throughout the kingdom, established, beyond dispute, that the scarcity and high price of grain were owing entirely to a deficiency in the crop, which, in a number of cases, was one third short of an average, in others, one half, and, in not a few instances, it had entirely failed.

Amongst others, I had the honour of being applied to upon the subject, and was desired to state what I thought the probable causes of the scarcity, and the means of preventing a similar calamity in future? The only answer I could make, (and it was founded upon a perfect knowledge of the district in which I reside), was, that the scarcity was a real one, occasioned by the long-continued bad weather, during the *Seed-time*, *Summer*, and *Harvest*; an evil that lay beyond the power of man to prevent, and which could only be mitigated, in future, by the strictest attention to our national agriculture, and bringing an additional number of acres under

the plough. If the above conveyed a faithful statement of one of the richest and best cultivated counties in Scotland, and the one I mention holds the first rank, what distressing accounts must have been received from more distant and less fortunate districts; in many of which, to my certain knowledge, the crop was either entirely lost, or fit only for giving to horses or cattle. The notoriety of these facts puts the matter beyond a doubt, and, in the minds of well informed men, must outweigh the ignorant assertions (not to call them by a worse name) of newspaper scribblers.

It is, however, upon the latter part of a crop that has been the subject of so extensive and impartial an inquiry, and has been declared deficient by the most respectable authority, that the miserable sufferers, in place of being taught to bear their hardships with resignation, and to consider them as the chastisement of a Supreme Being, for some cause to us unknown, — have been industriously told, that there is no scarcity, and that their misery is owing entirely to the machinations of avaricious men. Let those persons, who have been so assiduous in circulating such statements, and who unquestionably have rendered the cup of misery still more bitter by their doctrines; I say, let them look around, and blush, when they view the exertions that have been made, to lessen the public calamity, by the very persons whom they have loaded with reproach, and exposed to the fury and resentment of an ignorant and suffering multitude. The farmers, whom they have falsely accused of hoarding up their grain, have, throughout Scotland, exhibited a degree of compassion and benevolence heretofore unequalled; having voluntarily come forward, inquired into, and relieved the wants of all around them. If the newspaper accusations are true, a statute of lunacy ought immediately to be applied for, against a body of men, who, at the same time that they are hoarding the necessaries of life, with a view to enhance their price, are gratuitously feeding the very people who are the principal consumers of these articles. The thing speaks for itself; and, were the subject any other than a matter of the highest importance to the peace and comfort of society, I should not employ argument against such wretched absurdity.

With regard to forestalling, regrating, &c. the instances in which they are practised are so few, as to be unworthy of notice, when applied to a general scarcity over a great kingdom. But, were they more numerous and extensive, we certainly

tainly have laws to repress them : and the observations upon the subject, in almost every newspaper, can be considered in no other light than a libel upon these laws. They have industriously founded the alarm from one end of the island to the other ; they have rode in *the whirlwind, and directed the storm* of all the tumults and outrages that have attended the present calamity. Let them recollect, that, upon another occasion, an occasion that will occupy a conspicuous place in the annals of our history, a poison, that threatened the very existence of the country, was also propagated through the same medium ; I mean, the levelling or seditious principles with which the country lately teemed. From the beginning of that phrenzy, up to the time that the deputies were arrested at Edinburgh, their sentiments were propagated in the form of advertisements, and encouragement held out to the ignorant and turbulent, in all parts of the country, to unite in what was termed the common cause. The frequency of these advertisements, and the apparent impunity with which they were inserted, gave life to sedition, and rendered the principal actors bold : and it was not till the imprisonment of these men, and the whole kingdom had been set in a flame by their means, that the newspapers began to perceive they had done any thing that was either *morally* or *politically* wrong. You will pardon this digression, Gentlemen ; but it appeared to me a case in point, and I could not omit taking notice of it. Indeed, I am the more induced to do so, as, should the present unfortunate circumstances continue, and another bad year or two be added to the past, the tempers of the lower ranks of society may be rendered so irritable, by a continual series of misrepresentation, as to produce scenes of anarchy and distress, beyond what any person can calculate upon.

It is not unworthy of notice, how far, in the heat of declamation, these warm friends of humanity forget a proper definition of terms, including, under the opprobrious names of forestaller, regrater, &c. every person who has any dealings in grain or provisions, without considering that many of the most extensive and populous districts in Scotland, and, indeed, in many other parts of the island, would have been absolutely famished, but for the exertions of corn-merchants. What would have been the situation of Edinburgh, Glasgow, nearly the whole of the west, and many parts of the north of Scotland, without their assistance. It is notorious that they would have been without bread for many months, had they depended solely upon the produce of their immediate neighbourhood.

I have always been a decided enemy to *monopoly* of every kind, particularly of the necessaries of life, and think the practice of buying up grain the produce of any district, and reselling it in the same place, at an advanced price, is highly censurable, and deserves punishment. Fortunately for the credit of the country, few such instances are met with: if any such do exist, the laws are adequate to their punishment. Very different is the idea that ought to be annexed to the character of the respectable corn-merchant, who either imports his grain from foreign countries, or purchases it in districts at home, where more is raised than the wants of the inhabitants require; and, by carrying it to other districts where it is scarce, circulates it equally, and establishes a balance over the whole country; preventing alike the distress arising from scarcity in one place, and the waste which seldom fails to attend plenty in another. If the regards of society are proportioned (as in all cases they ought to be) to the benefit derived from the exertions of meritorious individuals, the corn-merchant, such as I have described him, in place of being stigmatized in the manner he has lately been, is entitled to the gratitude of his fellow-citizens. In conclusion, I have only to add, that, when I buy a newspaper, the money is given for the articles of intelligence it contains, and not for the unfounded statements, or childish comments, that are tacked to the tail of most of them. I have no objection to the editor, with all his faculties, both of body and mind, lulled into harmony by his dinner and a few glasses of wine, warming his backside at the fire of his printing-office, and, with his eyes shut, fancying a fairy scene, where every thing breathes the most unbounded plenty. The idea is pleasing: let him indulge it. Would to God it could be realized in this country at present! But let him take care, in times so disastrous as these, not to publish such visions as real pictures. Like the Arabian Tales, they will be believed only by weak or ill-informed minds: with those of another description, they will be scouted, and the author despised. Having never bought a boll of grain in my life, but for sowing or feeding my horses, and never sold any but the produce of my own land; and, having no connection with, nor interest in, the transactions of any dealer in grain, I can with truth subscribe myself,

NO FORESTALLER.

Sept. 12. 1800.

P A R T II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

=====

General View of the Agriculture of the County of Northumberland: with Observations on the means of its Improvement. Drawn up for the consideration of the Board of Agriculture. By J. BAILEY and G. CULLEY. 209 pages, 8vo. Sold by Mess. Robinson and G. Nicol, London; Bell, Newcastle; and Symington, Edinburgh,

(Continued from p. 318.)

WE have already given our opinion of five chapters of this useful Report, and proceed with pleasure to examine the remainder.

The sixth chapter treats upon that necessary branch of improvements, ‘*inclosures.*’ In p. 65. we find the following valuable observations upon the most proper way of training up young hedges :

‘ It is a custom, in some parts, to clip young quicks every year ; this makes the fence look neat and snug, but it checks their growth, and keeps them always weak in the stem, and, when they grow old, open at bottom ; while those that are left to nature, get strong stems and side branches, which, by interweaving one with another, make a thick and impenetrable hedge, and if cut at proper intervals, (of nine or ten years), will always maintain its superiority over those that have been clipped from their first planting. In point of profit and of labour saved, there is no comparison ; and, for beauty, we prefer nature, and think a luxuriant hawthorn, in full bloom, or loaden with its ripened fruit, is a more pleasing, enlivening, and gratifying object, than the stiff formal sameness produced by the shears of a gardener.’

In

In the chapter upon “arable land,” we have a clear detail of the several articles of Northumberland tillage, from the fallowing of the ground till the rotation is finished. It would appear, that the practice of naked fallows is rather on the decline, and that drilled leguminous crops are now substituted in its place. While we are fully convinced that naked fallow can never, with advantage, be wholly laid aside upon the heavy soils, we cordially concur with the authors, that, with proper attention to cropping, the quantity may be very much reduced. But let them speak for themselves—

‘Whether fallowing is or is not necessary, has been much agitated of late years; so much so, that the different partizans have obtained the appellation of *‘fallowists,’* and *‘antifallowists.’* It happens to be one of those subjects, which can never be determined by reasoning, opinions, or bold assertions: *‘fair experiments’* only can resolve it: and whatever be the results of such experiments, in any particular place, it may be justly concluded, they will be the same in similar soils, climates, and situations.

‘Though we are diffident in giving a decided opinion upon so important a subject, yet, from observations made on the above facts, we cannot help being inclined to think, that the quantity of naked fallow might be very much reduced, and, in another century, will probably be totally abolished, if no fortuitous circumstances arise, to check the exertions and spirit for improvement, which have been so prevalent of late years, and so generally diffused through this district.’

The information contained in the following paragraph, (p. 77.) has been amply corroborated by what we have practically experienced. Of last unfortunate crop, the smooth-chaffed wheats were 20l. per cent. superior to the other varieties, in respect of quantity and quality.

‘The downy-chaffed wheats have shorter straw, and are less liable to have the grain shaken out by winds, (the chaff embracing the grain more closely), than the smooth-chaffed tribes, which is a considerable advantage; but then we are apprehensive that this downiness makes them retain the dews and moisture upon the ear, much longer than the smooth-chaffed kinds, and probably renders them much more liable to be affected by those diseases, which give a dusky dark shade to the chaff, and a rusty cankering upon the straw: As we recollect few instances of smooth chaffed, or red wheat,
being

being troubled with the disease; of course, the downy-chaffed kinds are most proper for windy, open situations, and the smooth-chaffed to well sheltered inclosed districts.

In the account of Angus oats (p. 89.) we suspect that a mistake is committed. This variety is said to produce more straw than the common oat, which we have never found to be the case. So far from that, we judge that the latter, upon the same field, will exceed the other in bulk, at least one sixth. If the observation had applied to the grain, it would have been well-founded, as Angus oats are undoubtedly more prolific. With regard to the time of ripening, they appear now, from being naturalized to the climate, to come earlier to maturity, and in a more regular way, than when first introduced.

The drilling of beans is most judiciously recommended. Sowing this grain broad-cast, is certainly, in general seasons, attended with the most pernicious consequences. In fact, drilling and horse-hoeing beans, upon heavy soils, has been attended with equal advantages, as are produced by turnips upon the light ones.

We decidedly coincide with the authors, that potatoes can never be used with profit, in the feeding of cattle: a few of them, however, may be useful for carrying on stock in April and May, after the turnip crop is finished. Potatoes do not admit the land to be so well cleaned as turnips: They are planted too early, for getting the ground sufficiently worked; and their after culture must be concluded at an early period of the season. We hardly ever saw a potato field completely cleaned: witness all the fields in the vicinity of great towns, where potatoes are the chief fallow crop.

A curious and interesting history of drilled turnips is given, (p. 106.), which is too long to be inserted here, but shall afterwards be taken in by way of "Extract." It appears that, when originally introduced into Northumberland, they were sown broadcast; and that the first person who sowed them, having much to do, was obliged to *ride* and *sow*, that he might dispatch the greater quantity!

We are glad to notice, (p. 133.), that "the commons in this county, capable of being converted into profitable tillage, are now very trifling, the greater part having been inclosed within the last thirty years." The advantages attending this proceeding, are detailed in the following manner:

"The

“ *The advantages* arising from inclosing of commons, in respect to the *improvement of stock*, is obvious, when it is considered that, while in a state of common, every one turns on what he pleases, and there is generally double the quantity of stock that there ought to be : the consequence is, they make no improvement ; *they barely exist*. Should an enlightened breeder wish to improve his sheep, how is he to effect it, while his ewes mix promiscuously with his neighbour’s flocks ? If he had the best tup in the kingdom, can he be sure that one of his ewes would be tupped by him, while there are probably not less than a score of his neighbour’s to contest the female with him ? On the other hand, if the common were inclosed, every one would stint with that species of stock for which his allotment was best adapted, and in such numbers as would insure profit. When he can confine his ewes within his own inclosure, he can make whatever experiment he pleases, by putting a few, or many ewes, to any particular tup, without any fear or apprehensions of having a spurious breed, by the interference of his neighbour’s. He is also enabled to keep his flock from many disorders. Few commons but have some tracts of land liable to the rot. How are they to be prevented from depasturing on it ? Or, if the scab, or other infectious disorders, have taken place amongst any flock on the common, how is he to avoid it ? ”

The authors are friendly to paring and burning, and their opinion upon the subject (p. 137.) is so conformable to our own, that we shall give the whole section. It is not the operation itself which destroys the soil, but the injudicious cropping carried on afterwards. The like injury may be done by lime, which we have seen practically exemplified.

“ Paring and burning is not much practised in the eastern and northern parts of the county ; in the middle and southern parts it is most prevalent ; but even there, it is confined to old swards, and coarse, rough, rushy, and heathy lands. For the first breaking up of such ground, it is certainly very convenient, and preferable to any other mode we have ever seen ; but though we are fully convinced of its beneficial effects in such situations, yet we have our doubts whether it could be used with advantage upon lands that have lain a few years in grass, and that would produce good crops of grain *immediately on being ploughed out*, which is not the case with coarse, rough, heathy lands, or even very old swards on rich fertile soils ; it being found that crops on the latter, are frequently very much injured by “ *leaping* ” for two or three years ; which
paring

paring and burning entirely obviate, and insure full crops to the farmer, who need not be under any apprehension of his soil being ruined by it, provided he pursues the following course: 1. Turnips. 2. Oats. 3. Fallow, well limed for turnips. 4. Barley, sown up with clover and grass seeds, and depastured with sheep for three or four years; and afterwards (if not intended to lye in grass) continue it in the rotation mentioned p. 73. It is the *injudicious cropping*, more than the ill effects derived from paring and burning, that has been the chief cause of bringing such an odium on this practice, which is certainly an excellent one in *some situations*, and *properly conducted*; but, like the fermented juice of the grape, may be too often repeated, and improperly applied.

“The popular clamour against this practice, “that it *destroys the soil*,” we can by no means admit; and are inclined to believe, that not a single atom of soil is abstracted, though the bulk of the sod or turf be diminished. This arises from the burning of the roots or vegetable substances, which, by this process, afford a considerable portion of alkaline salts, phlogistic or carbonic matter, and probably other principles friendly to vegetation; as we find those ashes produce abundant crops of turnips, which fatten stock much quicker than those after any other dressing or manure we have ever seen; and the succeeding crops of corn are so very luxuriant, as to tempt the *injudicious cultivator* to pursue it too far; who, for the sake of a temporary gain, may be said to rip it up, as the boy did with his goose that laid golden eggs.”

We apprehend that too much is said, p. 139, viz. “That every exertion of ingenuity is practised to raise a large portion of farm-yard dung.” *Query*, Are the corn-crops cut low? Unless this is attended to, one fifth, in some cases more, of the means of making manure, is effectually lost. The conduct of the Cheviot farmers, in allowing their dung to be taken away by the floods, deserves severe reprobation.

We entirely agree with the opinion given, p. 143, “That upon some soils, the application of lime, in considerable quantities, is absolutely necessary, in order to bring them to their most fertile state, and to prepare them for the action of other manures” We have often, however, viewed the Northumberland lime-husbandry, as little better than giving the land a snuff; and we do not wonder, “that many intelligent farmers begin to doubt of its efficacy, and the propriety of continuing to lay it upon their old tillage lands.” In such situations, it is only throwing away money unnecessarily,

cessarily, to expend it upon the purchase of lime. Refresh the land with grafs, and the operation may be profitably repeated.

The account in chap. 13. of the wild cattle belonging to Lord Tankerville, is entertaining.

“ *The wild cattle*—are only found in Chillingham Park, belonging to the Earl of Tankerville ; and as it is probable they are the only remains of the true and genuine breed of that species of cattle, we shall be more particular in our description.

“ Their colour is invariably white, muzzle black ; the whole of the inside of the ear, and about one third of the outside from the tip downwards, red ; horns white, with black tips, very fine, and bent upwards. Some of the bulls have a thin upright mane, about an inch and a half, or two inches long. The weight of the oxen is from 35 to 45 stone, and the cows from 25 to 35 stone the four quarters, 14 lb. to the stone. The beef is finely marbled, and of excellent flavour.

“ From the nature of their pasture, and the frequent agitation they are put into, by the curiosity of strangers, it cannot be expected they should get very fat : yet the six-years-old oxen are generally very good beef ; from whence it may be fairly supposed, that, in proper situations, they would feed well.

“ At the first appearance of any person, they set off at full speed, and gallop to a considerable distance ; when they make a wheel round, and come boldly up again, tossing their heads in a menacing manner. On a sudden, they make a full stop, at the distance of forty or fifty yards, looking wildly at the object of their surprize ; but, upon the least motion being made, they again turn round, and gallop off with equal speed : but, forming a shorter circle, and returning with a bolder and more threatening aspect, they approach much nearer ; when they make another stand, and again gallop off. This they do several times, shortening their distance, and advancing nearer, till they come within a few yards, when most people think it prudent to leave them.

“ The mode of killing them was, perhaps, the only modern remains of the grandeur of ancient hunting. On notice being given, that a wild bull would be killed upon a certain day, the inhabitants of the neighbourhood came, in great numbers, both horse and foot. The horsemen rode off the bull from the rest of the herd, until he stood at bay, when a marksman dismounted and shot. At some of these huntings, twenty or thirty shots have been fired, before he was subdued. On such occasions, the bleeding victim grew desperately furious, from the smarting of his wounds, and the shouting of savage joy that were echoing from every side. From the number of accidents that happened

ed, this dangerous mode has been seldom practised of late years; the park-keeper alone generally shooting them with a rifled gun, at one shot.

“ When the cows calve, they hide their calves, for a week or ten days, in some sequestered situation, and go and suckle them two or three times a-day. If any person come near the calves, they clap their heads close to the ground, and lye like a hare in form, to hide themselves. This is a proof of their native wildness; and is corroborated by the following circumstance, that happened to the writer of this narrative, who found a hidden calf, two days old, very lean, and very weak. On stroking its head, it got up, pawed two or three times like an old bull, bellowed very loud, retired a few steps, and bolted at his legs with all its force. It then began to paw again, bellowed, stepped back, and bolted as before; but knowing its intention, and stepping aside, it missed me, fell, and was so very weak that it could not rise, though it made several efforts: But it had done enough; the whole herd were alarmed; and coming to its rescue; obliged me to retire; for the dams will allow no person to touch their calves, without attacking them with impetuous ferocity.

“ When any one happens to be wounded, or grown weak and feeble through age and sickness, the rest of the herd set upon it, and gore it to death.”

A very full account of the sheep husbandry of the county is given, p. 153. *et seq.* They are classed under three distinct heads; viz. the *Cheviot*, the *Heath sheep*, and the *Long-woolled breed*. Drawings of a ram of each breed are presented; but we have been informed that some of them are not correct. In speaking of the heath sheep, it is said—

“ The breeders of this kind of sheep on the south-west corner of the county, are very confident that they are a *much hardier sheep* than the *Cheviot* breed; and, upon their high-exposed heathy mountains, where there is *very little green herbage*, much more profitable; while the *Cheviot* farmers assert, that theirs are equally hardy, and that the greater value of the fleece gives them a decided superiority. We have before stated, that the fineness of wool is not a proper criterion by which the merits of a breed of sheep are to be determined. It can only be done by fair experiment, in which all the circumstances of the case are included. But we do not find that this has ever been done by either party; and though it is only opinion against opinion, yet both parties are so positive, that they are ready to quarrel with any person who happens to express an opinion of his own.

We shall therefore content ourselves with stating, that the question can only be properly decided by a parcel of each kind of ewes (suppose 100) being depastured and kept in every respect alike, upon some of those high, exposed situations, the height of which is much more elevated, and the herbage coarser, than the Cheviot pastures, and almost totally covered with *heath or heather* (*erica vulgaris*); and, at the end of *five, six, or seven years*, that breed which has brought the greatest number of sheep to market, and made the most profit, will deservedly be deemed the *hardiest, best, and most eligible* for such situations.

“ Until some experiment of this kind determine the matter, we hope we shall not give offence to either party by stating, that we have seen the heath sheep bred with advantage upon higher and coarser pastures than *Common Burn*, or those other kinds around Cheviot; and that it may probably turn out, that each breed is particularly adapted to particular situations; the one to *coarse, exposed mountains*, where the luxury of green herbage is thinly scattered, or rarely to be found; the other, to *hilly pastures*, where considerable portions of verdant surface predominate, such as characterise the pastoral districts round Cheviot.”

The practice of milking ewes is very justly censured, and we are happy to learn that this unprofitable custom is going fast into disuse.

The comparative statement betwixt horses and oxen, for the purpose of the draught, is given with so much accuracy, that we cannot refrain from extracting the whole of it. If oxen were invariably employed in farm-labour, it is evident that they would occasion a famine in the country, instead of rendering provisions cheap, as speculative men have idly supposed.

A comparative Statement between Horses and Oxen, for the purpose of the Draught.

“ By way of preliminary, it will be necessary to admit as data, that a horse, which eats 70 bushels of oats per year, will not consume of other food so much as an ox that gets no corn *; but, in the following estimate, we shall allow horses to eat as much

* This is deduced from the following experiments.

much as oxen, as the difference is not yet sufficiently ascertained.

“ That the oxen are yoked at three years old, and are worked till six; and for the first year require eight to do the work of two horses; but, after having been worked a year, and become tractable and stronger, six are equal to two horses, either by being yoked three at a time, or two, and driven by the holder with cords; of course, the expence of a driver may be estimated to be saved for one half the year.

“ That the expences of a ploughman, the plough, and other articles that are the same in both teams, need not be taken into the account.

“ And that oxen, to work regularly through the year, cannot work more than half a day at a time.

Expence of an ox per ann.

	£.	s.	d.
Summering,--Grass 2 acres, at 20s. per acre	2	0	0
	£.	s.	d.
Wintering,—on straw and turnips	2	0	0
but if on hay	4	0	0
	<hr/>		
The average is *	3	0	0
	<hr/>		
Carry over	£. 5	0	0

Three working horses, about $15\frac{1}{2}$ hands high, eat in 14 days 96 stones of hay, which is for each horse, at the rate of 16 stones a-week, with an allowance of oats, 12 gallons per week.

Mr Thomson's (of Chillingham Barns) 18 horses in 12 days eat 430 stones of hay: which is 14 stones per week each horse: allowance of oats, 16 gallons per week.

Mr Aitkinson's of Yevering, eat, per week, 13 stones of hay, 2 bushels of potatoes, and 16 gallons of oats.

Mr Jobson's of Newtown, five years old working oxen, with a full allowance of hay, had, each ox, 6 quarts of oats per day.

In 15 days, 4 oxen eat 164 stones 7 lb. of hay, which is after the rate, for each ox, of hay $19\frac{1}{2}$ stones per week.

of oats $10\frac{1}{2}$ gallons ditto.

Three days after, the same oxen were put to hay only; and in 7 days eat 79 stones 10 lb., or 20 stones, each ox per week, which is only $\frac{3}{4}$ stone more than when they got $10\frac{1}{2}$ gallons of corn in the same time. This is a singular circumstance, and deserving of further investigation.

An unworked ox, $2\frac{1}{2}$ years old, was put to good old meadow-hay, the 29th of November, and eat 49 stones in 21 days; or, per week, 16 stones 5 lb.

An idle horse ($15\frac{1}{2}$ hands high) eat of the same hay, 20 stones in 10 days, or, per week, 14 stones—had no corn.

* A great portion of the soil of this county is improper for turnips. In those districts hay is given, instead of turnips; for which reason we have taken the average.

	Brought over	£.	s.	d.
		5	0	0
Interest at 5 per cent. for price of the ox	-	0	10	0
Harnes, shoeing, &c.	-	0	15	0
		<hr/>		
		6	5	0
Deduct for the increased value of an ox for 1 year		1	0	0
		<hr/>		
Gives the expence per ann. of an ox for the team		5	5	0
		<hr/>		
And the expence of 6 oxen	-	31	10	0
To which must be added the expence of a driver for half a year	-	3	10	0
		<hr/>		
Total expence of a team of 6 oxen	-	35	0	0
		<hr/>		

An eight-ox team.

The expence of an ox per ann. being	-	5	5	0
				8
		<hr/>		
That of eight will be	-	42	0	0
To which add the expence of a driver	-	8	0	0
		<hr/>		
Gives the expence per ann. of an eight-ox team		50	0	0
		<hr/>		
Therefore the expence of a team of oxen for the first year will be	-	50	0	0
Ditto the second year	-	35	0	0
Ditto the third year	-	35	0	0
		<hr/>		
Divided by	-	3)	120	0
			<hr/>	
Gives the average expence per ann. of an ox-team, from 3 to 6 years old	-	40	0	0
		<hr/>		

Expence of a horse per ann.

Summering—Grafts 2 acres, at 20s. per acre	-	2	0	0
Wintering—Straw 13 weeks, at 9d. per week	-	0	10	0
Hay 16 ditto, 1½ tons, at 2l. per ton	-	3	0	0
Corn (for a year), 70 bushels of oats, at 2s per bushel	-	7	0	0
Shoeing and harness	-	1	0	0
		<hr/>		
Carry over		£.	13	10
			0	

			L.	s.	d.
		Brought over	13	10	0
Annuity to pay off 25l. in 16 years, the purchase value of the horse at four years old *			2	5	0
Expence of a horse per ann.	-	-	15	15	0
Ditto of a two-horse team	-	-	31	10	0
If a three-horse team be used, the account will stand thus:—					
The expence of a horse per ann. being	-	-	15	15	0
					3
That of three will be	-	-	47	5	0
To which add the expence of a driver	-	-	8	0	0
Gives the expence of a three-horse team	-	-	55	5	0

“ If the comparison be made with the horse-team of many of the midland counties, where they use *five horses, yoked one before another in one plough*, the account will stand thus:—

The expence of one horse per ann. being	-	-	15	15	0
					5
That of five will be	-	-	78	15	0
To which add the expence of a man to drive	-	-	18	0	0
The expence of a team of 5 horses will be	-	-	96	15	0
Ditto of 3 ditto	-	-	55	5	0
Ditto of 2 ditto	-	-	31	10	0
Ditto of 8 oxen	-	-	50	0	0
The average expence of an ox-team, from three to six years old, that will do the same quantity of work as two horses	-	-	40	0	0

“ The conclusions to be drawn from the above statement are so obvious, as to need little elucidation. But we cannot help remarking how strong the force of prejudice must be, to continue the use of five horses, and heavy, clumsy, unwieldy *wheel-ploughs*, where a single *swing-plough*, and two horses yoked double, and driven by the holder, would do the same quantity of work, equally well, and at one third the expence!

* This is calculated on the supposition, that a horse bought at four years old will work sixteen years; and admitting his price to be 25l., then the question will be, to find what annuity will pay off 25l. in sixteen years, allowing compound interest at 5 per cent., which, by the rules laid down by the writers on algebra, will be 2l. 5s.

“ But before any proper conclusions can be drawn, whether *ox-teams* or *horses* are the most eligible, it will be necessary to consider whether the quantity of land employed in supporting those animals, be used in the most profitable mode to the community, as well as the occupier.

“ With the latter, the first question for consideration is, Whether eight oxen used in the team, or in grazing, will pay him the most money?

“ Suppose eight oxen at *three years old*, were put to the plough, and plough six acres per week, which, at 3s. 4d. * per acre, is 20s. ; and if they work forty-eight weeks in a year, then their whole earnings, (after deducting 6l. for expences of harness, shoeing, &c.) will be 42l. ; but if they plough only *five acres per week*, (which is probably nearer the truth), then their whole earnings will be only 34l.

“ The same oxen put to graze at the same money, should improve in value 5l. 5s. each, in the first case, and 4l. 5s. in the latter ; but we are inclined to believe, there are few situations, if the cattle are of a good quick-feeding kind, where they would not pay *considerably more*.

“ In respect to the community, the account will be nearly as follows :—

From the above statements, we find that an ox for summering and wintering, requires	-	-	3 $\frac{1}{2}$	acres ;
Therefore a six-ox team will require	-	-	—21	ditto
And two horses for grafs and hay per ann.	-	-	-	-
require	-	-	7	ditto
For corn and straw	-	-	4	ditto
Land necessary for keeping two horses per ann.	-	-	—11	ditto
			—	

The difference in the quantity of land required for a team of oxen, more than horses } 10 acres.

“ Hence it appears, that a team of six oxen requires ten acres more land to maintain them than a team of two horses, which will do the same work ; and, of course, the produce which might be derived from these ten acres is lost to the community. Suppose it to be one half in grafs, the other half in tillage, then we shall have

- 5 acres of clover or grafs.
- 1 $\frac{2}{3}$ ditto of oats.
- 1 $\frac{2}{3}$ ditto of turnips, or fallow.
- 1 $\frac{2}{3}$ ditto of wheat.

“ It

* If to this 3s. 4d. be added 1s. 8d., the wages for the ploughman and driver, it will make 5s., the usual price for ploughing an acre in this district.

“ It would then send to market yearly, at the lowest computation,

7½ cwt. of beef.

8 quarters of oats.

And 5 ditto of wheat.

“ From this view of the subject, it appears, that if oxen were universally used for the draught, in the room of horses, there would be a considerable defalcation in the supply of the markets both in corn and animal food *. And the loss to the farmer, would be the profit derived from the produce ; which, by the usual mode of allowing one third for the farmer’s profit, would, in this case, be about 10l.”

The above is the most correct statement upon this important subject that we have seen. The advocates for oxen are constantly calling for facts ! Here they are to their hand. Indeed we have always considered the general practice of laying oxen aside, where husbandry was actively carried on, as the strongest proof of their inutility.

The obstacles to improvements are stated to be, “ Letting no leases, or leases for five or seven years.” The loss which the country sustains from such pernicious conduct, is clearly elucidated. The payment of tithes in kind, is likewise brought forward as an obstacle to the advancement of agriculture ; and it affords us great satisfaction to find, that the sentiments we have constantly maintained upon this branch of political economy, are so ably supported by such eminent and judicious agriculturists. We have long considered it as an axiom, That the waste lands cannot be cultivated, unless this ancient, but pernicious burden is previously commuted. This is in fact done under every inclosure-bill which is passed into a law, as an allotment in lieu of tithe is set apart for the impropiator. Where tithe is regularly drawn, it is not simply 10l. per cent. upon the product of the ground, *but 10l. per cent. upon*

N n 4

the

* In this county, it is estimated, that there are capable of cultivation 300,000 acres ; and allowing one third of this to be in tillage, that is, 266,666 acres, and that every 50 acres in tillage will require a team to manage it properly ; of course, there will be at least 5333 teams ; but, for the sake of round numbers, call it 5000 teams :

Then 5000 × 7½ cwt. beef = 37,500 cwt. of beef, at 30s.	-	£. 56,250
5000 × 8 qrs. oats = 40,000 qrs. of oats, at 16s.	-	32,000
5000 × 5 qrs wheat = 25,000 qrs. of wheat, at 40s.	-	50,000
		138,250

— the value in provisions that would be lost to this country yearly, if horse-teams were abolished, and oxen used in their stead.

the tenant's capital stock, because this capital is all laid out in the raising of the produce. Instead of being 10l. per cent. upon the rent, as very mistakenly supposed by some people, it may amount to ten times more, where the farm is possessed under a lucrative lease, or in the hands of a farmer who is an adept at his business.

Under the section of weights and measures, p. 194, it is said—

“ The Board of Agriculture could not do the public a greater service, than by bringing forward a regulation of weights and measures. One weight and one measure, derived from the same root, and increasing or decreasing in a ten-fold ratio, would introduce such simplicity, ease, and perspicuity, into all transactions of business, (where calculations are necessary), as would prevent the numberless mistakes and errors which are daily happening.

“ Preparations for remedying this great inconvenience, have been made at different times; and we believe there are sufficient materials for perfecting the measure, whenever it is thought proper to bring it forward.”

A very animated conclusion is given; but we are sorry that want of room prevents us from inserting it. In this branch, the means of improvement are brought under one point of view; and we can just mention them. They are, *drilling of peas and beans—watering of meadows—draining—planting.—An increased attention to the live stock of the country.—Single-horse carts—public farms*, “ where youth might be instructed in agriculture, and experienced farmers might visit with advantage.”

Upon the whole, it is but justice to the authors of this Report to say, that while it contains a large fund of sound practical information, it is written with spirit and perspicuity, and cannot fail to prove highly interesting to those who search after a detailed account of British husbandry. We have received much pleasure in perusing such an intelligent work; and ardently wish that every report presented to the Agricultural Board, had been executed upon the same liberal and scientific principles.

P A R T III.

EXTRACTS FROM AGRICULTURAL PUBLICATIONS.

=====

*From the Agricultural Survey of the West Riding of
YORKSHIRE.*

FALLOWING DEFENDED.

WHETHER Summer-fallow is necessary or unnecessary?— is a question lately agitated; and, in a respectable work, (the Survey of Norfolk), an attempt has been made to explode this practice, which has long been considered as a most beneficial improvement. The agriculture of Britain being materially interested in the issue of this question, the following answers to the Norfolk surveyor are submitted to the public.

To keep his land clean, will always be a principal object with every good farmer; for, if this be neglected, in place of carrying rich crops of corn or grass, the ground will be exhausted by crops of weeds. Where land is foul, every operation of husbandry must be proportionally non-effective, and even the manures applied will, in a great measure, be lost.

If the season of the year, and the state of the weather, when the ground is ploughed preparatory to receiving the seed, be duly considered, it will be found, that, at that time, it can neither be properly divided by the action of the plough, nor can root-weeds, or annual weeds, be then extirpated. Hence arises the necessity of working it in Summer, when the weather is favourable for the purposes of ploughing, and when root-weeds may be dragged to the surface. It is only at that time the full advantages of ploughing are attainable; for Summer-fallow may, with propriety, be styled ploughing in perfection.

The

The necessity of Summer-fallow depends greatly upon the nature and quality of the soil; as, upon some soils, a repetition of this practice is seldomer required than upon others. Wherever the soil is incumbent upon clay or till, it is more disposed to get foul, than when incumbent upon a dry gravelly bottom: besides, wet soils, from being ploughed in Winter, contract a stiffness, which lessens the pasture of artificial plants, and prevents them from receiving sufficient nourishment. When land of a dry gravelly quality gets foul, it may be easily cleaned, without a plain Summer-fallow; as crops, such as turnips, &c. may be substituted in its place, which, when drilled at proper intervals, admit of being ploughed as often as necessary; whereas wet soils, which are naturally unfit for carrying such crops, must be cleaned and brought into good order by frequent ploughings and harrowings during the Summer months.

It is from neglecting to make these distinctions, that the erroneous system laid down by Mr Kent, the Norfolk surveyor, evidently proceeds.

The county of Norfolk generally consists of dry sand, or of rich sandy loam; and, agreeably to the above principles, Summer-fallow may, in that district, be considered as unnecessary. If Mr Kent had confined his strictures to the husbandry of Norfolk, no objection could reasonably have been urged against them; but, when he condemns Summer-fallow altogether, he strikes at the agriculture of Britain in a most material point.

The substance of Mr Kent's arguments against fallow, may be comprised under four heads:

1st, Nature does not require any pause or rest; and the earth was evidently designed to yield a regular uninterrupted produce.

2^{dly}, As the productive quality of the earth never ceases, if corn is not sown, weeds will be produced; therefore, it is our business to expel the unproductive plant, and to introduce others that are beneficial.

3^{dly}, That the idea of leaving land to rest, is ridiculous; for by keeping it clean, and by a judicious intermixture of crops, it may be managed like a garden, and sown from one generation to another.

4^{thly}, That the fallows in England exhibit nothing but a conflict between the farmer and his weeds, in which the latter generally prevail; for they are only half-killed, and never effectually killed.

The most of these arguments may be granted, and yet the utility, nay the necessity of Summer-fallow, be consistently maintained.

It is already acknowledged, that it is only upon wet soils, or, in other words, upon land unfit for the turnip-husbandry, a plain Summer-fallow is necessary; and this, we suppose, includes three fourths of the island. The utility of Summer-fallow upon such soils, is not contended for because nature requires a pause or rest to invigorate her to carry fresh crops, but solely because it is impossible to keep them clean, without this auxiliary assistance. To speak of following nature in farming, is mere sound; for, if we were to imitate nature, we would not cultivate land at all. Nature is often improved by art; and fallowing is the means employed for removing a host of enemies, which prevent her from being fertile and productive.

As a field filled with root-weeds, must be in a state of greater exhaustion, than if it carried a heavy crop of corn; so, the productive quality of the earth must necessarily decrease, in proportion to the quantity of weeds it brings forth. But, because corn is not sown, it does not follow that weeds of any kind should be suffered to grow. The object of allowing the ground to remain a year under fallow, is to afford time and opportunity for expelling the unproductive plant, and to prepare it for the reception of others which are beneficial.

The most judicious intermixture of crops upon clay soils, will not preclude the necessity of Summer-fallow, although it will go a great way to prevent a frequent repetition of it. An eight-course shift, such as, fallow, wheat, beans drilled and horse-hoed, barley, grass-seeds, oats, beans, and wheat, is as much as can be recommended; and it is only upon rich clay, or deep loam, where such an extensive rotation is admissible. A shift of this kind, when dung is applied twice in the course of it, will pay the farmer more handsomely than the most judicious intermixture of crops, where fallowing is neglected.

Again, no rules drawn from garden practice will apply to operations carried on in the field; the soils are generally very different; and any comparison that can be made, must be with those rich sandy soils, upon which we have allowed fallowing to be unnecessary. The crops in the garden are reaped at so many different times, and often so early in the season, that opportunity is always gained for working the ground

in the completest manner; while the immense difference betwixt working with the plough and the spade, renders every comparifon ridiculous.

A fallow field, which exhibits a conflict betwixt the farmer and his weeds, does not deserve that appellation; for the intention of the fallow is to extirpate these weeds. We are inclined to think, that the shocking situation of many English fallows may be attributed to the feeding and folding them with sheep. The farmer, from being obliged, by the conditions of his lease, or the rules of common-field management, to fallow every third or fourth year, is tempted to draw something from them when in this unproductive state, and, to gratify his avarice in the first instance, sacrifices the good husbandry which it is his ultimate interest to practise. A well managed fallow should be wrought as early in the season as possible, and continually turned over where the least particle of quickens appears. It is no argument against the utility of fallows, that they are often managed in a different way; this goes only against the impropriety of the management, but does not militate against the practice itself.

Upon the whole, the necessity of Summer fallow turns up this single point:—Can wet lands be advantageously employed in raising turnips or cabbages? a question which the *practical farmer*, who is sufficiently acquainted with the nature of such soils, and the immense labour required to bring them into proper tilth, will have no difficulty to answer in the negative. It is not disputed but that turnips and cabbages will grow upon these soils; but the question is, Whether the extraordinary labour they require, and the damage sustained by the ground, during the consumption or carrying off the crops, will not exceed the value of the produce? Does Mr Kent mean to recommend the turnip-husbandry under such circumstances? If he does, the recommendation furnishes a presumption that he is unacquainted with the cultivation of wet lands. If he does not, how is the ground to be kept clean, and enabled to yield a regular uninterrupted produce?

Nothing that is said in defence of Fallow, is meant in vindication of the absurd system of taking only two crops to one fallow, as practised upon many English common-fields. It is only meant to show that clay soils, and every soil incumbent upon a wet bottom, cannot be kept clean, without the assistance of this radical and ancient practice. How often it should be used, must in a great measure be left to the discretion

discretion of the farmer, who will repeat it when necessary, if he knows his own interest. We shall conclude our defence of fallow, with an extract taken from p. 192. of the Survey alluded to. “ *It is highly proper to be careful against adopting the visionary recommendations of modern theorists, who, upon hypotheses of their own, hold up wild systems of delusion, which are apt to mislead the credulous, and do great injury.*”

Account of the Rev. Mr ADAM DICKSON, extracted from the Introduction to the “ Husbandry of the Ancients.”

MR DICKSON was a son of the late Reverend Mr Andrew Dickson, minister of Aberlady, in the county of East Lothian. He had a liberal education at the university of Edinburgh; and, having a very promising genius for learning, was always designed for the church. His father, however, having a large farm, he early turned his thoughts to agriculture; and, in his youth, passing some part of his time with the farmers of that opulent county, who are many of them not unfit to converse with men of letters, he, from them, as well as from his own observation, acquired the exact knowledge of facts, and of the practice of husbandry. Being a man of a very lively apprehension, of an ardent mind, and of a clear and sound judgement, he soon became an adept in any branch of science to which he applied.

Mr Dickson was ordained minister of Dunfe, in the shire of Berwick, in the year 1750. As his settlement had been delayed for a considerable time, on account of a law-suit about the legality of the presentation, an opposition to him was stirred up in the parish; but such was the ability, good sense, and engaging temper of Mr Dickson, and such the candour and generosity of his conduct, that his most sanguine opponents very soon became his greatest friends.

Our author resided for twenty years in Berwickshire, where improvements in agriculture having been much more recent, and the difficulties to be surmounted much greater than in East Lothian, he had occasion there to observe the most spirited exertions by the cultivators of land. This change of situation enlarged his views, and extended his knowledge, on the subject of his favourite pursuit.

In the year 1770, Mr Dickson returned to his native county, having been translated from Dunse to Whittingham, in East Lothian, where he lived but a few years: he was killed by a fall from his horse, on the 25th of March 1776. No man could be more universally regretted among the circle of his acquaintance, than he was; not merely on account of his respectable abilities as a clergyman and a scholar, but still more on account of the unbounded benevolence of his heart, and the peculiar frankness and promptitude with which he gave his assistance, in advice, or in credit and support, to every person who had the smallest title to ask him.

It was with no small degree of judgement, that Mr Dickson had early selected to himself a corner of literature, for which the habits of his life had particularly qualified him, and in which he was not likely to interfere with any of his companions, who started at the same time, for the same derived from writing well. He had observed with regret, that the books of husbandry, that had been published in England, were ill calculated for the soil and climate of Scotland; and likewise, that many of them consisted chiefly of uncertain speculations on theories, not well supported by the history of facts. He was therefore determined to compose a Treatise of Agriculture, on a plan that should obviate these objections. The first volume of this Treatise was published in the year 1764, and the second some years afterwards; and has ever since been held, not only to be the book best adapted to the practice of the Scottish farmer, but, upon the whole, one of the most judicious and practical treatises on the subject that has ever been published in Britain.

The Husbandry of the Ancients was the produce of Mr Dickson's maturer years, and, as he confesses himself in the preface, cost him a very great degree of application and labour. The public will judge of the execution. To the editor, it appears to do much honour to the author, and to be a very valuable present to all who are conversant in the first and most useful of all the necessary arts. Farmers, in general, are entirely ignorant of the language in which the books of ancient husbandry are written; and there are but few of those lovers of the art, who are masters of the language, that will take the trouble to select out of the ancient authors, in some of which there is no small degree of obscurity, all the experiments and rules that suit the modern practice.

This

This they will find done to their hands by the author, who has collected, under proper heads, from the ancient writers, whatever is material to the moderns; has compared the facts and rules together, and has set them in one view before his readers, both in a Translation, and in the original Latin. His perfect knowledge of the subject, has enabled him to clear up many difficulties, which the learned commentators on the *Rei Rustica Scriptores*, being entirely ignorant of husbandry, had rendered more obscure; while his skill in modern agriculture enabled him to make a judicious comparison between that and the practice of the ancients.

It appears from the author's preface, which follows, that his work was ready for the press before his death; though, by the copy of a letter in the editor's hands, he had not then determined whether he would treat with a bookseller, or publish it by subscription. But although the work was completed for the press, the candid reader may probably find defects and inaccuracies in it, that would have been supplied or corrected, had the author lived to superintend the press. He will also reflect, that the book was written fully twelve years ago, and therefore will make an allowance for there being no notice taken in it of improvements or discoveries in husbandry, that may have been made since that time.

The manuscript was given to the editor a few years ago, by a daughter of the author's, who survived him, with a recommendation to do with it what he thought best, for the memory of her deceased father, and his own friend. After revising it with care, the editor put it into the hands of the noble Lord to whom it is inscribed; with whose approbation, and under whose patronage, he ventured to offer it to the public, in the shape in which it now appears, with little doubt of its meeting with a favourable reception.

FOR THE FARMER'S MAGAZINE.

AGRICULTURAL TABLE OF SCOTLAND,

EXTRACTED BY PERMISSION,

From Mr ROBERTSON'S Statistical Table.

I. Square miles of surface.

II. Population per square mile.

III. Rent per Scottish acre in shillings and pence.

IV. Proportion in 100 parts of arable land.

V. Ditto of moorish land, occasionally cultivated as meadows.

VI. Ditto of hills, &c. altogether unfit for tillage.

COUNTIES, &c.	I.	II.	III.		IV.	V.	VI.
			s.	d.			
Aberdeen.....	1890	65	2	9 $\frac{3}{4}$	16	46	38
Ayr.....	1034	73	6	3	24	36	40
Argyle-mainland.....	2130	24	1	7 $\frac{1}{2}$	6	12	82
Argyle-islands.....							
Argyle-shire.....	2924	26	1	6	6	12	82
Banff.....	750	51	2	3 $\frac{1}{4}$	15	40	45
Berwick.....	480	64	9	8 $\frac{1}{2}$	27	27	46
Bute-isle.....	40	119	5	4 $\frac{1}{2}$	25	25	50
Arran.....							
Bute-shire.....	224	47	1	7 $\frac{1}{4}$	9	21	70
Caithness.....	690	36	1	1 $\frac{1}{2}$	8	12	80
Clackmannan.....	48	182	11	7	40	35	25
Cromarty.....	25	211	7	5 $\frac{1}{2}$	30	34	36
Dumfries.....	1344	40	3	2 $\frac{1}{2}$	15	30	55
Dumbarton.....	245	75	5	5	25	25	50
Edinburgh.....	360	340	16	6	32	32	36
Elgin.....	575	48	2	10	20	36	44
Fife.....	476	183	14	4	32	48	20
Forfar.....	928	98	5	1 $\frac{3}{4}$	30	25	45
Haddington.....	300	96	17	4 $\frac{1}{2}$	64	16	20

AGRICULTURAL TABLE—continued.

COUNTIES, &c.	I.	II.	III.	IV.	V.	VI.	
Inverness-mainland	2894	16 $\frac{3}{4}$	os. 9d.	4	6	90	
Skyc-island	792	18 $\frac{1}{3}$	0	5 $\frac{1}{4}$	4	6	90
Uists, Harris, Barra, &c. }	616	17 $\frac{1}{2}$	0	4 $\frac{3}{4}$	4	6	90
Invernessshire	4302	17	0	7 $\frac{3}{4}$	4	6	90
Kincardine	380	70	4	0	20	30	50
Kinrofs	78	68	6	4 $\frac{3}{4}$	25	50	25
Kirkcudbright	864	31	4	4 $\frac{1}{2}$	12	24	64
Lanark	870	144	5	8 $\frac{1}{2}$	15	40	45
Linlithgow	112	156	15	6 $\frac{1}{4}$	40	40	20
Nairn	152	40	2	0 $\frac{3}{4}$	20	30	50
Orkney-isles	350	46	1	10 $\frac{1}{2}$	10	14	76
Shetland-isles	1250	16	0	2 $\frac{4}{5}$	4	6	90
Orkney-shire	1600	27	0	5 $\frac{1}{2}$	5 $\frac{1}{4}$	7 $\frac{3}{4}$	87
Peebles	294	27	4	0	6	18	76
Perth	2374	56	3	9 $\frac{3}{4}$	16	20	64
Renfrew	246	296	10	2 $\frac{1}{4}$	20	40	40
Rofs-mainland	2280	18	0	7 $\frac{1}{2}$	5	7	88
Lewis-isle	649	13	0	3	2	6	92
Rofs-shire	2929	17	0	6 $\frac{1}{2}$	4 $\frac{1}{4}$	6	89
Roxburgh	738	41	5	5 $\frac{1}{4}$	18	27	55
Selkirk	260	16	4	0	5	15	80
Stirling	704	66	4	10	12	36	52
Sutherland	1894	12	0	2 $\frac{2}{5}$	2	3	95
Wigton	469	45	4	5 $\frac{3}{4}$	15	25	60
Fresh-water Lakes	569						
General Result	31, 168	50	3	1 $\frac{3}{4}$	12 $\frac{1}{4}$	20	67 $\frac{3}{4}$

T A B L E,						T A B L E,					
Showing the difference betwixt the Scot. Standard Linlithgow boll, and the Wheat and Barley Measures used in several Counties in Scotland.						For reducing the price of the Eng. Quarter to the Linlith. Boll.					
LINLITHGOW BOLL.						Price ^r Quart.	Wheat, Peas, per B.	Barley, or Oats, per B.	s. d.		
WHEAT.		BARLEY.		s.	s. d.					s. d.	
B.	F. ¹⁰⁰ pts.	B.	F. ¹⁰⁰ pts.								
100 Bolls of				16	8	2	11	11			
Linlithgow.....	100	0	0	17	8	8	12	8			
Aberdeen.....	122	1	41	18	9	2	13	5			
Argyle, <i>Inver</i>	116	1	1	19	9	9	14	2			
Argyle, <i>Camp</i>				20	10	3	14	11			
Ayr.....	97	3	46	21	10	9	15	8			
Banff.....	105	1	64	22	11	3	16	5			
Berwick.....	152	3	76	23	11	9	17	2			
Bute.....	130	3	92	24	12	3	17	11			
Caithness.....				25	12	9	18	8			
Dumbarton.....	116	2	52	26	13	4	19	5			
Dumfries.....	302	0	73	27	13	10	20	2			
Edinburgh.....	101	3	5	28	14	4	20	11			
Elgin.....	106	3	6	29	14	10	21	8			
Fife.....	103	2	11	30	15	4	22	5			
Forfar.....	103	2	11	31	15	10	23	2			
Haddington.....	102	3	76	32	16	4	23	10			
Inverness.....	114	1	81	33	16	11	24	7			
Kincardine.....	112	3	76	34	17	5	25	4			
Kinross.....	102	2	58	35	17	11	26	1			
Kirkcudbright.....	162	1	60	36	18	5	26	10			
Lanark, Glasgow, and L. Ward.....	105	1	27	104	0	70	37	18	11	27	7
Lanark and Upper Ward.....				103	0	90	38	19	5	28	4
Nairn.....	121	3	90	40	20	5	29	10			
Peebles.....	107	0	59	41	21	0	30	7			
Perth.....	107	0	59	42	21	6	31	4			
Perth.....	102	3	94	43	22	0	32	1			
Renfrew.....	100	0	0	44	22	6	32	10			
Ross.....	112	3	76	45	23	0	33	7			
Roxburgh.....	129	1	64	46	23	6	34	4			
Selkirk.....	129	3	11	47	24	0	35	1			
Stirling.....	108	0	94	48	24	7	35	10			
Sutherland.....	117	2	58	49	25	1	36	7			
Wigton.....	195	2	92	50	25	7	37	4			
An English Quarter of <i>Wheat</i> and <i>Peas</i> is 1 boll 3 firlots, 3 pecks and 2 fifth parts of a peck, Scots measure.						51	26	1	38	1	
						52	26	7	38	10	
						53	27	1	39	6	
						54	27	7	40	3	
						55	28	2	41	0	
						56	28	8	41	9	
Ditto of <i>Barley</i> and <i>Oats</i> , is 1 boll 1 fir- lot, 1 and 1-half peck.											

P A R T IV.

AGRICULTURAL INTELLIGENCE.

HAVING arrived at the period when a pretty accurate opinion can be formed of the crop, both as to quantity and quality, we proceed to lay before our readers the various articles of intelligence, concerning that important subject, transmitted to us by our numerous correspondents. It is painful to observe, that the apprehensions expressed in our last, respecting the failure of the crop in North Britain, have been fatally realised in several districts. Indeed, the sentiments then given were formed, not only from our own observation, but from information furnished by experienced agriculturists in different quarters. In addition to a short crop, the evils attending an unfavourable harvest have followed. Much grain has been shaken, or has dropped in the working. The early cut fields have universally sprouted: and, from the unsettled state of the weather, the corn, which still remains in the fields, must be greatly damaged.

The produce of wheat in Scotland, of this year's crop, from every account, will be much below the usual quantity. Less of that grain, as formerly stated, was sown than usual, particularly in the northern counties. A great number of fields, even in the best districts, were thin; and though the quality, where it escaped sprouting, is generally good, yet a doubt can hardly be entertained respecting the deficiency of this article, perhaps to a greater extent than last season.

Barley appears to be a much better crop than last year, especially in all the northern districts, where it ripened in perfection. Oats may be considered as scantier than ever remembered in Scotland, and very unproductive in meal.—Many reasons might be given for this failure,—the wetness of the ground at seed-time,—the subsequent severe drought, which prevented their tillering,—the attack of the grub-worm,—the excessive heat during the Summer-months, which is always unfavourable to this grain,—and, above all, the injury

sustained from the myriads of insects which covered them in August, and sucked out the whole juice from the straw. In a word, little or none of this grain presents a fine sample, and in produce from the mill does not go beyond the last year, unless it be in the Highland districts, where it then never ripened.

Peas, in general, are good ; but beans, now commonly sown in their stead, scarcely exceed half a crop. As this species of pulse ripened early, much damage was sustained from the rains, both in corn and fodder. This remark, however, together with the foregoing ones, must be received with some little exception, as is very judiciously stated in another place, by a respectable correspondent ; for one week, nay, even one day, in point of harvesting, in this critical season, may make a considerable difference in the value of the crop.

Fodder of all kinds will be scarce in the extreme over the whole island, during the ensuing Winter ; and the brute creation, unless the Winter keep open and mild, stand a chance of being exposed to great distress. Perhaps turnips could not be used with greater advantage, than by giving them in small quantities to the lean stock ; otherwise they will be so backward in Spring, that feeding will be a tedious business. High prices, triple the usual rate, are talked of for wintering cattle upon straw, which consequently will be given to them in a limited manner.

Having now presented an abstract of the information communicated to us, it is our duty to notice the gross impositions practised upon the public, through the channel of the Newspapers, respecting the value of the crop, and the attempts lately made to inflame the minds of almost every rank in society, against the growers and dealers in the produce of the soil. It has been expressly stated, through the whole course of the season, in opposition to positive facts, that a most abundant crop every where loaded the face of the country, and that the high price of provisions has arisen, in a great measure, not from any real scarcity, but from a combination amongst the farmers, the dealers, and the manufacturers of grain, who are held out to public detestation, under the odious names of Foretallers, Monopolizers, Engrossers, and Re-graters. These misrepresentations, and the conclusions drawn from them, have been supported by the opinions and decisions of men, who, at least, ought to have been better informed, and who have raised an alarm which has nearly

nearly set Britain in a flame. The mutual confidence which, in every well-regulated society, ought to exist betwixt the inhabitants of the country and those in towns, has thereby been relaxed, and a degree of enmity created, not much inferior to what prevails betwixt hostile nations.

We have lately seen this spirit displayed in acts of open violence and outrage against bakers, millers, farmers, butchers, and other dealers in provisions, not only in the metropolis, but likewise in many of our provincial towns. But it is to be hoped, that the wisdom of Government, supported by the returning good sense of the nation, will in future effectually prevent such disorders, and remove every impediment to a free internal traffic in grain, which alone can afford a regular and constant supply of provisions, proportioned to the demand and the quantity in the country. In this northern climate, clothing is as much a necessary of life as food. If the merchant and retailer were persecuted by law, or by the practice of the courts of justice, would the community be cheaper or better served, by being sent to the manufacturer? Most certainly the contrary effect would be produced. The manufacturer would not know how to proceed with his business; manufactures would receive a check; and the regular supply to answer the current demand in the market not arriving, scarcity would ensue, and with it an advance in price. In the present state of society, when the greatest part of the population of the nation is crowded into towns, the preventing, or throwing impediments in the way of a free internal commerce in grain or other provisions, is equally impolitic, and would be attended with the same evil consequences, as shutting up all the retail-shops, and preventing merchants from purchasing goods from one another, by which the price is supposed to be enhanced to the consumer; for it is not within the compass of possibility, that the inhabitants of the large towns can be supplied with provisions from the actual raiser of the different articles of consumption, no more than they can be supplied with every article of dress from the actual manufacturer: And this free commerce in grain, as well as every other article, so far from enhancing the price, by passing through different hands before it comes to the consumer, has a quite contrary effect; of which we shall give the following striking instance exactly in point.—In years of plenty, when wheat of our own growth nearly equals our consumption, the city of London is mostly supplied by corn-dealers,

who bring it from the country, and sell it in the public market: it is there purchased by millers, who again carry it to the country, manufacture it, and bring it back to the London market, where the flour is publicly sold to the bakers. In Scotland, in years of plenty, the bakers are mostly supplied by the farmers, who carry the wheat into the bakers loft at the mill, at their own expence, where it is ground for the baker, and the flour carried home to the bakehouse by the miller; the cost of grinding not being one half of what is charged in the neighbourhood of London. Agreeable to the popular opinion, bread ought to be considerably cheaper in Scotland than in London; but the reverse of this is the case. Upon comparing the price of bread in London, and the price of corn at the corn-exchange, with the prices of these articles in Scotland, it will be found, that bread is considerably cheaper in the city of London, in proportion to the price of wheat, than it is in Scotland*. We recommend the consideration of this fact to those who wish to throw impediments in the way of a free internal traffic in grain, by persecuting those who are engaged in that necessary branch of commerce.

Numerous associations are going forward to accomplish a reduction of prices, and resolutions entered into not to purchase higher than certain rates condescended upon. Without inquiring whether such measures are illegal or not, we must observe that they are grossly unjust. Their object is to take from the seller a part of the money which his articles would have brought him at market, if no restraint had been imposed upon its natural course; which is precisely the same, as if all the sellers were to combine not to dispose of their articles, unless they received higher prices than the state of the markets would give them. Under this last case, the law, it is presumed, and very justly, would instantly punish them for such a combination. Now, we know no difference between the cases: by the one, it is intended to make the seller take less money for his article; and by the other, to make the purchaser pay more than the level of the market warrants:—the consequences are precisely the same to the parties.

As

* At present, it is standard bread, at the medium price betwixt household and wheaten, that is baked in Edinburgh; whilst, in London, only wheaten bread is baked.

As this subject is interesting to every member of the community, we have been induced to discuss it in this leading article. We have given our sentiments, we trust, with candour, though with firmness and truth; a line of conduct we are determined to pursue.

Before we are done, it is highly proper to recommend, that similar measures should be taken to supply the wants of the poor, as were last season so generally practised. While we contend for freedom of trade and unrestrained markets; as being the sure method of insuring a regular supply of provisions, we as earnestly recommend sales, at reduced prices, to the lower classes, who, at the present rate of wages, cannot subsist themselves and families. The philanthropy of the country was distinguished, in the extreme, last winter; and, if Providence has visited us with another short crop, let it be the care and concern of all provided with the means, to alleviate, to the uttermost of their power, the distresses of those who are unable to bear such calamities.

EXTRACTS FROM PRIVATE CORRESPONDENCE.

S C O T L A N D.

Extract of a Letter from Inverness, September 1.

OUR harvest is now general, and, if dry weather continue, the crop upon my farm will be nearly cut down this week. The crop, generally speaking, is very light, as we have had no rain worth mentioning for a long time. From the scarcity of fodder, I should not be surprised, that hay sells in the Spring at 2s. 6d. per stone. Several fields of barley have been lately sold from 16l. to 22l. per acre, which, in my opinion, will not yield above six bolls, or thirty-six bushels: oats proportionally high: so you will see what value is put upon the fodder.

The turnip-crop on my farm continues in a thriving state. Potatoes, though apparently good, are not likely to yield more than half their usual return, which will bear particularly hard upon the poor people. Within these ten or twelve days, the whole of the oats in this neighbourhood have been covered with a black insect; not a stalk but what carries thousands of them. As yet, I see no injury done.

Extract of a Letter from a Gentleman near Perth, September 11.

Our wheats are very thin, though, in general, the ear is close set, and the grain of good quality. Oats are, in most places, a poor crop; and the quality very inferior to an ordinary average. This may be attributed, *in part*, to the wet seed-time, the weakly seed sown, and the severe drought following, which, in many places, bound the ground, so that the plant could not forage as usual. Also, all round this quarter, the oat-crop, in particular, has been, for many weeks past, infested with small blackish vermin, which, I am persuaded, must tend greatly to retard the nourishing quality from rising up the stalk, to mature the grain; and, in my humble opinion, this last mentioned cause has not been the least powerful in reducing the quality of the oats of this season. Barley, in most places is far short of its ordinary bulk; in some thin sandy soils, it was almost parched up. However, on the whole, the grain is of a fine quality, from its having the benefit of such an uncommon degree of sunshine in the course of the Summer. This remark, however, respecting the barley-crop, must be received with some little exception; and, indeed, all remarks of an agricultural nature, this season, must be cautiously made; otherwise most erroneous conclusions would be drawn, the crop being so various, at least in this quarter. On some of my fields, the variety of crops, from *good*, down to mere *nothing*, never appeared so as this year. In this neighbourhood, few peas are sown; what little there is this season, are what is called pretty corny, but little straw. Turnips, wherever they braided fairly, have stood out much better than could have been expected, considering the dryness of the weather; and now, with the refreshing weather, promise a most luxuriant crop. I need say nothing about the state of the pasture grounds. They are here, as in most other places, much barer than ever I saw them. I hope the fine rains we have had, will, even late as the season is, produce some fresh vegetation, which would indeed be most acceptable, when fodder of all sorts will be so very scanty for the Winter supply. Potatoes were, early in the season, most promising; but I am sorry to find the roots are not like the tops in that respect. I hope they will still improve in size, though I have some little doubts on this head, from the appearance of fresh vegetation from some of the first formed potatoes at the roots of many of the plants. The shaws, however, in many places, are still vigorous, though, in hollows, and by the river side, they are quite gone, from the effects of hoar-frost, which we had here about ten days ago. Live stock, of all descriptions, in our markets, are a mere drug. Butcher-meat is much reduced—best beef, 5d.; mutton 4d.; and it is thought will still be lower.—Inferior sorts
much

much under the above. I can say nothing at present as to the price of new grain, no market being as yet fairly opened. Oat-meal 2s. per peck ; the quartern loaf is 1s. 3½d.

Extract of a Letter from the same Gentleman, October 6.

I now send you a note of prices in Perth market on the 3d instant, although as yet no very great quantity of grain has been offered for sale.

Wheat, 40s. to 43s. 6d. per boll.	Beef, 4d. to 5½d. per lb. Dutch weight.
Barley, 30s. to 36s. per ditto.	Mutton, 3d. to 4d. per ditto.
Oats, none in market.	Lamb, 4d. per ditto.
Oat-meal, 2s. 2d. per peck.	Butter, 1s. 6d. to 1s. 7d. per lb. Tron weight.
Barley-meal, 1s. 6d. per ditto.	Eggs, 9d. per dozen.
Potatoes, 1s. 8d. per peck of 32 lb.	Hay, 1s. 8d. per stone.
The Quartern loaf, 1s. 3½d.	Oat-straw, 1s. per ditto.

In last week's newspaper, I observed a strange resolution amongst the good people in Edinburgh, respecting butter. Although I am a great enemy to all such as demand extra profits on any article, in particular such a necessary of life as butter is ; yet I am sorry to hear of any plan formed not to use this article. It must be evident to every person, in any degree capable of forming an opinion on the subject, that butter cannot be afforded this season for a price short of double the ordinary rate ; otherwise those who furnish it must be soon ruined. I mention this only by the by, and beg you would take some notice of it in your next Number. The remarks I made in my last, on the crop, I can now confirm, having thrashed part of my wheat, barley, and oats. The two first are of excellent quality, but the last vastly inferior. What of the oats I have had at the mill, has taken six firlots to bring one boll of meal : and I am sorry to hear of even less returns than that. For about ten days prior to the 3d current, we had very indifferent harvest-weather—rains every other day, and yet no material damage done. We have now again fine dry weather, which I hope will continue for some days. There is now a considerable degree of vegetation in the ground ; and our pasture-fields greener than in June. No doubt, the quality of the grass is vastly inferior to what grows in Summer ; but still it will prove of great benefit to the bestial, and save what little fodder there is till Winter. Had we not been blessed with such mild weather, the prospect for Winter-forage would have been melancholy indeed. I am glad to add, that our potato-crop has greatly mended of late, and that turnips are still improving fast.

Since

Since writing the above, I hear that barley has been this day sold so high as 42s. per boll.

*Extract of a Letter from a Gentleman in Strathern, Perthshire,
September 22.*

Strathern has, this season, been particularly subject to the effects of the more than usual drought; therefore, our crops cannot be called good. The failure is chiefly felt in barley. Peas and beans, for the most part, have not so much straw as usual, but plenty of good pods. Oats are very short, the ear pretty well, and the grain of a good quality. Some, of an early variety, which had been manufactured, yielded not much less than meal for corn at the mill. Our wheat turns out better than was expected. The oats were lately much burdened with a black insect; but I do not find that much harm is thereby sustained. About the beginning of Summer they were severely cut up by the grub-worm; but afterwards, three or four stalks sprung up from those apparently destroyed; and such parts have turned out the best crop.

Turnips have, in a great measure, failed; though there are some good fields here. The pastures were reduced to dreary wastes during the long drought, but now begin to present the hue of Spring. Our hay-crop has proved very scanty; and, with the little straw which this year's crop affords, makes me earnestly hope for a favourable Winter; else I do not know what will be done with our stock.

I cannot say much about the price of grain; but I lately bought some old oats, at Perth, for which I paid 32s. Wheat is 55s.; hay 20d. per stone; and oat-straw 1s. Cattle sold pretty well at Falkirk Autumn tryft; but the preceding markets in our neighbourhood were dull and low.

*Extract of a Letter from a Gentleman in the South-East Corner of
Berwickshire, September 22.*

I have lately had occasion to travel through Northumberland, Durham, and part of Yorkshire; and such observations as occurred, thrown together as recollection, amid the hurry of harvest-work, admits, are much at your service. I left Berwickshire in the end of August, some time after harvest was begun here, and returned on the 12th of September, after an absence of nearly three weeks.

I did not find the harvest a bit farther advanced, than on this side Tweed, all the way to the vale of Tees, which divides
Durham

Durham from Yorkshire. In the noble tract of country from Tees to Knaresboro-forest, harvest-work might perhaps be a week farther forwards than here, especially with wheat, peas, and barley. In that fine turnip-district, vast quantities of later sown turnips had entirely failed, and the land was working over again, probably for wheat. The earlier turnips seemed good; but almost uniformly broad-cast: some few *rowed*, by the harrows only; but at such small intervals, as not to admit the horse-hoe. On these lands, I observed, in a former journey, that a great part of the dung was harrowed up to the surface; and, consequently, was in a great measure lost, both to the turnips, and those crops which are to succeed. The land seemed well pulverized; but by no means even tolerably cleaned from couch and other weeds. In this last excursion, I observed some fields, in which the turnips had not succeeded, most disgracefully covered by heavy crops of weeds, fast running into seed, if not already seeding. The succession seemed, on these *turnip-soils*—turnips, barley, broad clover for hay, wheat. Universally, a large proportion in perennial meadow, or grass for hay: consequently, these are never broken up for the production of heavy crops of grain and turnips; nor does the arated land ever derive the vast improvement of pasturage. Having, however, no opportunity of particular information, I know not how far this eternal jog-trot may be forced by tithes; but I do know, that it is imperiously continued by the total absence of leases.

Generally speaking, the inferior lands in Knaresboro-forest, where I was near a fortnight, have poor crops; and these are very much injured by the bad weather which occurred about the beginning of September. I saw wheat growing there, literally not worth harvesting, rent, seed, and labour out of the question; but indeed on land which ought only to carry trees.

In Knaresboro-forest, almost universally, a good deal in the rest of Yorkshire northwards, and almost generally in Durham, and the south of Northumberland, the oats were of the Tartarean kind. Those I saw at the inns, and in the fields round Harrowgate, prejudiced me much against them, as they were small-bodied, and very long tailed. They were likewise much mixed with wild oats; which, however, is an extraneous fault, owing altogether to bad husbandry.

In the Yorkshire harvest-work, where I had occasion to see it, each reaper made his own band, and bound his own sheaf. This is contrary to the principle of the *division of labour*, and seems not nearly so economical as our practice of band-winds, six, or even seven reapers, in two ridges, the middle reaper in each making the bands, and a *bander* behind, who binds and sets up all the sheaves.

The

The reaping which I attended to, near Harrowgate, was more cleanly taken up from the stubble, than any ever I saw in Scotland. Even on wheat-fields, gleaning did not seem worth attempting. Returning, however, through the fine country already mentioned, by Rippon, Northallerton, and Darlington, I observed many bunches of gleanings on their way home; but most of these were evidently pulled, and I saw the cottagers, in several places, busily engaged in cutting off the roots from their gleaned wheat.

In spite of old custom, I am decidedly an enemy to gleaning; it encourages idleness, when hands are wanted for reaping; it initiates the young into habits of pilfering, as I know parents often punish their children if they do not bring home abundant gleanings, which prompts them to steal, that they may loiter; it occasions dishonest reaping, that plenty may be left on the ground for the children and followers of the reapers. I never permit gleaning, till my crops are carried off the ground; and then, because it is customary, the gleaners and my cattle may gather in conjunction. I once counted above eighty gleaners on a large stubble-field near Prestonpans, in which the reapers must have committed immense waste, to make it worth while for such a multitude to glean. As well might a farmer scatter uncounted handfuls of money by the road, as he returns from selling his grain, as leave grain, or allow it to be left, wastefully in the field, to be picked up, by non-industrious, though busy poor. Let farmers, and all others, give of their abundance to those who really need; but scatter not at random, you know not what, to you know not whom.

In this neighbourhood, (Berwickshire near the sea), a great loss has been sustained, in oats that were nearly ripe, when the thick weather came on at the beginning of this month. The necks of all the best pickles became black and tender, so that the wind and handling broke them off. I estimate the loss, on several acres of my farm, at twelve bushels the acre. Early oats escaped this injury; but were a good deal shaken about the middle of August, and are much discoloured by the thick weather. I do not observe much growth on the barley, or wheat, or peas, that were then cut. I have made some discoloured Angus oats into meal, which, after paying the miller, the Lord knows what proportion, produced 9 bolls of meal, from 10 bolls of oats; or 90 English stones of meal from 60 Winchester bushels of oats, which is exactly 21 avoirdupois pounds of meal from the bushel of oats.

So far as I can pretend to judge, the produce of grain on the good dry soils will be a fair average crop; and the grain, where not injured by weather, of excellent quality: But, on the clay lands, even the most fertile, the crop is thin; perhaps, generally

generally speaking, it will not exceed half an average; on cold wet lands it is excessively bad, particularly early oats, which, on some, even fertile clays, are hardly worth reaping. Universally, except on some very favourable spots, the straw is extremely short; so that, on the whole, few farmers will have above half the fodder of an ordinary good growing year. Hay, consequently, besides being generally a light crop, is rising fast in price. At Berwick, it began in the rick at 16d., and fell to 10d. the stone of 24 lbs.; now it is said to have returned to 16d., and to be on the rise. I sold, four weeks ago, thrashed hay, at the rick side, for 14d. the stone of 22½ lbs. At Newcastle, I was told it began at 6l. and 7l. and is now 9l. the ton.

Wherever I have been, turnips have failed universally on cold lands, and very much so on later sown dry soils. Even on the best soils, the early sown turnips, though luxuriant in foliage, do not root by any means well: I think I have seen them nearly twice the diameter by this time of the season.

If I may judge from what I saw in Morpeth market, on the 10th of September, fat cattle, sheep, and lambs, are scarce; as great numbers, in a miserable state of leanness, were on sale, and, I was told, brought full 6d. the pound. The fat, I suppose, are much exhausted by the demand; the succession has been prevented by the long drought; and graziers are pushing off what they can, from the bad prospect of Winter food.

Extract of a Letter from Thurso, September 25.

I have, with much satisfaction, perused the three first Numbers of your valuable Magazine, which will soon find an extensive circulation in this part of the country; and I hope your success will be equal to the general utility of your laudable undertaking.

I see that you wish to be furnished with reports of the state of the crops in the different districts. I have the pleasure to inform you, that, in the county of Caithness, the hay-crop has been abundant, and was got up in excellent condition. The corn-crops, in consequence of the long continued drought, will be short in fodder, but by no means deficient in grain, and that of excellent quality. The state of harvest affords the prospect of a safe and speedy conclusion, the weather being uncommonly favourable, and the reaping far advanced. On my own farm, in the neighbourhood of Thurso, the corns were all got in, and *the barn-yard flap closed, on the 15th of this month*; and I think I may venture to say, that, by the 10th of October, not a sheaf will be out in any part of this county.

Our

Our remote situation, no doubt, subjects us to certain inconveniences in regard to markets; and perhaps many intelligent men, in other parts of the kingdom, have formed very erroneous opinions and notions of the fertility of our soil, and the nature of our climate; but they should not forget, that, in the oldest Scottish Law Book, the *Regiam Majestatem*, the Caithness boll is laid down for a standard measure; and, as facts are stubborn things, I here give you a correct statement, taken from the Custom-house books of the port of Thurso, of the quantities of grain and meal shipped off, of the growth and produce of Caithness, of crop 1799, which, being compared with the state of other counties, in that season of general scarcity, will convince your readers, that, in point of agriculture, this district is not so far behind as many suppose it to be.

Grain and Meal shipped off, viz.

	Bolls.
Wheat - - - - -	36
Barley, bear, or bigg - - - - -	6,847
Oats - - - - -	2,472
Peas and beans - - - - -	12
Oat-meal, of 140 lb. avoirdupois per boll -	9,020
Barley-meal, of 156 lb. avoirdupois per do.	1,370
	<hr/>
	19,757
Besides several quantities, sent partly over land, and partly in boats from different creeks, to the neighbouring counties, without Custom- house dispatches, not under - - -	1,600
	<hr/>
In all	21,357

You will observe, that not a boll was imported or brought coast-wise into the county, and the inhabitants were plentifully supplied.

The Caithness boll of barley and oats is 5 per cent. better than the Linlithgow standard.

Berwickshire Quarterly Report.

THE fine warm weather, which commenced in July, with the unremitted continuance of drought, made corn shoot prematurely into ear, and brought harvest on much earlier than was expected: many farmers had begun reaping previous to the 20th of August, since which there has not been 20 days entirely free of rain; from the 3d to the 10th of September, it rained almost incessantly, by which the cut corn was greatly sprouted, and even standing
corn,

corn, where fully ripe, was in many cases sprung, and very much discoloured.

Wheat, which occupied a smaller extent than usual, is not equal to an average crop per acre; but the quality is in general good. The peas crop, which also occupied but a small extent, had not a promising appearance at the beginning of this quarter, but recovered surprisingly after the warm weather set in, and has at last turned out exceedingly productive. Oats are a very light crop, and, from the trials already made, do not promise to yield, per boll, a greater weight of meal than last year. Barley is good in quality, where not damaged in harvesting, but will come short of an average crop per acre. Straw is every where greatly deficient in quantity, and much of it discoloured by the rains. In the lower district, harvest is now nearly concluded. Reapers wages have been from 6d. to 8d. below last year; men being about 1s. 2d., and women 1s. per day, with victuals; though, one week, from the pressing demand after a delay occasioned by bad weather, they were as high as 2s. and 2s. 9d. per day.

Potatoes are in general small, and not likely to turn out productive. They were stunted by the drought, and have, in many situations, sent forth young fibres, each potato becoming a mother plant. Turnips, in general, are extremely thriving, and may be considered as better than an average crop. Young clovers met with a severe check from the drought: some few fields died away altogether: however, most of them have recovered a healthy appearance, though not so forwardly as usual. The fallows, in general, are in fine order, and a few of them already sown with wheat.

Hay, which proved a very light crop, was in most cases extremely well got; prices from the rick were from 1s. to 1s. 4d. per stone of 22½ lb. English. The foggage, or aftermath, has this season made but a very poor appearance. Pastures suffered greatly from the drought; notwithstanding which, sheep and cattle kept their condition better than could have been expected; and, since the fields resumed their verdure, stock of every description has made a rapid improvement.

Markets for lean cattle were very dull in the beginning of this quarter; but since Dunfermline fair, prices have rather been upon the advance. The demand for sheep to the English market, has of late been considerable; in consequence of which, prices have run from 18 to 24 per cent. above last year. Wool, in the lower district, sold from 18s. to 21s. per stone of 24 lb. English, being about a shilling higher than last year; but the fleece, in general, weighed from 16 to 20 per cent. lighter. New corn has been selling at Berwick as follows; viz. wheat, from 60s. to 70s.;
barley,

barley, from 38s. to 42s.; oats, from 26s. to 30s. per boll of six Winchester bushels.—Butcher-meat at Dunse, per lb. of 17½ oz., beef from 5d. to 6d., and mutton from 5d. to 6d.

September 30. 1800.

Ross-shire Quarterly Report.

THE constant and severe drought which prevailed during the months of June, July, August, and part of this month, though favourable in bringing forward the harvest, has, in many places, been attended with the most pernicious consequences. Oats, which is our principal grain, have suffered most; they are not half their usual bulk, and it is found they meal poorly. Not above one third of them are stacked, the harvest having been much retarded, for upwards of two weeks past, by wet weather; but, should they escape injury from the weather, still there must be a great deficiency, and will be found to prove, in quantity as well as quality, far below an average crop. Barley, though not bulky, may be pronounced a good crop upon the ground; it is of superior quality, and a considerable part of it has been stacked without a shower. Wheat does not enter much into the present system of farming in this county: the few farmers who raise that grain, were prevented from getting their usual quantity sown, by the rains in last Autumn; and a good deal of what was sown was ploughed in the Spring. What remains, is very thin in the ground; but the quantity is so trifling, that it is supposed there is scarcely as much growing in the county, of this crop, as will sow the next. Peas are below an average crop, in many places having totally failed from the drought; but they are not a crop of general attention. Potatoes will not be productive; and a great many of that valuable root have been prematurely consumed by the poor people, who, for want of meal, began much sooner to use them than usual. It is distressing to see the patches of the poor cottagers so far exhausted at this early period. Many families have lived solely upon them for two months past; and by thus taking them before they had attained any thing like a full crop, what they expected, at planting, would have served their families till next crop, will not last beyond Christmas. Turnips, where they have not totally failed from the drought, are a pretty good crop. Hay, in many places, was scarcely worth the cutting: it sold from the field at 1s. per stone, and none can now be had under 1s. 6d. New oat-meal has been selling at 40s. per boll of nine stones, and barley from 40s. to 45s. per boll: But we have scarcely a market for grain at present; not so much for want of a demand, as for want of grain to sell. No one will thrash out at present, for fear of wasting their straw before Winter,

ter, of which there never was such a scarcity ; four times the usual price is offered for wintering cattle with straw. Butcher-meat sells from 3d. to 4d. per lib. and beasts in condition meet with a market in proportion to these prices ; but for lean, and young cattle, with which we are far overstocked, we have no demand.—September 29. 1800.

Argyleshire Quarterly Report.

FROM the coldness of the Spring, and the great drought of the Summer, our corn-crops this year are not so bulky as usual. But what is wanting in straw, is more than made up in grain ; so that, upon the whole, the crop may be considered as a good one, and more than sufficient to serve the county, if much of the bear be not distilled. As we had no rain till the 20th of September, all the bear, and about half the oat crop, was got in before the weather broke. From the scarcity of water for grinding (a very uncommon thing in this county) little of the grain has been manufactured till within these ten days, in which time bear-meal has fallen from 20d. to 14d. the peck, and oaten meal from 3s. to 1s. 10d.

The potato crop is of an excellent quality ; firm and dry, but in most soils not so large and numerous as usual. Few of the potatoes have yet been dug or sent to market. At Campbeltown, they sell at a shilling the peck. At Inverary, the Duke of Argyle, who raises large quantities, sells them at the low price of former years.

As the cattle were low in Spring, and the grass late of springing up, the quantity of butter and cheese made, is less than usual. Butter sells at 14d. and cheese at 5d. the lib. Butcher-meat from 4d. to 5d. where it is sold by weight : but, through the county in general, cows and sheep are bought whole and alive. There is little demand for fat cattle, and it is thought they must be sold much lower than for some years past. Sheep farmers, who sold their widders early, got nearly the price of last year, a little under or over 20s. But those who were last of selling, made a worse market. Wool has sold considerably higher than last year ; a great part of it about 8s. the stone.

The quantity of herrings taken this season on the coast of this county (which commonly makes a considerable part of its revenue) has not yet been so considerable as for some years past ; nor are the last accounts from the herring-busses that have gone to the North Isles, so flattering as could be wished. But as the most of the fish is commonly taken after this time, there is yet no reason to despair of a good fishing. The herrings, sold fresh along the coast, have been generally about 3s. a hundred.

At present (in the beginning of October) our weather is wet and cold. We are thankful for the good weather we have already got ; and trust in a gracious Providence, that the year will be crowned with his goodness.—*October 2. 1800.*

Perthshire Quarterly Report.

THE county of Perth is so extensive, that the state of the crop in one district can hardly be accounted a true criterion of the general state of the harvest over the whole ; yet, so far as the situation of this county has fallen under my observation for some weeks, I am desirous to acquaint you ; that you may judge in what degree it may be of use to the public, through the medium of your Miscellany.

The extreme drought last Summer, and part of this Autumn, had parched the ground so much, that two kinds of soil have proved very unproductive ; the light sand and gravel, and also the stiff cohesive clay or till. The first was too porous and open, to resist the influence of the season ; the last was of so close a texture, that it became hard as a sheet of iron, and locked up all the principles of vegetation. All our crops have failed in both these kinds of soil. The straw is extremely short, insomuch that, in a variety of instances, it was impossible to gather any by the sickle : the people were obliged to pull the crop, as they do lint, or to cut it down with the scythe. The grain is generally meagre and thin ; being blanched under a burning sun, before the usual season of ripening.

Wherever the crop grew from old lea, or from a deep loamy soil, or on level haughs, where the moisture was abundant and not easily exhaled, or in the narrow glens of the Highlands in the vicinity of mountains, which attracted clouds and occasional vapour, being cherished by these favourable circumstances, it has proved abundant, the grain well filled, and the straw no scantier than usual.

Upon the whole, however, the instances in which the crop has been as good as usual, do by no means counterbalance the instances in which it has failed ; so that, in my opinion, taking the whole county at an average, we may be said to want a third part of what is estimated a fair crop.

Since the middle of September, the weather has broke, which is a critical season for the greater part of this county ; and if the rains continue, which is very likely, from the long tract of dry weather lately past, we may lose a great part of what remains still in the fields.

It

It is to be hoped, that Government will adopt early and effectual measures this season, to ward off the pressure to be dreaded by the scarcity to be expected from the failure of the present crop. Importation is expensive, owing to the successive and accumulated profits always derived from grain, by every hand through which it must pass, before it can reach the consumer. Importation may eventually prove extremely precarious and uncertain, by the failure of crops in other countries, of which our experience, last season, is an irrefragable proof. Why not do the best we can at home, and husband the grain we have, with the most prudent economy?

Government did, last season, adopt the expedient, which they had formerly fallen upon in similar cases, and which they may probably think upon again in the present situation of the country, *to prohibit the distillation of grain into spirits*. This expedient is well meant; but it is only doing things by halves, or rather doing nothing at all, when you take the loss of revenue into the account.

So long as there is an unbounded license to malt, all the restrictions to distil, are nugatory and ineffectual. Last season, almost the whole of our home-grown barley, and a great deal of our imported barley, was converted into malt, and every person in this part of the kingdom, even every school-boy, knows that four fifths of this malt was made into whisky, in spite of all restrictions to the contrary, and in absolute defiance of law. Government did not, perhaps, foresee this malversation, occasioned by a collusion between the maltsters and the smugglers; and, therefore, they stand excused by every well-disposed man. Those at the helm of affairs, to whom we look up with anxiety for relief, no doubt expected that malting might go on, and, at the same time, that it was possible to suppress distillation. But every time they have calculated on this possibility, it has failed; and if they should try the same expedient fifty times, it will fail as often.

It is so easy to elude the law in this respect, that no human prudence, no human sanctions, can guard against the trespass. Allow me to malt to any extent I please, and to dispose of that malt to whom I please; having sufficient capital, I engage fifty, or as many hundreds of penniless beggars, who understand distillation; I provide them with money, to purchase apparatus on a small scale; I sell them malt; they retire into woods and dens, and the crevices of rocks; into islands, and sequestered glens and mountains. If they are seized by the officers of excise, and sued before the Justice, they have nothing to lose; if they escape, which is often the case, I receive their spirits in exchange for my malt, and by this gainful nefarious traffic, I make cent. per cent. of my money, as I pay no duty but that for malting, and a trifle to these lawless hirelings.

This is no new or ideal scheme of injuring the commonwealth, which an honest man ought not to suggest. It has been followed almost openly, during the time of our greatest distress, within these twelve months past.

A remedy might be easily supposed ; but it is of no avail to develop the evil, or to point out the remedy, unless our Legislators think seriously of putting a stop to such a glaring misapplication of human food.—*October 2. 1800.*

Morayshire Quarterly Report.

ONE fourth of the grain in this county is still uncut, and a considerable part of what is cut remains in the fields. The weather has been unfavourable for eight days past ; and more rain will injure the wheat and barley much : hitherto, both are free from springing.

As one half of our land consists of sandy soil, a fourth of carse clay, and one fourth of free rich loam, the deficiency of corn and fodder on the two former, from causes evident to every farmer, is beyond precedent since the year 1781. Wheat is not supposed to average more than five, and barley four and a half bolls per acre ; but both, if fairly got in, will be of exceeding fine quality. Oats are still more deficient in quantity, as well as quality. For weeks previous to their arrival at maturity, this grain was infested by an insect, which, placing itself on the stalk and bearers, weakened both, and evidently prevented the pickle from receiving that small nourishment which the parched earth was little able to afford. Of last crop, this county spared many hundred bolls of oats, equal in quality to any, and superior to most in Scotland : It is doubtful if crop 1800 will do more than supply ourselves. Potatoes are a poor crop, but the quality is good ; and as farmers, who were in the practice of feeding cattle when worth but 4d. per peck, will, thus, when likely to sell at 10d. to 1s., be induced to bring them to market, it is probable that the inhabitants will find a sufficiency both for food and feed.

No wheat or oats are yet thrashed out, nor prices fixed ; for, while the weather continues such, that cattle can find even a scanty maintenance in the fields, farmers will not be easily induced to thrash out, when provender is in such request. Barley and straw have sold on the ground for 3l. per boll. Hay gives 2s. per stone, and more likely to rise than fall in price. Brewers are paying 3s. to 4s. per boll for barley ; but little has been grinded down for meal, as the markets are yet supplied with old grain, bought up by the magistrates
and

and incorporated trades of Elgin and Forres, from farmers and corn-dealers, at 28s. to 36s. per boll, and sold according to its produce in meal, to keep them from loss; so that probably in no county of Scotland, except Caithness, were the inhabitants so cheaply furnished with meal.

For two or three weeks past, cattle of all descriptions have met with a ready sale, but at prices so low, that money will be lost by the graziers, who still think themselves fortunate to get clear-handed, considering the want of Winter keeping. Turnips, although greatly improved during the last six weeks, are rooting poorly, and are still far under an average crop. Beef and mutton sell at 2½d. to 4d. per lib., and not likely to alter before Christmas.

The Morayshire barley and oat firlot contains 32 Scots pints.

Wheat ditto, 22 ditto.

Hay, 20 lib. Amsterdam per stone.

Potato, 32 lib. do. per peck.

Beef, 16 oz. do. per lib.

Five firlots of oats go for a boll, when sales are made in the county.

Few peas or beans are sown in Moray; and both are this year a bad crop.—*October 3. 1800.*

Extract of a Letter from Grangemouth, 29th September.

There are yet about two thirds of our crop in the fields: what is stacked, in general, bulks ill. Barley is the worst crop, and in quantity will not yield more than half of an ordinary year's crop. Wheat is middling, and will not fall much short. Oats were very thin on the ground, and short in the straw, but will give well in the mill, and exceed the produce of last year, though they are not above three fifths of a crop. Beans are strong on the ground, but will not yield well in the barn-floor: they are, however, a better crop than last year. Peas are a very good crop, and will be equal in quantity to any ordinary year. The quality of the whole will be good, if we have a continuance of good weather to get well in. These are, at present, the general opinions respecting our harvest; but, until it is all brought in, it is not easy to form a just idea of the quantity. Few farmers expect half their usual fodder. The crop of potatoes has failed very much. Prices, we are of opinion, will remain much as at present, for a month or two; but, thereafter, we doubt they will go higher. Annexed, you have the present prices of grain, which are very nominal. When we get any farther information respecting the state of our crop, it shall be communicated.

Wheat,	40s. and 45s. New, 50s.	} Per boll Stirlingshire, which is $7\frac{1}{2}$ per cent. above Linlithgow.
Ditto foreign,	42s. — 50s.	
Barley,	30s. — 37s. New, 42s.	
Oats,	25s. — 30s. Fine, 32s.	
Beans,	26s. — 30s. New, 38s.	
Peas,	28s. — 31s.	
Oats, 2s. per peck in retail.		

Extract of a Letter from Dunkeld, October 2.

I shall do myself the pleasure of communicating such information as has fallen in my way. The showers of rain in June, July, and August, only wet the surface; but, during September, a great deal of rain has fallen. Along Strath-Tay, as far as the junction of the Tummel, and along the Tummel, and around Blair, the rains were frequent in August, and the crops of grain better than in this quarter.

In the above tracts, the barley crop may be considered as remarkably fine, and the oats short, but good in quality. Potatoes are greatly benefited by the late rains; flax tolerable; and, as for turnips, few are cultivated, except it be upon the farms of proprietors.

From the junction of the Tummel with the Tay, all the way to Perth, the crops have suffered much from the dry weather. They are of very little bulk, but generally good in quality. From Dalnacardoch, down the vale of Athol, and along Strath-Tay to Perth, the crop is cut down, and almost got in to the stack-yard, though much retarded by the rain, which falls every day. A great scarcity of hay, and other fodder. Fat cattle are on the rise; and the demand for lean stock is increasing. The pastures are now pretty good. The oats suffered much from a black insect, particularly those upon light soils.

State of the Markets.

Hay, 1s. 6d. to 1s. 8d.; salt butter, 22s. to 22s. 8d.; cheese, 8s. to 9s.; all per stone of 22 lib. Fresh butter, 18d. per lib.; beef, 4d. and 4½d.; mutton, 3½d. and 4d.; oat-meal, 2s. 4d. per peck; wool, 12s. to 14s. per stone; oats, 28s. to 30s. per boll; but little of this crop yet brought to sale.

Extract of a Letter from a Farmer at Strathmore, October 2.

Very few trials have been made of this new crop; as the apparent scarcity of fodder is so great, that thrashing will be delayed as long as possible. We are well advanced with harvest-work, and nearly all in the stack-yard; but, in the eastern parts of the county, they are
much

much behind, though, in ordinary years, they are always before us. Turnips are generally good. I never had better. Oat-meal sells at 2s. 6d., and barley-meal at 1s. 6d. per peck. Barley for malting has been sold from 45s. to 48s. per boll, but not much to be got at any price. Potatoes are a bad crop, which will prove a material loss to the lower classes. Cattle have a tolerably quick sale, but they are not plentiful; I mean good ones.

Extract of a Letter from a Farmer in Teviotdale, October 3.

The corn-crop, in the low district of Roxburghshire, will not average that of last year in the number of bolls; but, from the superior quality, will be fully equal (oats excepted) in point of the means of subsistence. From the beginning of September to the 10th, we had almost constant fogs, breaking into showers, which damaged the corn very much, causing a great part of it to sprout, whether cut or uncut, particularly wheat. In the higher districts, the harvest is already completed, and will yield more than double of last year's produce, both in quantity and quality. Turnips, upon which we place great dependence, may be said to be a full crop, except those sown upon clay soils, which have completely failed. From the great deficiency of fodder and grass, recourse will be had to them early. It is expected that they will bring high prices.

Grain still keeps high. Wheat, from 62s. to 75s. 6d. per boll of 6 bushels; barley, 38s. to 50s.; oats, 30s. to 37s. per boll of $7\frac{1}{2}$ bushels. No peas or beans in the market. Beef, 4d. to 6d.; mutton, $3\frac{1}{2}$ d. to 6d.; veal, 5d. to 7d.; lamb, 3d. to 5d.; pork, 3d. to $4\frac{1}{2}$ d.; all per lib. weight of $17\frac{1}{2}$ English ounces.

Potatoes, which in the beginning of Summer flattered our hopes, will turn out an ordinary crop, being stunted in their growth by the severe drought. Short wool was sold from 20s. to 28s.; some very fine, as high as 32s.; long ditto, 18s. to 21s. per stone. Butter 18d. per lib. of 24 ounces; and in firkins of 56 lib. avoirdupois, from 55s. to 63s. As to cheese, no price is yet fixed, but from 10s. to 12s. per stone is expected. Hay was a very light crop; but we have small demand for that article, unless during a severe Winter. Oat-meal is 4s. per stone, but expected lower next week.

Extract of a Letter from a respectable House in Glasgow, Oct. 3.

We have had a considerable import of flour and wheat from America; not less than 8000 or 9000 barrels of flour, and 16,000 bolls of wheat, of excellent quality, and in good condition. The canal being shut up on account of the great drought,

little grain from the eastern coast has been received for these two months past. We beg leave to say, that all wheat sold here by measure, is by the Linlithgow firloot; and that all barley, oats, and beans, that come to this market by the Canal, are sold by the Stirling measure, which is $7\frac{1}{2}$ per cent. larger than Linlithgow measure. There are four counties within five miles of this city, and all their measures are different, which gives us a great deal of trouble. Stirling is $2\frac{1}{2}$ per cent. larger than Lanark; Renfrew is $2\frac{1}{2}$ per cent. larger than Stirling; and again, Dumbarton is 2 per cent. larger than Renfrew. Would not our Legislators do well to make all measures of one size, which would be a great benefit to the trading interest of the kingdom?

The wheats in this neighbourhood were thin upon the ground, but will turn out well from the straw, and are of excellent quality. What has already come to market, weighs from 60 to 62 lib. per Linlithgow firloot. Barley is also fine in quality, and supposed to be a good crop; weight from 18 to 19 stone English, per Stirling boll. Oats are but light upon the ground; and all that were early got, are only middling in quality. Late crops are better; beans and peas a fine crop. As more than one half of our crop is still in the field, we are afraid it will suffer considerably, unless the weather change soon. Potatoes are fine in quality, but not very luxuriant in the field. The hay crop has not turned out well; and the pasture and the meadow grasses have been greatly hurt by the long drought. Fodder will be scarce. Fat cattle are selling well, and bring high prices.

Present Price of the following Articles:

American wheat,	50s. to 52s. per boll of 240 lb.
Dantzic ditto,	50s. — 54s. per measure.
Hamburgh do.	48s. — 50s. per do.
English do.	45s. — 50s. per do.
Scotish do.	40s. — 50s. per do.
New do.	42s. — 48s. per do.
English barley,	30s. — 38s. per do.
Scotish do. new,	36s. — 40s. per do.
Baltic oats,	24s. — 30s. per do.
English do.	28s. — 36s. per do.
Beans of all sorts,	30s. — 40s.
Peas ditto,	30s. — 35s.
Oat-meal,	24s. — 30s. per boll of 140 lib.
Ditto new,	32s. — 35s. per do.
Hay,	1s. — 1s. 2d. per stone.
Beef,	6d. — 8d. per lib. tron.
Mutton,	6d. — 9d. per do.
Bar-meal,	16d. — 18d. per peck.
Peas-meal,	18d. — 20d. per do.

Inverness Quarterly Report.

THE fears formerly expressed respecting the crop, are too well verified: for, owing to the extreme drought, it is likely to fall short of an average. The wheats will not return a quantity equal to the consumption of the country. Barley, on the whole, comes nearest to an average crop. Oats are defective, both in quantity and quality, and peas very indifferent. Fodder must be exceedingly scarce, and hay, consequently, high in price. Potatoes, though in general looking well, are much complained of. I have heard of no grain sold at fixed prices, except barley, at 42s. and 48s. per boll. Oat-meal sells at 2s. 6d. per peck of 9 lib. Dutch; beef and mutton 3d. and 4d. per lib.

The first part of our harvest was favourable; but, since the 20th September, we have had very broken weather, and a considerable part of the grain is still out. The Highland districts of the county did not suffer so much by the drought as the lower parts; for, in the former situations, the crop, upon the whole, is thought fully equal to that of ordinary years. The price of lean cattle is very low.

—O^r. 4.

East-Lothian Quarterly Report.

THE dry sultry weather which commenced early in the Summer, and which we noticed in last Report, continued with unremitting ardour, accompanied frequently with dry parching winds, till about the end of August, when the wind, settling in the easterly points, brought on a tract of extremely damp weather, being a continued drizzling mist, known in this country by the name of an *easterly barr*. As this damp weather was accompanied with a considerable degree of heat, and at the same time a dead calm, it occasioned some damage to the crop that was cut, particularly to the wheat, barley, and beans. Even in uncut barley and wheat that were completely ripe, several of the grains appear to have vegetated, though not in the least lodged. The appearance of the oats is also hurt by the wet weather: being mostly ripe, and uncut during that period, they are much discoloured with the rain. The long continued drought had withered up every pile of grass on the pastures, and stunted the growth of every plant under cultivation; and, before the rain came, the crop was too far advanced to receive any advantage from the moisture. If the Autumn of last year had been favourable for putting in wheat in proper season, it is probable the crop of that grain would have been abundant;

for,

for, being a native of a warm climate, it requires a hot sun to bring it to perfection, and consequently the wheat of this crop is of a remarkably fine quality. The thick set woolly-eared kind, which, last season, owing to its retaining much moisture about the ear, was more defective than the kinds with thin set ears and smooth chaff, is this year reckoned superior, and, in the general run of seasons, will be found to be the most productive of the two, and best suited to the soil and dry climate of East Lothian. But although the wheat, this year, is of the best quality, it is thin upon the ground, owing to the bad tilth of the soil, occasioned by its being drenched in moisture last season, and the severe droughts succeeding in this, which rendered the soil so hard, as completely to prevent the plants from tillering. When therefore we take into consideration the small quantity of wheat sown, its thinness on the ground, and deficiency of bulk in the barnyards, we are of opinion, that the crop of this year will fall far short of the produce of an ordinary year.

The crop of barley is extremely various. On some damp free soils, it is a middling good crop; on dry bottoms, and on strong lands, indifferent; and on the lands that were much ploughed in the Spring, or late of sowing, it is most wretched. The quality of this grain, on the strong soils that were early sown, is fine, as also on the free dry soils, if not prematurely ripened with the drought; but the quality of late-sown barleys, that were not ripe when the wet weather set in, will prove very indifferent. Upon the whole, the crop of this grain may be esteemed below mediocrity. Beans are not half a crop, short in the straw, thin on the ground, and not well podded. They were much hurt by an insect that covered the leaves and upper part of the stem, in the end of Summer and beginning of Harvest, and have also sustained damage from the wet weather, having been mostly cut when it came on. The oats in East Lothian, this season, are certainly the worst crop ever remembered by the husbandman; short in the straw, thin on the ground, and of a wretched quality; the grains being small, husky, and long-tailed: and to all appearance, as well as from the trials that have been actually made, on an average, they will not produce above fourteen pecks of meal per boll. The ears of this grain, in most fields, during the month of August, were covered with dark-coloured insects, which clung in numbers about each grain, and probably hurt the crop, though their depredations were not apparent. In a field after Summer fallow, on a clay soil, the following uncommon occurrence was observed. The crop looked well in the early part of Summer; but in the month of July, when eight or ten vigorous stems, from six to eight inches long, had pushed out from one seed, a great number of these vigorous plants were noticed going into decay. Up-

on examining their roots, they were found totally destroyed by a worm or maggot, which had also eaten out or corroded the heart of the stems. All these plants completely decayed before harvest, inasmuch, that the field will not yield five bolls per acre.

Turnips have in general failed through the county. In many fields, the seeds never vegetated, for want of moisture; and in others, the severe and long continued drought rendered the plants sickly, when they were attacked and destroyed by a number of caterpillars and insects of various descriptions. In many fields, they have indeed escaped, and may turn out a middling crop; but, upon the whole, the cattle fattened in the county during the course of the ensuing Winter, upon these nourishing vegetables, must be few, when compared with the numbers fed off in an ordinary year.

The pasture grass being completely burnt up through the Summer, little milk and butter was produced, and many of the fattening cattle were hurried to market before they were fully fed. This occasioned a glut in the butcher-market for a period: but they are now growing scarce, and prices on the advance. Good fat will bring 7s. 6d. and 8s. per stone, sinking the offal. Owing to pastures being gnawed to the roots, by the starving cattle, in the time of the drought, the fields have now an uncommon verdure, every pile of grass being exposed to the eye; but this more in show than in reality. Little or no clover was cut a second time this season; at any rate, the deficiency of the Summer grass cannot now be made up.

To conclude: We cannot view the deficiency of the crop, both with respect to fodder and grain, in the half-filled barn-yards throughout the county, without putting every individual on their guard, by a rigid and well-timed economy, to remedy the evil as much as lies in their power: for as the price of every commodity depends upon the demand and quantity at market, it is only by diminishing the consumption, that, in the event of scarcity, the prices of grain can be kept moderate; and it will undoubtedly be found, that every restriction on its free circulation, and internal commerce, so far from being of service to the community, in reducing the price of grain, will ultimately have the contrary effect.

—October 6.

Tweeddale Quarterly Report.

The general face of this county being hilly, naturally points out the sheep-husbandry, as the most eligible mode of farming for it; yet,
 though

though sheep is our staple commodity, there are few farms on which the plough is not less or more employed, and many are occupied equally in both ways. The produce, in ordinary years, exceeds the consumption of the inhabitants; and considerable quantities of barley and oats are sent to Edinburgh, and other places.

Last year was an exception, as, from the failure of the crop, the greatest part of seed-oats were purchased from the coast-side, and also much of the grain needed for bread during the Summer months. The backwardness of the season, and high price of seed, prevented the farmers from sowing the usual quantity of grain for the current crop, and occasioned a greater portion of the land, than common, to be occupied by potatoes and turnips. The latter, where sown in a regular rotation, and with a proper quantity of dung, promise to be a good crop; but potatoes, under the best culture, do not appear to be near so prolific as in former years. The young potatoes vegetated after the rains, and set out fresh shoots, though still adhering to the parent stem, which, in many cases, produced potatoes about the size of large peas. The crop is nevertheless now evidently improved.

The month of April was friendly to vegetation; but the succeeding months turned out so much the reverse, that both corn and grass were greatly hurt. The drought about the middle of July became so violent, as almost to annihilate the pastures; yet still the early sown grain was not so much hurt, though what was late sown suffered greatly.

The hay or sown grass turned out a middling crop, producing, in many instances, 200 stone, of 23 English pound, upon the acre: but, where eaten in the Spring, or where raised upon cold stiff soils, was, in many cases, hardly worth the cutting. It is very common to eat the hay-fields, during the Spring months, with ewes, when lambing, as they give a seasonable supply at that critical period.

Sheep, notwithstanding the drought, were as good as in common years. That species of stock agrees better with heat than black cattle; the latter having suffered severely, both in respect of the quantity of milk given, and in the degree of fattening, when intended for the butcher. The lambing season was excellent, and the crop of young lambs as good as could be wished.

The oats, peas, and even the bear, where sown early, have turned out middling well; but the late grains, especially of those who were foolish enough to sow their own frosted seed, are poor indeed. The bear on deep soils is a middling crop; on stiff land, very indifferent. Peas, of which there is a large quantity sown, the land being mostly new sined, are good; unless

unless in those parts where the extreme drought got the better of them before they were filled. From trials made, oats and barley appear very small; and, at the mill, the former does not yield above 7 stones of meal to the boll, containing 128 Scots pints. Upon the whole, what with the limited sowing, and the effects of a backward season, this county will be considerably below an average crop.

The harvest, that is to say, the cutting of the crop, is nearly over; but a great portion is still standing out. What is brought in, is far from being bulky; and a scarcity of fodder is seriously feared, the appearance of which excited every farmer to cut as much boggy coarse hay as possible.

No regular market for grain has been in this county during the Summer; the supplies having come from Leith, and consequently, the prices regulated by those of that port. A considerable quantity of the grain imported by the Associated Societies came here; but the price has not been much less than of that which was bought by dealers from the merchants. Present price of oat-meal, 1s. 10d. per peck; bear-meal, 1s. 6d.; pot-barley, 3d. per lib.

Little wheat is raised in this county, that article being brought from other places, and has, through the Summer, cost 3l. per boll of 90 Scots pints. Butter has been 13d. and 14d. per lib. of 23 ounces. Cheese of cows milk sold green at 4d. and 5d. per same weight. The price of ewe-milk cheese not yet fixed.

Beef and mutton have sold, for this some time past, at 6d.; lamb rather lower. Wool, per stone of 23 lib., from 8s. to 9s. The market was dull at the first; but, towards the end, the merchants purchased more freely. The sheep here are mostly of the black-faced breed, and the wool coarse; attempts to introduce the fine woolled sheep not having succeeded.

Wether and ewe hogs (sheep of a year old) were sold at Linton market, from 10l. to 15l. per score of 21. Holding lambs, or those bought for stock, from 4s. to 6s. each. Fat lambs, to the butchers, from 5s. to 10s. according to weight and quality. Stock ewes from 8s. to 10s. Fat cattle from 7s. to 8s. per stone, sinking the offal. Lean cattle, from the scarcity of fodder, not much in demand. Half-fed beasts, for laying on turnip, sell well; but no sale for horses, unless they are very good.

October 2.

Haddington, October 10.

The weather, for a month past, has been variable, and harvest-work has gone on very unpleasantly. Except a few fields, the corn

is all cut down; though, on several farms, a considerable quantity remains in the stock. Shearers were very scarce during the throng of harvest, which occasioned wages to rise to 2s. 6d. per day, besides maintenance.

Gifford Autumn fair, on Tuesday, was well supplied with cattle, generally in good order. A number of purchases were made, though a considerable quantity were driven home unsold. Prices may be rated at from 7s. to 8s. per stone, sinking the offal. The show of horses was indeed indifferent, and few sheep were sold.

At our market this day, the prices were as follows:—Wheat, which, in general, is of excellent quality, but damp from the wetness of the weather, from 35s. to 54s.; barley, from 34s. to 41s.; and oats, which, upon the whole, are only tolerable, from 26s. to 34s.—all per Linlithgow boll.

At a meeting of heritors of the parish of Preston, in this county, September 2d, a report, from the committee appointed last Winter, to conduct the sale of meal to the poor at reduced rates, was laid before them. From the report it appeared, that 128 families had been regularly supplied with meal, at prices very little higher than those of ordinary seasons; and that coals had been furnished to the most necessitous poor, free of all expence, during the last inclement Winter: Also, that the sum of 738l. 8s. 4d. had been expended by the committee, in the purchase of grain, for which, after being manufactured into meal, 387l. 15s. 6½d. had been received. The heritors approved the said report, and directed that a piece of plate should be presented to one of the members of the Kirk-session, who had taken extraordinary trouble in conducting the business.

Mid-Lothian Quarterly Report, from July 1st, to September 30th, inclusive.

The intense drought, remarked in the report for the preceding quarter, has continued, with little intermission, during almost the whole of this, there having been no showers, to any effect, till about the 5th of September, when rain, preceded by two or three days fog, set in, and continued for four or five days together, which did indeed some damage to such corns as were then cut in the fields; but, on the other hand, was highly beneficial to the pastures, and to the potato-crop, both of which had declined greatly; also to the aftermath of the hay, which, till then, was altogether at a stand. In the end of July, and beginning of August, the weather was uncommonly warm, which, conjoined with the existing drought, had the effect to bring on the harvest much sooner than was expected,

pected, and even before the ear, in many instances, was properly filled, particularly on all dry and gravelly soils, which, of course, from this premature ripening, have produced a shrunk grain and scanty return. This has been the case, more or less, with grain of every description, wheat alone excepted, which not only stood out the extreme dryness and heat of the season on every soil, but even prospered under it, producing now as fine a sample as has perhaps been known for many years. Straw, as well as hay, having been greatly stunted in the growth, fodder of all kinds is, of course, uncommonly scarce. Potatoes, which continued to prosper till about Lammas, then fell off much; so that if it had not been for the reviving rains in the beginning of September, they would not have turned out above one fourth of an ordinary crop; and, even after all, will hardly amount to one third. Turnip has also failed greatly. On the whole, the present crop does not appear, by any means, to be such as will make up for the very great deficiency in the crop of the year 1799.

The harvest, which commenced early in August, is now nearly finished. Reapers have been had in great abundance, and, of course, at moderate wages. Preparations for the next crop are going on with alacrity; and what wheat has already been sown, whether on fallow or from stubble land, has been accomplished under very favourable circumstances.

Prices have continued high, (oat-meal excepted, which being now at 2s. the peck, is more in proportion to the rate of labour), and still have little appearance of declining, notwithstanding of the immense quantity of grain imported into the different harbours of the kingdom. The true reason of this (the wretched return of crop 1799, and the doubtful aspect of crop 1800), has been altogether overlooked, and the whole imputed to machinations of middle-men, forestallers, and regraters, those

Gorgons and Hydras, and Chimeras dire!

MILTON.

For, at no period has there been such an universal cry of plenty, in the mouths of the newsmongers and public declaimers, as in the present, (except perhaps in the year 1782, of starvation memory), accompanied with grievous imprecations, warm from the heart, against corn factors and all dealers in grain, with many a side-glance curse also at farmers and meal-men. These people, like to the false prophets of old, continually call out, Peace! peace! (in the present instance, a *piece* of bread), while there is no peace. But perhaps, after all, this may arise from their own inward conviction; like to the man who fabricated a story about *sailing over the Alps*, and told it so often, that at length he believed it himself. On the other

other hand, the farmers, who are rather a grumbling kind of race, have been so long remarked for exaggerating every thing bad in the weather, or bad about the crop, that they are not now believed when they speak the truth.

Return of Grain of all kinds, flour, meal, hulled barley, &c. imported and exported at Leith, from the week ending July 12th, to the week ending October 11th, inclusive. The whole reduced to quarters of 8 bushels each, reckoning a ton of flour equal to 7 quarters of wheat; a ton of hulled barley equal to 8 quarters of barley; and 4 bolls of oat-meal equal to 3 quarters of oats.

<i>Week ending</i>	<i>Imported coastways.</i>	<i>Imported foreign.</i>	<i>Exported coastways.</i>
July 12.	1822	1474	3221
19.	2228	1170	2616
26.	3697	4858	2436
Aug. 2.	2638	2476	3391
9.	11,270	4606	2770
16.	6873	1399	2121
23.	2643	4098	1801
30.	1827	7392	642
Sept. 6.	3839	1297	717
13.	109	4188	566
20.	494	1299	807
27.	480	157	1353
O&. 4.	120	105	1757
11.	603	none	2009
<hr/>	<hr/>	<hr/>	<hr/>
This quarter,	38,643	34,519	26,207
Former quarter,	60,550	37,219	26,699
<hr/>	<hr/>	<hr/>	<hr/>
Coastways	99,193	71,738	52,906
Foreign	71,738		
<hr/>	<hr/>	<hr/>	<hr/>
Total	170,931		
Deduct exported	52,906		
<hr/>	<hr/>	<hr/>	<hr/>

Remains 118,025 for home consumption, which is supposed to have been 3000 quarters weekly in Edinburgh, Leith, adjacent suburbs, and inland counties to the south and west. Hence in 33 weeks, (the time specified), there will have been expended 99,000 quarters, leaving still 19,025 quarters for the Winter consumption, in addition to the existing crop in the country.

Wheat

Wheat fold in Haddington market, from October 1. 1799 to October 1. 1800—16,441 bolls. Oat-meal in Edinburgh market, in the same period—Lothian 10,149, South Country 125; in all 10,274 bolls.

Fife Quarterly Report.

During July, August, and the beginning of September, almost no rain fell. Dry weather, for so long a period; is not remembered by any person. The hay, in consequence, is less than half a crop; the after-growth, nothing: for it, as well as the pastures, were entirely burnt up, brown and withered, and nothing green and luxuriant, except natural meadow, and inferior wet pastures; for such, the season was a good one.

The oats, in general, are a thin crop; partly owing, it is supposed, to the seed being injured, and a wet feed-time. They are well filled and ripened, but almost no straw, owing to the extreme drought.

Barley, a better crop in general, grain plump and good: but as much of it was arrested in the shoot-blade for want of rain, the straw is short, and the stalks of a much smaller size than the farmers expected from the appearance before cutting.

Wheat, a thin crop, good grain, but little straw.

Beans, a poor crop in general.

Peas, a better crop, extremely well filled, but the straw short.

Flax, a good crop, where the soil was properly chosen for that plant. The flax-seed saved, the best in quality seen for many years: the dry season being particularly favourable, much more seed is saved than usual in this county.

Potatoes, entirely stunted in their growth for want of rain; the plants dwarfish, and did not cover the ground; and, consequently, an unproductive crop, ripened prematurely. Perhaps owing to this, a phenomenon in that crop has been observed this Summer, viz. the few potatoes at the root pushing out stems at the eyes, in the same way as sets planted in Spring; and new potatoes, of the size of peas, forming on these stems in great numbers, drawing their nourishment from those first formed, and probably injuring them materially. When rain at last fell in sufficient quantity to restore verdure to the pastures, (middle of September), the potatoes began to grow with vigour; the roots increased in size to a great degree, and the shoots from the eyes are not observed in such numbers; at least, no new ones appear. Upon the whole, however, the potatoes cannot be reckoned at above half a crop.

7th October.—The harvest not finished, and rain almost every day, succeeded by drying winds; so that little injury to the crop has yet happened. Harvest began to be general about 1st September; and two thirds of the crop is now well got in; though on some farms part of it is not yet fully ripe.

A famine for cattle is dreaded, from the scarcity of straw. The price of corn in the straw exorbitant. But it is supposed, if the weather is tolerable, the same calamity to man is not likely to happen.

Turnips, owing to a total want of rain, are a very poor crop, not even equal to half a crop in some seasons; which adds to the difficulty of maintaining Winter stock.

The graziers complain of heavy losses from the failure of the pasture grass. Many have lost not less than the whole rent.

Fat stock sells well; but, wherewith can the farmer fatten, when turnips, potatoes, hay, and straw, have all failed him?

Hay 1s. 6d. per stone, and can only with difficulty be got.

Prices of Victual.

In this county, very little, except foreign victual, was to be found all this quarter. No oats, no barley, no peas. Old wheat, a small quantity in August, price 40s. to 55s. per boll.

Oat-meal in July, from imported corn, 52s. per boll.

End of August, fell to 34s and continues at ditto.

Barley-meal, in July, 34s. per boll.

Ditto, end of August, 23s. 4d. per ditto, and continues the same.

No old peas-meal at any price.

New Crops

Wheat, on 1st October, from 40s. to 50s. per boll.

Barley, fine quality, at 35s. per ditto.

No new oats as yet.

A little new oat-meal, at 34s. per boll.

Extract of a Letter from a Farmer in the Upper Ward of Lanarkshire, Oct. 6.

Our crops here are mostly got into the stack-yard, and they promise to yield well. Oats, when mealcd, produce nearly meal for corn, and barley 24 or 25 pecks per boll. In the muir-lands, they were last week little more than begun to cut, and their crops are thin upon the ground, much bad seed having been sown. There is but a small extent of wheat and peas sown in this district; but

but what we have of these grains are tolerably good. A larger space than common was planted this season with potatoes: the quality of the produce is good, but the quantity will hardly average one half of what we used to have in favourable years.

The late rains have done great service to the pasture-grass and turnips. A considerable extent of this valuable root is now sown here, which we find to be of great advantage for cleaning our lands, independent of the profit arising from the crop, especially in a season like the present, when fodder is so scarce.

Little sale for lean cattle; but real fat bring good prices. At Lanark, beef is from 4d. to 6d. per lib.; butter 1s. 3d. to 1s. 4d.; common cheese 5d. and 5½d.; oats, with fodder, sell from 35s. to 40s. per boll; without fodder, 28s. to 32s.; bear 31s. 6d.; hay 1s. 3d. per stone; and straw 6d.

Extract of a Letter from Caithness, Oct. 4.

We had dry warm weather till the 26th ult.; since which it has rained every day. The harvest was then well advanced; and I do not think the crop has as yet sustained any damage. The crop is light, particularly upon the coast-side; in the Highland district it is much better, but very little straw indeed. Bear sells from 28s. to 30s. per boll; oat-meal from 35s. to 40s. per boll of 8½ stone Dutch; bear-meal from 25s. to 30s. per boll of 9 stone Dutch; oats from 28s. to 34s.; hay 10d. and 11d. per stone; beef and mutton 3d. and 4d. per lib. The market for lean cattle is low; average price 50s. per head. Turnip-crop is indifferent. Potatoes good in quality, but scarce.

E N G L A N D:

Extract of a Letter from Louth, Lincolnshire, Sept. 16.

IN this neighbourhood, the harvest is at its height; the greatest part of the corn is brought home; and, from the information of several respectable farmers, I am happy to learn, that it is in excellent condition. The sprouted ears are not numerous. The crop is light, compared with that of some former seasons.

The rot is appearing among the sheep, owing to the great flush of grass since the late rains. In consequence, the graziers, who have not had time to change their pasture, are selling off as fast

as they can; which must render mutton plentiful and cheap for some time.

Beasts for slaughter sell from 6s. to 7s. per stone of 14 lib. sinking the offal; wool, 23s. to 25s. per tod of 28½ lib.; retail price of beef, 5d. to 7d.; mutton, 6d.; veal 6½d.; butter, 14d. per lib. of 18 ounces; potatoes 8d. per peck; milk, 2d. per quart.

There has been some rioting at Tatterfal and other villages near Boston; but, on the Volunteers being ordered out, the rioters dispersed. The present condition of the poor is certainly very distressing; yet rioting is not the way to procure relief.

Extract of a Letter from a Yorkshire Farmer, Sept. 6.

Of our turnips, on indifferent land, very few have hit; upon fine sandy soils, they now promise to be tolerable. Potatoes are much freshened of late, and I hope will turn out better than expected. Oats are pretty good in general; barley the same, though much sprouted, in consequence of the heavy rains. The ground was warm, and some people trusted it in the swath till it was grown most shockingly. Part of mine is so damaged as to be fit only for hogs. Wheat is also pretty good. Some of it, indeed, is sprouted; and if the present hazy weather continues much longer, the loss will be great. Upon the whole, I trust that our crop will turn out a tolerable one.

Butcher-meat keeps at 6d. and 6½d. per lib.; and my opinion is, that fat will preserve its price; for, though the grass was burnt up, our markets were never overstocked; and, during the time I have been engaged in business, they used always to flag in a hot and dry Summer.

Extract of a Letter from Hull, Sept. 10.

The corn crops, which were much improved by the dry warm weather, have been damaged by the rains that lately set in, and still continue; which make us fear that the quantity of sprouted grain will be equal to that of last year; but the quality being vastly superior, the loss will be more easily sustained. The white crops are in general small; a great part is yet standing, and little got in. At our market yesterday, prices advanced, there being many more buyers than sellers. Sales for wheat were—Peterburgh 90s.; Riga 95s. 6d.; Hamburgh, Bremen, &c. 95s. to 105s.; inferior sorts 80s. to 85s.; some as low as 63s.; new wheat, but very soft, 80s.;
oats,

oats, Russia, 3s. 6d. ; Hamburgh, 3s.—all per quarter of 8 Winchester bushels.

Prices of other Articles here.

Flour, common, 3s. 7d. ; middle, 3s. 10d. ; fine, 4s. 3d. per stone ; rape-seed, 50l. per last ; rape-cakes, 7l. per ton ; lintseed cakes, 12l. 12s. per ton ; hay, 6l. to 6l. 10s. per ton ; straw, 2l. 5s. to 2l. 10s. per ditto ; whins or furze, 7s. to 10s. per 120 kids or bundles ; wool, 23s. to 24s. per tod ; butcher-meat, retailed at 6d. upon an average ; beef, wholesale for shipping, 46s. to 50s. per 112 lb.

Imported into this place, from the 28th July to September 1st, from foreign ports, as per Customhouse list,—25,482 quarters of wheat, 8,984 quarters of oats, 1741 quarters of rye, 499 quarters of barley, 186 quarters of pease, 976 quarters of beans, and 20 cwt. of flour.

Grass-lands, which were nearly burnt up by the drought, are now in a flourishing state.

Lancashire Quarterly Report.

In this district, the harvest is chiefly finished, and the crop brought home, in excellent condition. According to expectation, the grain turns out well in regard to quality, (particularly wheat), though, in general, it was observed rather thin upon the ground. The markets at Liverpool, and in the neighbourhood, still keep high, though the importations of wheat, flour, &c. at the port of Liverpool lately, have almost, if not altogether, exceeded that of any former period. New wheat has hitherto sold as high as from 13s. 6d. to 14s. and upwards, per measure of 70 lb. To-day the market was dull, and very few samples of wheat shown. New oats have been sold from 5s. to 7s. 4d. per bushel of 36 quarts. Oat-meal, from 3l. 10s. to 4l. per load, in this neighbourhood ; but I am informed, that, in several of the market-towns in this county, it is, or has been lately, 3l. per load (and under) of 240 lb. Little of the barley of last crop, I believe, has yet been sold, and that chiefly for grinding. I have heard of 7s. 6d., 8s., and 9s. having been given. The price at present, however, does not appear to be settled either by the brewers or other dealers. It is much to be lamented, that potatoes have been, and continue to be, extravagantly dear. The regular price has been from 6s. to 8s. per bushel of 90 lbs. To-day, in the Liverpool market, the price fluctuated between 4s. and 5s. 4d. per bushel. (It is to be observed, that the potatoes here, as in most other places, are sorted, the large being separated from the small ones ; and it was

the small potatoes that sold for the lowest of the above-mentioned prices). This high price, some assert, is owing to the failure of the potato-crop in general; whilst others assert, (and apparently with good reason), that though the crop may fall short of what may be called a *good* crop, yet, from the large quantities planted, there does not appear to be any necessity for the present very advanced price. However that may be, the late rains will certainly be very beneficial to the potato-crops, and cause the roots to swell very much in size, as is already very apparent. Though the old pastures and after-grass have improved so very much since the late rains, butter sells here from 18d. to 20d. per lb. (best salt butter at 14d.). Hay sells from 1s. to 1s. 4d. per stone of 20 lb. and some as high as 18d. per stone, but that is chiefly some of the very best of the last year's crop. Turnips, except where sown very early, have failed in general. The crop of hay, in general, was good, and the quality superior; but, owing to the great succulence in the grass, and the gloominess of the atmosphere, and not being suffered to remain till it was thoroughly cured, many stacks in consequence heated; nay, some absolutely fired, and that in greater numbers than ever before remembered.

Sept. 20. 1800.

Lincolnshire Quarterly Report.

The wheat-crops have, in general, as formerly predicted, turned out light; and some, that were then promising, have suffered much from mildew, which was prevalent in August. Many fields have also received damage from the late wet weather. Barley, notwithstanding the severe drought, will be a productive crop, though, in several instances, where early cut, it has sprouted; as the warmth of the ground, when the rains fell about the 22d August, produced as speedy an effect as if it had been on the floor of a malt-barn. Some that has been already thrashed, makes superior bread to the most of last year's wheat; which, it is hoped, will compensate for the deficiency of wheat this season. Barley-bread is much used in Lincolnshire; and the peasant, fed upon this aliment, looks equally healthy, and will do as much work as his neighbours who eat their wheaten bread.

Oats likewise prove a good crop; and, when generally thrashed, must get lower in price. Beans and peas do not promise to be productive. Turnips are, for the most part, superior to the crops of ordinary years; though, in a few instances, they have failed.

The hay-harvest was never known to be better; and, though the crop of artificial grasses was not heavy, yet the goodness of the natural grasses will, in all probability, make up for the deficiency,

deficiency. The clover and trefoil, sown with the barleys this year, have an excellent appearance.

Fat beasts are now beginning to be plentiful: and as the pastures and eddishes are very luxuriant, they have met with a considerable reduction in price. Of mutton, the markets have had an ample supply. Great apprehensions are entertained of that fatal malady, the *rot*, which has begun to make its ravages among the flocks in the lower parts of the county, and heavy losses are dreaded.

Wool has not brought such high prices as expected. Prices are various, according to the qualities. The average of long combing wool may be about 23s. per tod of 28 lib. As the harvest has, for some time, nearly occupied the whole attention of our farmers, little can be said respecting the prices of grain; but, as near as can be ascertained, wheat has sold from 93s. to 100s.; barley, 63s. to 70s.; oats, 35s. to 45s.; beans, 84s.; all per quarter of 8 Winchester bushels.—*Sept. 27.*

Norfolk Quarterly Report.

The soil of this county is so various, and of course so differently operated upon by every kind of weather, that no *general* description can with justice be given of our rural matters. From this difference of soil, the harvest has been a week and ten days sooner in one place than another, by which some have suffered little by the long continued rains, while others have sustained very great and material injury. The long continuation of hot and dry weather which preceded this, had so heated the ground, and the warmth of the atmosphere was so great during the rains, that it was impossible to prevent those grains, at that time cut, from sprouting; nay, even many instances occurred, both in wheat and barley, of its growing as it stood. The harvest is ended, except in the fen-lands, where, I understand, they have still a week's work to complete it. The markets are now beginning to receive a regular supply. The peas and oats, on the high lands, were in general saved before the rains, and are of a very fine quality, as to colour and weight. Such peas, if white, sell as high as 70s. to 80s.; if grey, 48s. to 50s. per quarter. The wheat-crop being injured in many places by the mildew, and also much sprouted and damp, the quality is extremely various; the market-price of the best, whose quality is extremely fine, reaching 110s. per quarter; whilst there are of all gradations down to 60s., and some for which no price is offered. The barley-crop, with some exceptions as to soil, must be esteemed abundant, but the quality extremely various,

except those which were harvested before the rains. Very few, even of the driest and best coloured, are free from a sprouted kernel, and some have even one half of them grown; the prices, of course, must be extremely different. Those of good body, and saved without rain, are of the finest quality I have seen for many years, and were eagerly sought after by some necessitous maltsters, even at 80 s. per quarter: that spirit is however somewhat damped, and such now only obtain 70s. to 72s.—The second quality, which is dry and well saved, excepting here and there a single sprouted corn, and of which the malting sort must mostly consist, obtains from 46s. to 54s., with all gradations downwards, even to 24s. per quarter. The turnip-crop, excepting *particular soils* and *late sowings*, stood the long drought beyond all expectation; and, since the rains have come, have experienced a growth and improvement never remembered in so short a space of time. This crop may be reckoned very fine. The eddishes and grasses are most abundant; but hay, in consequence of many ships loading the same for the northern counties, is advanced considerably, being now sold at 4s. 6d. per cwt., and 5s. demanded. Beef and mutton is tolerably plentiful; the former 6s. 6d. to 7s. per 14 lib., and the latter 5½d. to 6d. per lib. You may form your own calculations as to what the grazier obtains, as they generally get 6d. to 9d. per stone more on beef, and ¼d. to ½d. per lib. more on mutton, according to the season, to sink the offal. At our principal lamb-fair, 4th September, that article went off very slow; but wether-lambs obtained 16s. to 19s. per head. The South-down and half-bred went off more ready. Of wool, I understand Norfolk has obtained 46s. to 48s.; South-down, 50s. to 52s. 6d.; Long Lincoln, 23s. to 25s. per tod of 28 lib.; but much is unfold. The preparation for wheat-sowing is going busily forward, and the season is favourable.

Extract of a Letter from Lynn, October 1.

At the commencement of the harvest, (say from the beginning of August till the 19th of the same month), we had remarkably fine weather; and nearly the whole of the rye, peas, and high-land oats, with about one fourth of the wheat, and one fifth of the barley, were secured in excellent condition, and are of beautiful quality. Since then, the corn has been harvested in various conditions, and equally various in quality, particularly the two last articles, which are much grown; for, owing to the heat of the earth when the rain came, that which was cut vegetated quicker than ever was known.

The crop of wheat was generally thought, before the rains, a
very

very good one; for though it was thin on the ground, the ears were well filled; but since then, the greater part has been so affected by the weather, that we fear it will be found deficient, as very few samples appear that were harvested since, without being in part sprouted.

The crop of rye is but small; but as it is all harvested under a good sun, the quality is very dry, and will yield well.

Barley, no doubt, is a very abundant crop; but there is a great deal of it so much grown, that it will be totally unfit for malting. That, early harvested, is beautiful; and as we have had latterly some pretty fine weather, that which was not cut during the first rains, and was not fully ripe, is not much hurt: But in all the samples harvested since the rain, there will be some sprouted kernels, as it chitted whilst standing; but we think, on the whole, that which we call our second quality, will be found as kind in malting as the very fine delicate sort.

The oats are good. The crop also in the fens is equally good, in point of quality; but as they are much later in the harvest, there will be a great variety in the samples; yet, upon the whole, they will be found much superior to the growth of last year.

Peas are a fair crop, and being well harvested, of a fine quality. Beans are middling; but as they have been exposed to the whole of the rains, and some even yet abroad, we consider them injured, and in a precarious state.

Current Prices of yesterday's Market, as paid to the Growers.

	<i>Per Quarter.</i>		<i>Per Quarter.</i>
Wheat, fine	- 100 to 110	Barley, coarse	- 24 to 28
Ditto, runs	- 80 — 90	Oats, fine	- 36 — 40
Ditto, coarse	- 65 — 70	Ditto, coarse,	- 26 — 30
Rye	- 40 — 46	White peas	- 76 — 78
Barley, fine	- 72 — 74	Grey ditto	- 52 — 54
Ditto, seconds	- 48 — 52	Beans—none appear.	
	Rape-feed, 48l. to 51l. per last.		

Northumberland Quarterly Report.

The corn-crops in this district have been materially injured from several causes. The grub, in the Spring months, in a great measure, destroyed the wheat and oats upon clover leas, where the soils were strong or moist. Upon dry, sandy, or gravelly soils, the extreme drought checked the growth of barley and oats so very much, that, in many places, the ear did not get half out of the
shot-

shot-blade, and the straw was scarcely a foot high. Upon the real good mellow loams, the crops were remarkably fine, and nearly all the early oats cut, when the first rains began on the 23d August, by which the whole of the sheaves were so completely wet to the heart, that it was necessary to open them out, to get dried again; and just when they were a second time fit for leading, the wet weather set in on the 4th September, and continued, without intermission, till the 10th, by which they were again completely drenched, and a great deal in a growing state, in some places sprouted quite green, and so discoloured, as renders them totally unfit for the London market. But this was not the worst: they were again obliged to be opened, and laid in broad bands; and, being so tendered with the wet, the grain hulled out in such quantities, that the loss is scarcely to be estimated, besides the straw being so materially deteriorated for Winter fodder. But the evil did not rest with the crops that were cut, and in sheaves or stooks. The *ripe crops* of wheat and barley that were *uncut*, and *standing perfectly upright*, were, in many places, sprouted to such a length, and in such abundance, that probably the oldest farmer never saw another such instance, nor so great a loss afterwards, in shearing the wheat, by the grain hulling out, from its being so tendered by wet weather. Upon the whole, I am sorry to add, that the crop of white corn is considerably below an average.

Peas and beans are a very abundant crop. Few people ever saw them so well loaden, or so perfectly ripened.

Turnips were beginning to change colour the two middle weeks in August, and the most unpleasant apprehensions were entertained for their safety; but the rain came exactly in time, and restored them to health; and such a vigorous and rapid growth ensued, that they have the most promising appearance of being a very abundant crop. Had not this been the case, the situation for Winter food would have been truly alarming, as our crops of hay and straw are not much above half their usual bulk.

Potatoes, I am afraid, have also been injured by the drought, upon sandy and gravelly soils, on which, it is said, they are not so productive as expected.

The demand for cast ewes and shearling widders, has been very brisk; the prices better than last year, by about two shillings a-head. The cattle were also well sold at St Ninian's fair, (the 27th September), to drive southward.

The present prices of corn are—

Wheat,	10s. to 12s.	per Winchester bushel.
Barley,	6s. to 7s.	per ditto.
Oats,	4s. 6d. to 5s.	per ditto.
Peas,	8s. to 10s.	per ditto.

The

The harvest has been long and tedious: it began the 1st of August, and is yet unfinished.—*October 4.*

Extract of a Letter from a Farmer in Wales, September 30th.

“ We had a remarkably dry Summer; scarcely a shower from the middle of May till the 19th of this month, since which it has rained and blowed by turns. The grass was entirely burnt up; and some farmers on the clay lands had to fodder their cattle with hay, before the corn-harvest commenced. Hay is, in general, a fair crop, but much of it was carried too soon: where it got time to win, the quality is excellent. Our corn-harvest commenced about the 8th of August, and was nearly over in three weeks. It came on all at once, except some late barleys, which are not worth reckoning. Wheat improved every day till harvest, and will be a saving crop, which is more than we expected from previous appearances. Oats are very short, but well corned; small in the grain, which does not fill the measure well. Barley does not exceed half a crop: on the best land it was thin, and, on the clays, it will scarce pay for the gathering. The few peas sown here are good. Potatoes very bad. Few turnips, most of them being ploughed down, and the land prepared for wheat. Corn-markets fluctuate much. Immediately after the harvest, wheat dropped from 55s. to 26s. per bushel of 20 gallons: it has again rose to 33s. and 34s. Barley from 18s. to 20s., and oats 16s. and 17s.; but our bushel for that grain is nearly equal to four Winchester ones. Seed-tares, 30s. No peas or beans at market. Butter, 1s. 3d. per lib. of 16 ounces. Cheese of sheeps milk, 9½d. and 10d.; of cows milk, 9d.; of skim milk, 6½d. Beef, from 5d. to 6d.; mutton, from 4½d. to 6½d.; veal, 5d.; pork, 5½d. Hay, from 4l. to 6l. per ton; and straw dearer in proportion.

If we could believe the newspapers, the crop in Britain is, this season, very great: but, when I read of the vast crops of corn and potatoes in Glamorganshire, I can give but little credit to what is said concerning other counties. It is owing to such misrepresentations, that we had so much rioting in this quarter. Last week, the forge-men occasioned much disturbance; but, thank God, they are now quiet, and the gaol full of them.”

Extract of a Letter from Stafford, October 5th.

“ In consequence of the late commotions here, and in other places of the county, the Mayor requested the principal farmers to attend him

him at the Town-hall on the 26th ult. to settle the price of wheat ; when all present agreed to sell at 12s. per bushel of 38 quarts, though many have sold lower, which, I fear, will not be followed up. Our crops have greatly failed for want of rain : before harvest, we had not more than one day's rain for two months : therefore the bulk is small indeed. I have only threshed a few bushels of wheat, for my house-consumption ; but the grain, though good, is lighter than ordinary. My barley weighs 60 lib. and oats 48 lib. per customary bushel of 38 quarts. As yet I have only sold 188 bushels of the former, for which I got 9s. ; but yesterday, owing to a great demand, it got up to 9s. 6d. and 10s. ; oats, 6s. 6d. to 7s.—Last Thursday was our great fair. Beasts of every kind sold high.

I will give you an instance of our oppression from tithes, the major part of which, in this county, since the days of Henry VIII. are in lay hands. Last year I paid 34l. in lieu of them. This year I was suffered to carry, before they fixed the price ; (good weather ought never to be passed) ; and though I have ten acres of less corn than last year, yet they have charged me 52l. to be paid on 26th January. I wish you to read my friend Mr Boulton's letter in the Stafford paper, with attention. Three great Lords have put a negative upon the inclosure of Needwood forest, thinking that beneficial measure would interfere with *their favourite pursuit of running after a sinking fox*. From such friends to their country, good Lord deliver me !

I once despaired of my turnips ; but the fine rains, since harvest, have brought them forward beyond all expectation, particularly the Swedish ones, which promise to be an abundant crop. Beef and mutton was yesterday from 5 $\frac{3}{4}$ d. to 6d. per lb.

Extract of a Letter from Rippon, (Yorkshire), October 9.

In hopes of being enabled to inform you, that our crops were safely harvested, and prices reduced, I have delayed writing you till this time ; but am sorry to say, that the heavy and continued rains have injured our grain very much, and that there is little of it free from sprouts. The prices are rather lower, but by no means so much reduced as expected ; and I fear they will continue higher than the poor and middle class of people can possibly pay.

A large quantity of potatoes were planted last season, but they are said to be unproductive. The rains at present are great, which will prevent the fallows, intended for wheat, from being sown in due time.

Prices

Prices of Grain, &c. at our Market this day.

Wheat 10s. to 14s.; maflin 10s. to 13s.; beans 10s. 6d.; barley 6s. 3d. to 6s. 9d.; oats 4s. to 5s. 3d.; potatoes 3s. to 4s. 4d.; all per Winchester bushel. Butter 60s. to 63s. per firkin of 56 lib.; beef 5d. and 6d.; mutton 6½d.; lamb 6d.; veal 7½d.; fresh butter 17d. per lb. of 21 ounces.

Extract of a Letter from London, October 10.

The crops of grain in the vicinity of this city, are in general very middling. Wheat on the strong clays of Middlesex is very light, and will not average above 12 bushels per acre. Beans are good, but the produce not yet sufficiently ascertained. In Hertfordshire, the wheats are fine in quality, and the produce great. Barley is also a good crop; from six to eight quarters per acre being produced in several places. In Essex and Surry, a considerable part of the crop was out when the rain set in; and much of the wheat is sprouted, even of what was then uncut. The white wheats were most affected; the red being in few instances hurt, except where it was lying upon the ground.

We have hitherto received but a short supply of new grain, and prices have been advancing ever since the middle of August. Fine English wheat sells at 120s. and 126s.; barley 70s. to 76s.; oats 45s. to 46s.; beans 50s. to 56s.; old ditto 63s.; hog peas 54s.; boiling ditto 96s.; split ditto 120s. to 126s.; all per quarter of eight Winchester bushels.

The average weight of wheat is about 59 lib. per bushel; barley 50 lib.; oats 40 lib.; beans 56 lib. The millers say, the wheats do not yield so much flour, by 28 lib. in the quarter, as in former seasons. Probably this may be owing to the great part of what has as yet appeared in Marklane being of inferior quality; as farmers naturally bring out at first that which is most likely to lose by keeping. The new oats are superior to any seen here for a long time; but we have hitherto had a scanty supply; and good old ones are difficult to be got. We have had no arrivals from abroad, of consequence, for a month past.

Smithfield market has been lately well supplied. Potatoes are considered as a middling crop, prices from 7s. to 12s. per cwt.; hay 6l. to 6l. 15s.; clover ditto at 7l. per load; straw about 1s. 3d. per truss.

POSTSCRIPT TO SCOTS INTELLIGENCE.

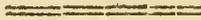
Extract of a Letter from Haddington, Oct. 17.

The demand for wheat was brisker than for some days past, and the average price advanced considerably. Very little old wheat remains on hand; and what is presented, is of miserable quality.

Barley was rather dull; but oats sold fully better than at last market. Peas and beans likewise advanced. Our supply of oats and peas has been scanty for some time past.

Since Tuesday, the weather has been very fine and dry, which has allowed the remainder of the crop to be brought in in safety to the stack-yard. A good deal of wheat has been sown this week; and if the favourable weather continues eight days longer, the greatest part of the wheat seed in this county will be got finished.

As an instance of the attention now paid to stock in this county, one of our most respectable farmers lately purchased a lot of breeding ewes, at a sale in Berwickshire, at five guineas per head; which, we hope, will be the means of exciting a more general attention to that mode of husbandry, than hitherto has been customary in this district.



TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

If you have a spare corner in the Magazine, please give a place to the annexed extract of a letter, lately received from an eminent foreign political writer, who made a tour through Scotland last Summer; and oblige yours, &c.

A Friend to the Magazine.

“One of our first cares, after arriving in Edinburgh, was to provide ourselves with the two first numbers of the Farmer's Magazine. We have already perused them; and all I have to tell you about it is, that we unanimously range such publications amongst the principal causes of the active spirit of improvement that pervades this island, and particularly this part of North Britain. We all agree upon the general superiority of the British Agriculture, over that of the Continent; but it is not so easy to agree upon the causes; for they are so numerous and complicated, that they might well furnish matter for a very comprehensive work.”

OBLI-

OBITUARY.

At Longrigg, Berwickshire, Joshua Tait, Esq; an eminent farmer and grazier.

At Weeton, Yorkshire, Mr J. Craven, farmer, aged 88. He was married 11 years ago, to a young woman, aged 16, by whom he had three children, and who is at this time in a state of pregnancy.

At Malton, Yorkshire, Mr Witty, one of the first horse-dealers in the north of England.

Mr Samuel Preck, farmer at Hardwick, Suffolk. aged 83.

At Goodleigh, Devonshire, Mr Henry Stibbing, farmer. He was a great fox-hunter, and had collected as many foxes pads as covered his stable door and door-posts, having been in at all their deaths; and, at his own particular desire, a pad was placed in each of his hands when laid in the coffin.

At Fillieside, near Edinburgh, Mrs Ann Horn. Since her death, the farm of Fillieside, consisting of 160 acres of arable land, has been let by public roup, at the amazing rent of 1110l. Sterling per annum. We understand the old rent did not exceed 400l.

 NOTES TO CORRESPONDENTS.

The Rural Inquirer, No. III. is unavoidably postponed.

The *plan of a lease and cultivation table, adapted to the west-country climate*, is received, and under consideration.

First part of a Tour through the Northern Counties of Scotland will appear in our next.

We offer thanks to our numerous Correspondents, (particularly to those who have taken the trouble to collect intelligence); and are extremely sorry, that want of room prevents us from giving them all a place, notwithstanding that *sixteen additional pages* are given.

We will be obliged to any of our friends in Dumfries-shire or Galloway, who will report the state of husbandry in these districts.

The Title-page and Index to this Volume, will be given with next Number.

No. V. will be published on Monday, 12th January 1801.

END OF THE FIRST VOLUME.

Printed by D. Willison, Craig's Close, Edinburgh.

I N D E X

TO

THE FIRST VOLUME.

A

ABOLITION of Tithes (Essay on) p. 396.

Abstract of proposals for a joint stock Farming Society, 169.

Account (Statistical) of the parish of Honnam, reviewed, p. 17—account of the Reverend Adam Dickson, 439—additional Scottish Agricultural Intelligence, 117.

Agriculture coeval with Society, p. 3.—early History obscure, *ib.*—causes conducing to its improvement, 4—fruits and herbs used in a preserved state for cattle, probably before the introduction of grain, 5—Agriculture among the Egyptians, Babylonians, and other Oriental nations, *ib.*—among the Chinese, *ib.*—anniversary in honour of it—improvements and progress flow, 6—cultivated by a whole nation or tribe in common, 7—its ancient state still visible in America, Lithuania, Shetland, Iceland, and other neglected countries, 8—Italy, and the north of Africa, the favourite seats of ancient Agriculture, 9—Virgil's Georgics contain a system amazingly similar to the modern, *ib.*—disseminated over the whole Roman Empire by conquest, even to Britain, 10—cause of all the happiness and comforts of Society, *ib.*—of science, literature, and fine arts—of commerce and manufactures, *ib.*—connected intimately with the commonwealth, 11—is the true basis of national prosperity, 12, 13—British system capable of being improved by facts and experiments, 14, 15—to collect and record these, the object of this publication, 15, 16.

Agriculture of Middlesex (Middleton's) reviewed, 72—of Nottingham (Lowe's) reviewed, 87—of Perth (Robertson's) 191—of West-Riding of Yorkshire (Brown's) 200—short view of, in Russia, from Tooke, 268.

Agricultural Intelligence for Scotland, p. 103-110, 117, 212-217—from correspondence, 217-227—*idem*, 334 to 337—from correspondence for Scotland, 338-348—*idem*, 445-449—from correspondence for Scotland, 449-477—from correspondence for England, 110-117, 227-233, 349-361, 477-487—Agricultural Societies recommended, see Agriculture of Yorkshire, 297—Agricultural Publications—curfory remarks on—their utility not so generally acknowledged as it ought to be, 67—Extracts from, 207-211, 318-327, 435-449—Agriculture (Board of) Premiums offered by it for 1800, 140 146.

Agricultural fete at Woburn, 328-334.

Articles of agreement between Henry Fletcher and James Meikle, 159.

America—Travel through the United States of, by the Duc de la Rochefoucault Liancourt, reviewed—American husbandry, 305-308.

Apples, best mode of preserving requested, 265.

Annual expences of a single horse and ox, and of a horse and ox team, 428-433.

Angus, Mearns, and Aberdeenshire Quarterly Report, 117.

Art of Agriculture not yet sufficiently reduced to principles, but divided between narrow experience and wild theory, 157—Lord Kames's

Gen-

INDEX.

- Gentleman Farmer a fine introduction to the science of this art, 158.
- Ayrshire quarterly report, 338.
- B.
- Barley-mill introduced into Scotland about the year 1710, by Mr James Meikle, under the patronage of Andrew Fletcher of Saltoun, 159.
- Barley, most of the home crop of 1799, and a great deal of imported, made into malt, and clandestinely distilled, 461—East-Lothian, report of, for October 1800, 468.
- Berwickshire quarterly report, 219, 339, 456.
- Breaking up ground (the excellence of the Hertfordshire plough for this purpose) 254.
- British collieries, whether inexhaustible, 310.
- Broadcast method of cultivating turnips inferior to drilling, 149.
- C
- Cabbages (on raising) 386.
- Capital stock of a Farmer actually diminished by payment of Tithes, 434.
- Carse of Gowrie, one of the best cultivated clay soils in the kingdom, 196.
- Cattle (on the scarceness and dearth of) Matthews' remarks on, reviewed, 309—how managed in Russia, 270.
- Calculation of the quantity of Coal in an acre of ground, of a certain thickness, 312.
- Catchwork meadows described, 320.
- Charge (annual) attending a plough and two horses, 46.
- Character of small Farmers, 377—character of English tradesmen, 150.
- Cheapest and most economical mode of feeding horses, black cattle, &c. required, 71.
- Claims (manorial) essay on, 23-32.
- Climate of East Lothian (observations on) situation—hills—winds—heat—figure of land—soil—snow, &c. 63-67.
- Cleaning of land a capital object with a farmer, 435—various rotations of crop, and means for this purpose, *passim*—Summer-fallow recommended, 435-438.
- Coals, a chief article in Northumberland, 1.
- land, 310—export from Newcastle doubled lately, *ib.*—whether inexhaustible, 310—seams at St Anthon's and Montague-Main, 311.
- Crop, failure of, for 1799 and 1800, noticed, *passim*.
- Community at large, how affected by the burden of tithes, 397.
- Comparative advantages of horses and oxen, 214.
- Comparison between feeding with grain in a broken or unbroken state, required, 71.
- Contiguous farms occupied by one farmer, the effects of, 379.
- Courses of husbandry used in Clumber Park, Nottinghamshire, 89.
- County (rural sketch of the county of Lancaster) 245.
- Curly in potatoes, query, how prevented, 71—in beans, *ib.*
- D
- Danger (on the) attending trees about corn-fields, 165.
- Draining of land late of use in Scotland, 125—on the new mode of drainage, 166.
- Drilling (on the drilling of beans), 155—observations on the same, 423.
- Diffusion of capital among farmers, the great source of national prosperity, 41.
- Discontent of the lower orders, how occasioned, 416.
- Diseases arising from damp and unwholesome grain, 51.
- Dickson (Reverend Mr Adam) some account of, from the husbandry of the ancients, 439.
- Durno (report of Mr Consul) on the cultivation of flax in Poland, Prussia, &c. 52-63.
- E
- East Lothian quarterly report, 222, 341, 467.
- Entails, extremely injurious to agricultural improvements, 286—observations on the present state of, and the means of removing the grievances, 267.
- Erskine (Mr) his opinion, in his Institutes, of subsetting land, 43.
- Effex, general soil of, loam, 390—has very little naked summer-fallow, *ib.*—wheat the principal article

INDEX.

- fields of cultivation, 391—the whole county seems cultivated like a garden, *ib.*
- Ewes, (practice of milking censured) 428.
- Evidence (extracts from the) given before the Committee of the House of Commons on the scarcity of provisions, 207.
- Expences of an ox and horse per ann. compared, 428-433—of an ox and horse team, *ib.*—of a plough and two horses, 46.
- Export of coals from Newcastle increased nearly one half since 1772, 310.
- Extracts from the report of the Committee of the House of Commons, with regard to the scarcity of provisions, 207—Extract of a letter from a linen-manufacturer, on flax, 258—from Agricultural publications, 318, 421—extracts of letters from various places, *passim*.

F

- Fallow (Summer) necessity of, on all clay soils, shown, 48—noticed, 205.
- Fallowing defended, 435—account of its introduction into Scotland, and of the introducer, 161.
- Feudal system, cause of the former inactivity in agriculture, 191.
- Farms, the proper size of an arable one demanded, 69—large or small, whether most advantageous to population, *ib.*—I. Of farms altogether under tillage, and these being small, in the occupation of mechanics—of professed husbandmen—two or more contiguous small farms under one farmer—several separate farms under one farmer. II. Farms altogether under pasture, considered in the same subdivisions as before. III. Arable and pasture united—the expences—profits—population—and stimulus to industry, and to improvement in Agricultural science, considered in each, 376-384.
- Farmers, from progressive improvements in agriculture, greatly changed from their former situation, 287—not as formerly subjected to personal labour, *ib.*—different kinds of farmers described, *passim*.
- Feal muck, the absurd practice of paring fresh pasture turf to mix with

- dung, in order to produce this, censured, 411.
- Firing, a disease to which flax is liable, so called in Ireland, 126.
- Fiars of grain in Scotland, 237.
- Floating, (on the floating of land) 263.
- Flax and hemp (Durno's report concerning method of cultivating) in Russia, Poland, and Prussia, 52—kind of soil for, 53—what crops previous to these, *ib.*—time of sowing, 54—of plucking and stripping seed, 55—of steeping flax, 56—profit of, 58—18 queries answered relative to this article, 61-2. On the culture of flax in Ireland—soil, 126—quantity of seed to the acre—mode of tillage—steeping, 127-8. Answers of the four flax-surveyors appointed by the Board of Trustees, 129-131—letter on the same subject, 258-260. Appendix to it, showing the great national advantages of cultivating flax, 261-2.

- Fletcher of Saltoun (the celebrated patriot) employs Mr Meikle to introduce into Britain the barley-mill and the fanners, 161.
- Food—on the food of horses, 51—necessity of always having green food on a breeding farm, 50.
- Fruit, best method of preserving, required, 375.
- Forestalling, remarks upon, and the misrepresentations of newspapers, 415.

G

- Game-laws, animadverted on, 301—considered as not so prejudicial, 266—one of the manorial claims, 23—game anciently belonged to the Crown, and was granted to the subject or inferior lord, 24—cause of contention, *ib.*—occupied by the freeholders of alienated manors during the reign of Henry VII. *ib.*—and thence the application for the game-law, so oppressive at present, *ib.*—absurd restriction of licence to those possessing a certain rate of property, *ib.*—game cannot be killed by the licentiate, without being liable to an action of damages from the unqualified proprietor, *ib.*—Hence it is secured for the poacher alone, 25—game-laws ought to be repealed,

INDEX.

- repealed, and the old Saxon law re-enacted, allowing license to every proprietor. Marquis of Rockingham's conduct on this subject, 26.
 Germany, some account of its agriculture in the year 1743, from a letter, 399.
 Grass, remarks on the old pastures in Yorkshire, 293—grass lands, decrease in value by remaining long unploughed, 317.
 Green food, great necessity of always having, in a breeding farm, 50.

H

- Hay (essay on the management of) 180—plan for making it from heath, 273-277—method of feeding with, 187—mixture of straw, *ib.* 188-9.
 —Quantity from water meadows, 326.
 —salting of hay, 186.
 Heads of a lease, as presented by the surveyors of Northumberland, objected to, 315-16.
 Heath, proposed as a substitute for hay in Highland farms, 274—used for this in Sweden, from an ancient period, 275—practice of burning improper, as destroying the shoots and the grass below, *ib.*—time of cutting and drying prescribed, 276-277.
 Hedges, (strictures on hedge-management), 371—training of young, 421.
 Hints (loose) on the principles and practice of rural science, 156.
 Horses, preference of to oxen, 215—essay on the food of, 51—single-horse carts recommended, 434—best horses for country use in Suffolk, 391.
 Husbandry (ancient state of) curious, but lost, 122—description of *out* and *infield* lands in the Lowlands of Scotland, *ib.*—alteration of these by Summer fallow, 123—grass husbandry, its effects, *ib.*—turnips, when introduced, 124—beans, 125—potatoes, *ib.*—inclosing and draining, *ib.*—circumstances affecting it, 242, 245—Kentish husbandry noticed, 253—(state of) in Pennsylvania, 95—husbandry of the Ancients, (extract of the Author's life) 439.

I

- Inclosures, remarks on forming, 411.
 Impolicy and injustice of assaulting dealers in provisions, shown, 447.
 Improvements of stock from inclosing commons, 424—of entailed estates, 266.
 Inequality of weights and measures, 373.
 Intelligence (Agricultural) for grain, cattle and sheep markets in different counties of Scotland, 103-109—of England, 110-117. No. II. For Scotland, 217-227—for England, 227-234. No. III. Scotland, 338-349—England, 349-361. No. IV. For Scotland, 449-477—and for England, 477-487.
 Joint-stock Farming Society (proposals for a) occupying an experimental farm near London, 170—supported by arguments from the increasing population—the great waste lands in the vicinity, 171—from utility of example, and instruction to others, *ib.*—useful amusement to be derived from agricultural experiments, 172—manner of such a farm explained, *ib.*—objections to it answered, 174-178—proposed capital, *ib.* proposed expenditure, *ib.*—advantages to subscribers, 180.

L

- Land, on value of, 42—on subsetting of, 43,—(arable) whether Summer-fallowing be proper on clay and strong soils, 205.
 Leases (with-holding of) injurious to Agriculture, 77—inquiry, whether subsetting is lawful, unless when there is a clause in the lease allowing, 43—on obsolete terms in, 39—short endurance of, prejudicial to improvement, 291—Lord Kames's plan of, how neglected, 292.
 Letters from a Scottish farmer on a tour through England, 32, 147, 248, 390—from Germany in 1743, 399. Extract of a letter from a linen-manufacturer to Sir J. Sinclair, 258-262.
 Lincoln described, 394—large fallows run to waste about that city, *ib.*—overgrown with thistles, and pastured by sheep—the upper parts of
 R r 2 Lincoln

INDEX.

- Lincoln crowded with Commons, 395
- Lime—limestone common in the High lands of Perthshire, 192—plan for bruising it unburnt, frustrated, 193—utility of lime in some soils, 425—use of it in Yorkshire, 387—on Summer-fallow, *ib.*—in what proportion, *ib.*—with what other manure, *ib.*—different kinds, *ib.*—Pon-trefact lime, how mixed, *ib.*—Error with regard to its actual fertility, 388—to be considered as an exciting, not an enriching manure, according to some writers, *ib.*—how to be used, and on what soils, 389—most beneficial mode of lining land, 148—errors of the Yorkshire lime-husbandry, 149.
- M
- Machine (winnowing) introduced, 158—thrashing, *ib.*
- Manorial Claims, (observations on) 266, 18, 23—enumerated and examined—game—suit and service—mill-fokes—common lands—minerals—Courts leet, and Courts baron, 23-32.
- Manufacturers, those treated of by Middleton in his survey, 84—excellent Agriculture in Lancashire, 246.
- Manures, those laid upon meadows in Middlesex, 80—different modes of procuring, 402.
- Malt liquors (immense consumption of) in London, 83.
- Markets, (state of the Edinburgh, Haddington, &c.)—See Agricultural Intelligence in each No.
- Meadows, watering of, finely understood in Wiltshire, 318. Theory of water-meadows, 319.
- Nature and properties of, *ib.*—flowing and catchwork meadows described, 320, 322.
- Quantity of watered meadows in Wiltshire, *ib.*—not unhealthy—advantages great, 323—management of, 324—feeding of with sheep, 325—laid up for hay, 326—kind of hay *ib.*—what soils fit for water-meadows, 327.
- Millfokes or miltures, a part of manorial claims, 266.
- Minerals, one of the manorial claims, 266, 23—an important article in the description of Northumberland, 310.
- Montague Main colliery, (seams of coal in) 312.
- N
- National advantages which the encouragement of the growth of flax will produce, 261.
- Northern and Southern States of America, agricultural distinction between, 307.
- Northumberland, (Review of Messrs Bailey and Culley's general view of) 309.
- Notes to correspondents, 120, 239, 489.
- Number of people one acre of flax will employ, 262.
- O
- Oats, (on the management of a late crop of) 363. Angus oats, their fertility, 423.
- Obituary, with biographical notices, 119, 234, 361, 489.
- Obstacles to improvement enumerated by Dr Robertson—townships—runrig—uncertain boundaries—servitudes—thirlage—short leases—distance from manure—commons, 199. In the county of Northumberland, no leases, or very short ones—and tithes particularly in kind, 433.
- Over-sweat, how prevented in stacking hay in the vicinity of London, 254.
- P
- Paring the surface (observations on) in the Highlands, 407—centured, 425.
- Premiums offered by the board of Agriculture for 1800, 140.
- Present state and management of common fields and waste lands in Yorkshire, 366—state of the open fields that are cultivated, *ib.*—waste lands, about 849,272 acres, partly common to all, and partly restricted, *ib.*—promiscuous culture and pasturage, *ib.*—rotation of crops used, *ib.*—draining entirely neglected, 369. This distribution of lands in common, seems to have come from feudal times, *ib.* Saxon equitable laws neglected,

INDEX.

- neglected, *ib.*—prejudices unfavourable to the inclosure of commons, 152, & *passim*—chief difficulties to be surmounted in inclosing, 370.
- Population increases with agriculture, (see *Introduct.*) General causes affecting it, 21, 23—sheep and great farms proved favourable to, 138-140—*idem*, 380—increased population heightens the price of provisions, 243—see also observations on statistical account of Hounam, 19, 23.
- Plough, different kinds of ploughs in general use, mentioned *passim*—description of one for cleaning turnips, 413.
- Prices (of cattle, grain, and other articles). See quarterly reports of different counties, and state of the markets, in the Agricultural Intelligence of each number.
- Profits of a flax and grain crop in Prussia, &c. compared, 58.
- Prosperity of Scotland declined after the Union of the Crowns, 40—owing to what, *ib.*
- Public farms recommended as the means of improving agriculture, 434—see Joint-stock Farming Society.
- Q**
- Quarterly reports for Mid-Lothian, 108, 225, 346, 472—Northumberland, 112, 229, 359, 483—Yorkshire, 114, 230, 354—Angus, Mearns, and Aberdeenshire, 117—Berwickshire, 219, 339, 456—Fife-shire, 220, 475—Northern, 221, 361—East-Lothian, 222, 341, 467—Ayrshire, 338—Lincolshire, 350, 480—Roxshire, 458—Argyleshire, 459—Perthshire, 460—Morayshire, 462—Invernessshire, 467—Tweeddale, 469—Lancashire, 479—Norfolk, 481.
- Queries on the size of the measures of capacity used in England, 190.
- Queries upon practical subjects in agriculture proposed, 71—query concerning the quality of straw, 146—query respecting smut in wheat, answered, 154.
- Questions upon general subjects in agriculture, 68.
- R**
- Rape-dust, farm-yard dung, or bones mixed with lime, as a manure in the West-riding of Yorkshire, 387.
- Register of the weather during 1782 and 1799, 133-138.
- Rent, what proportion of produce rightly due for—cursorily remarks on, 39—history of rent from the Union of the Crowns, in Scotland, 40.
- Review of Middleton's survey of Middlesex, 72—of Lowe's survey of Nottinghamshire, 87—of Rochefoucault's travels, 94, 303—of Robertson's Perthshire, 191—Brown's Yorkshire, 202, 293—of Thomson's Fifeshire, 284—of Matthews' remarks on cattle, 308—of Bailey and Culley's Northumberland, 309, 421.
- Ridging a wet clay soil, (proper mode of) 278—ancient mode of ridging in East-Lothian, and other Scottish counties, *ib.*—broad and serpentine 279—narrow ridges introduced by Cockburn of Ormiston, early in this century, *ib.*—employed successfully on a wet clay soil, 280—and recommended, 284—contradicted, 289.
- Roxshire quarterly report, 458.
- Roads (importance of good) 272.
- Rotation of crops on a marsh-land farm, 206—almost unknown in Russia, 270—those recommended by Middleton reviewed, 79—of Nottinghamshire, 88.
- Roota бага, or Swedish turnip, (on the cultivation of) 89.
- Rural inquirer, No. I. 121. No. II. 241. Rural affairs (state of) 101, 212, 334, 445—rural economy (notices on) 296—view of rural economy during 1799, 101.
- Rye grass seed (on the quality of) 271.
- S**
- Scottish farmer (letters from a) on a tour through England, 32, 147, 248, 390.
- Seams of coal in Montague Main colliery, 312—in St Anthon's, *ib.*
- Sheep-stock, (rage for in the county of Perth, 198)—the Cheviot—heath—and long-woolled sheep of Northumberland, 428—folding of sheep, 393.
- Size of farms disputed, *passim*—size of, in Northumberland, 314.
- Soils in different parts of England—see Letters from a Scottish farmer.
- Use

INDEX.

- Use of fallow on all wet clay soils, 48—soil for flax in Prussia, 53—soil of East-Lothian, 66—of Nottinghamshire, 88.
 Smithfield and London markets, (prices of cattle, &c. at) 115.
 Stock (live) attention to, recommended, 434.
 Stockbridge in the Massachusetts, America, account of the lands around it, 307.
 Straw (query concerning the quality of, as fodder) 146—remark upon, *ib.*—mixture of straw with hay, see *Hay*.
 Suit and service, one of the manorial claims—free and military, or copyhold, i. e. mean and base services appendant to the tenant in villain socage, 26—heritors of Durham under something like the latter, 27—deserving to be all abolished, *ib.*

T

- Table (agricultural) of Scotland, 442 of the difference between the Linlithgow boll, and the various wheat and barley measures in Scotland, 444.
 Tares, on the utility of, 49—most productive method of sowing, *ib.*—serve as bands to tie the principal crop, and as green food, *ib.*
 Tillage of Middlesex described by Middleton, 72—best mode of, for flax, 127.
 Tithes considered in Middleton's survey of Middlesex—great obstacle to improvement of waste lands, 75—tithes in kind discouraging to the farmer, and unhappy for clergy, *ib.*—history of, 76—late introduction, *ib.*—partial operation of, very oppressive, 77.
 Turnips (description of a plough for cleaning) 413—advantages of drilling over the broad-cast method, 393.
 Twcedale quarterly report, 469.

V

- Value, (on the value of land), 42.
 View of rural economy during the year 1797—Dr Robertson's general view of the agriculture of the county of Perth reviewed, 191—Brown's general view of the West-riding of York-

shire reviewed, 200, 293—short view of agriculture in Russia, 268—Dr Thomson's general view of life, reviewed, 284—Messrs Bailey and Culley's view of the county of Northumberland, 309—comparative view of measures of capacity, 444.

W

- Walker (Mr John) some account of, who first introduced summer-fallow into Scotland, 161.
 Washington (General) sketch of his life and character, 234-6.
 Wastes, or commons, (inclosure of) foolishly deemed hurtful to the country, 242—shameful neglect of the finest lands under such opinions, *passim*—recommended, 293—Stockdale's account of the inclosure of Knarborough forest, noticed—necessity of an act to abolish the waste lands in Britain, 229.
 Weights and measures, on the inequality of, 373.
 Wheat (downy-chaffed wheats), their advantages, 422.
 Wheel-ploughs, their properties above the fwing-ploughs, 392—may be pitched to any deepness, and regulate the furrow exactly, *ib.*—contrary advantages of the fwing, 393.
 Wild cattle at Chillingham, in Northumberland, described, 426—their mode of attack, *ib.*—are killed by hunting, 427— their calving, and hiding of their calves, *ib.*
 Woods and plantations mentioned in Robertson's agriculture of Perthshire, 197.
 Woburn sheep-shearing fete, see an account of, p. 328.
 Worm, (grub) uncommon ravages of, among oat crops, 336—among wheat, 405—the species of fly ascertained to which it belongs, with a drawing of the fly and worm, *ib.*—chiefly destructive on moist soils, and strong lands, 406.

Y

- Yorkshire quarterly report, 114, 230, 354.
 Young (Mr Arthur) examination of, before the Committee for inquiring into the scarcity of provisions, 210.







New York Botanical Garden Library



3 5185 00292 5095

