

THE
FARMER'S TOUR
THROUGH THE
EAST of ENGLAND.

BEING

The Register of a Journey through various Counties
of this Kingdom, to enquire into the State
of AGRICULTURE, &c.

CONTAINING,

- | | |
|---|---|
| I. The particular Methods of cultivating the Soil. | the Soil, and its Division into Farms, with various Circumstances attending their Size and State. |
| II. The Conduct of live Stock, and the modern System of Breeding. | |
| III. The State of Population, the Poor, Labour, Provisions, &c. | V. The Minutes of above five hundred original Experiments, communicated by several of the Nobility, Gentry, &c. |
| IV. The Rental and Value of | |

WITH

Other Subjects that tend to explain the present State of
ENGLISH HUSBANDRY.

By the Author of the FARMER'S LETTERS, and the
TOURS through the North and South of England.

V O L. IV.

L O N D O N :

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M D C C L X X I.

C O N T E N T S
OF THE
FOURTH VOLUME.

Letter

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THE
FARMER'S TOUR
THROUGH
ENGLAND.

LETTER XXX.

MATTHEW COOMBS, of *Taun-*
ton * *St. James*, has practised the
drilling of pease three years: he makes his
rows equally distant, 20 inches asunder,
uses ten pecks, or three bushels of seed *per*
acre, and cleans them by two, three, or
four horse-hoeings, and also hand-hoes
and weeds them. He likewise draws down
the

* In the way from *Henlade* to *Bridgewater*,
I went out of the direct road for the pleasure
of seeing three places, which I had heard of
before

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the rows of pease to the sun with rakes, when twelve inches high. This operation he thinks essential to the welfare of the crop. The produce rises from 20 to 40 bushels *per* acre. Eight acres last year yielded him 40% for kids sold at market, and 140 bushels of dry pease. The expences of the culture are,

Hand-hoeing and weeding, 1 s.

Drawing the pease, 1 s.

Horse-hoeing, 3 s. His

before I came into *Somersetshire*: these are *Hestercomb*, the seat of ——— *Bampfild*, Esq. *Halfwell*, Sir *Charles Tynie's*, and *Enmore-Castle*, the earl of *Egmont's*.

The gardens at *Hestercomb* are the object: a rural sequestered vale with wood; much of the ground wild and romantic: Mr. *Bampfild* has filled this canvass in a manner that does honour to his taste. A walk winds around the whole in some places along the sides of the hills, at others it dips into retired bottoms, and rises again over the eminences, commanding views of the distant country. Here was no water, but it was brought from the higher lands, and is exhibited in various forms. The grounds are finely thickened with wood, which is so artfully managed, as to make the extent appear vastly larger than it really is.

His course of crops is,

1. Wheat and eddish turnips.
2. Drilled pease, and turnips after.
3. Wheat sown in *February*.
4. Barley.
5. Clover one year.

This honest farmer rises much above the practice of his neighbours, and deserves commendation for so doing: he is a sensible intelligent man.

About

The walk first leads from the house, behind some thick wood, on the side of a fine falling valley, to a bench, which is elegantly situated: at the bottom of a bold declivity is a lake, quite environed with an amphitheatre of hanging wood; the varied, waving slopes of green, break into the dark grove in the most beautiful manner: an urn on a rising knole is excellently situated, half obscured by the shade of the trees: a small fall of water from out a mossy bank, thickly tufted with wood, enlivens this most agreeable scene. Above the whole a hermitage is seen, situated on a projecting point of the hill; from whence it looks down on all the objects beneath. The parts of this view are extremely well connected, though various. The lake at your feet, the shelving lawn, and the thick woods, unite most happily with the water-fall; from thence your eye feels no pain in passing

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About *Halfwell*, the course is,

- | | |
|-------------------|--------------------|
| 1. Wheat | 3. Clover and ray- |
| 2. Barley or oats | grafs 2 years. |

Also,

- | | |
|-----------|--------------------|
| 1. Wheat | 4. Wheat |
| 2. Barley | 5. Pease or beans. |
| 3. Clover | |

Wheat yields on an average 15 bushels, barley 18, oats 25, beans 20, pease 14. They have some turnips, but
none

to the urn, which is in the very shade of the woods, that thicken quite to the hermitage.

Rising the hill you come to a winding terrafs, from which you look down to the right, on the hollow, with the water at the bottom: the effect fine. Between the hills you catch the distant country, which is composed of rich inclosures. From hence the scene changes totally, to a cool, sequestered vale, almost wholly shaded by the thick woods, that hang on the sides of the hills: no building or distant prospect is seen, but a transparent spring gushes out of a little spot of rock, moss and wood, and trickles over a pebble course through the lawn: the path then leads through a dark wood, and comes out at a rustic seat, from which you look at once on a cascade that will rivet you to the spot with admiration.

A bold stream rushes from out a rock, and falls in the most natural manner imaginable
about

THROUGH ENGLAND. 5

none hoed. Their tillage they perform chiefly with oxen, 6 or 8 in a plough and one horse: an acre a day good work.

Sir *Charles Tynte* uses them in harness (a practice I before thought had been peculiar to Mr. *Cooke* of *Derbyshire*) one before another, or abreast at pleasure; and never puts more than four in a plough: they move much quicker than in yokes, and draw heavier weights. Four doing the work of 6 or 8 and one horse, is an
amazing

about 40 feet, nearly perpendicular over a bank of rock-work, moss, ivy and weeds. Never was nature so admirably imitated. The background is a wood quite impervious, and as steep as the fall of the stream: the whole spot is a little opening in a thick wood, and no object to be seen but that which engrosses your attention. The accompaniment is as happy as the principal: a gloomy wood, whose branches bend about with all the ease of nature, and exclude every thing but the sun beams, which sparkle on the falling water: the floor of this sequestered dell is a small lawn, in which the water is lost. So complete a scene, in which every thing is complete, and nothing to offend, will not be often seen.

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amazing saving; and yet it is certainly a fact, that 4 in Sir *Charles's* team are equal to 6 and an horse in the farmers, and sometimes to 8. A comparison so extremely decisive, that it is amazing they do not imitate it: I suppose the expence of harness, added to the loss of laying aside the yokes, is what deters them; for one farmer I talked with, who had all his life been used to oxen,
allowed

Leaving this most agreeable spot, the walk leads through a piece of wild ground, which contrasts the more interesting scenes we have passed; but the shrubby grass, scattered with single trees, whose tops unite with the woods that spread over the hills, form a retirement that will not allow you to drop your attention.

The path winds from hence up the hill, through a dark wood, from which it breaks suddenly into an alcove bench, opening at once on a fine prospect over the vale of *Taunton*. Crossing the pasture, and again entering the woods, you come to a small bench, from which you have a very pretty birds-eye landscape through the branches of the trees, on a part of the vale of *Taunton*, with the steeples of the town: it is managed with taste. Rising the hill again, we next came to the hermitage or witch house, from the figure of an old witch
painted

allowed that his landlord's were faster walking beasts than his, though he did not put so many in a plough.

There is much rich grazing land around *Bridgwater*, that lets from 20 to 40s. an acre. It is chiefly used for fattening *Devonshire* heifers, which they buy in at *Candemas* from 3*l.* to 6*l.* each, and keep them at hay till the grass springs; then they allot a beast to every acre, which pays on
an

painted in the center pannel: the occasion of a very genteel compliment to the grounds from *Dr. Langborne*:

O'er *Bampfild's* woods, by various nature grac'd,
A *witch* presides!— but then that witch is TASTE.

The view from hence is very striking; the spot is the top of a hill, which projects boldly over the vale, and being lofty, the declivity is steep; the hollow vale, with the lake at the bottom, deep sunk in the hanging woods, has a great effect; the union of lawn, hill, wood and water, romantic. The distant country above opens to the eye, and renders the whole complete.

From hence, the walk leads to a seat, which looks full into a fine hollow, totally surrounded with impervious woods; not one intruding object; but an enchanter seems to have torn up a cascade, and flung it into the dark bosom of these noble groves. A scene more perfectly

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an average 40s. profit. Besides this every acre will fatten from one and a half to two wethers in the winter, to 8s. a head profit: this grass land must be incomparably good. There is a vast tract of rich grazing marsh from *Bridgewater* towards *Bristol*, and quite to *Axbridge*. It lets from 25s. to 30s. an acre: 20 of these acres will fatten 16 oxen of 50 score in the summer, and 40 wethers in the winter. The profit on the
oxen

picturesque I have not viewed: never was a falling water more happily united with the various shades of retiring woods; not an edging, or flat bank of trees, or mere back ground, but this is seen deep in the recesses of a woody hollow, and beneath the eye, with the peculiarity of looking *down* on a water-fall, with a greater effect than eyeing it *upwards*: a circumstance I remember no where besides. It is a scene, which sets the pencil at defiance.

From this spot, the path carries you to many natural openings in the wood, which let in a great variety of prospects, excellently managed to set off the preceding scenes by contrast: *they* are in general sequestered, and borrow half their charms from the gloomy shades, in which they are viewed: *these* are more open and gay; in some places you look down on the vale, with the opposite hills varied with woods and scattered trees; in others, over the home fields and catch,
4 through

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oxen is from 4*l.* to 5*l.* and 8*s.* a head on the sheep.

Hearing there was a great cattle fair kept annually in an arable field at *Bridgewater*, I was desirous of knowing its products; supposing that they must be very considerable from so rich a fold; the course of crops regular on it is,

1. Wheat, manured for with 20 loads an acre.
2. Pease or beans.
3. Clover one year.

Which

through the plantations, distant objects, with the rich vale of *Taunton* opening in various breaks. The whole admirably contrived for the introduction of uncommon variety in a small space of ground.

Mr. *Bampfild* has ornamented his house with several paintings of his own performance. His copy of *Vandyke's* king *Charles* on horseback is executed with all the fire and freedom of the original. The landscape over the chimney in the dining-room, a composition of his own, is beautiful: the brilliancy and warmth of the tints are very pleasing. In the drawing-room is a piece of birds in needle-work by Mrs. *Bampfild*, in which the colours are astonishingly fine; the hen's back is nature itself, and the relief uncommonly bold. Some smaller pieces in the
same

Which is a better course than many in *Somersetshire* : part of this field (it is an open one) is,

1. Wheat, 2. Pease,
constantly. As to crops they give no reason to suppose the land the better for the fair.

Wheat, 20 bushels.

Barley, 30 ditto.

Pease, 25 ditto.

Beans, 30 ditto.

Clover, 2 loads of hay, and then a crop of seed.

In

same room, of other birds, &c. are touched with a spirit and liveliness, that do honour to the lady's genius.

* * * *

From *Hestercombe* to *Enmore-Castle*, I took the road by *Cutberstone* lodge, a very high ground, which commands a most extensive view over the *Bristol* channel, across *Glamorganshire*, to the mountains of *Brecknock*. The channel, with the *Holmes*, is a fine object, and the waving hills and vales around the lodge, cut into inclosures, are pleasing; but the whole is not equal in beauty to several prospects I have elsewhere seen. The objects are too indistinct: you look over a country twelve miles to the channel, that is 21 miles over, then the whole county of *Glamorgan*,

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In all this country they manure as much as they can for wheat : some few for beans ; but no hand-hoeing, and sow the wheat after the beans.

Throughout the vale of *Taunton* and here also, they are very attentive to getting their wheat lands into good husband-like order : I think they mind this point more than any other. They plough much of their land on to narrow beds from 4 to 10 feet
over,

Glamorgan, and far into *Brecknockshire* : this is too great : the eye receives no pleasure from being told, that it sees fourscore miles. A channel five miles wide, at the bottom of the declivity, and winding round a cultivated country, with the *Welch* mountains rising immediately from the opposite shore, would be ten times more striking than *Cutberston*. The view of the *Isle of Wight* channel, from the hill above *Cowes*, much exceeds this in real beauty.

Excuse this digression, which I should have avoided, had I not been told, that this view was the noblest in *England*.

Enmore-Castle is situated on a gradually rising hill, in the midst of a fine rich country, about four miles from *Bridgwater*. It is one of the most peculiar buildings in the kingdom : it is a large quadrangular castle, built of a dark-coloured stone, round a court. It is surrounded by
a dry

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over, and break all the clods that are left by the harrows, drawing at the same time the loose earth from the furrows on to the beds; this they call clodding and hacking, and when finished, the fields have a very neat appearance; but what is very astonishing, with all this attention to their wheat lands, they do not (as I before observed about *Henlade*) know what a water-furrow is! On wet clayey soils, and flat ones too, they have no contrivance to
carry

a dry fosse, 40 feet wide and 16 deep. This opens all round into the offices under the castle, and likewise (which is the peculiarity) into a whole range of others under the lawn, which surrounds it; and among the rest to the stables, which are all under ground: an excellent contrivance to have them conveniently near the house: how it agrees with the constitutions of the horses I know not. The principal way into the stables is at a distance from the castle, where the entrance is at the side of the hill. The following is a list of the rooms.

The hall 40 by 28, and 27 high; a gallery round it, but it is too dark.

The armoury, 36 by 22.

The anti-chamber, 25 by 18.

Bed-chamber, 22 by 18.

Dressing-room, 22 by 14. Here are several good portraits.

The rest offices.

carry off the water, which lodges in the furrows of the beds, and which must half poison no slight portion of their crops.

Leaving *Bridgewater*, I took the road to *Bath*, passing within sight of a very remarkable tract of country, called *King's Sedgmoor*: it is on an average nine miles long and two broad; it is a flat black peat bog, but so very rich, that some sensible farmers

In the principal story are,

The gallery 66 by 22, and 19 high.

The dining-room 41 by 22, and 19 high.

The library 46 by 19.

Lord *Egmont's* dressing-room, 19 by 17.

Bed-chamber 29 by 16.

Lady *Egmont's* dressing-room 19 by 17. Over the chimney the taking down from the cross, in the stile of *Albert Durer*. There are many figures, and most minute, though unmeaning expression. There is neither composition, nor any knowledge of the clear obscure.

Lady's wardrobe, 15 by 11.

Lady's woman's room, 19 by 13.

Another room, 20 by 19.

The cabinet, 18 by 17. So called, but it is a mere waiting room.

Dressing room, 22 by 14. Here are several pictures, landscapes; still life, &c.

Bed-

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farmers assured me, it wanted nothing but draining to be made well worth from 20s. to 25s. an acre, on an average. But at present it is so encompassed by higher lands, that the water has no way to get off, but by evaporation; in winter it is a sea, and yields scarce any food, except in very dry summers. What a disgrace to the whole nation is it, to have 11,520 such acres lie waste in a kingdom that is quarrelling about
high

Bed-chamber, 22 by 20. Crimson velvet, hung with tapestry.

Anti-chamber, 25 by 19. Hung with tapestry; some of it fine.

Saloon, 44 by 30, and 20 high. The windows of this room are so low and small, that it is rather dark. Over the chimney a very good portrait. It is hung with fine tapestry.

Drawing-room, 25 by 19. Here are four admirable portraits, of fine colouring and excellent expression.

* * *

Halfwell, the seat of Sir *Charles Tynne*, Bart. is beautifully situated in the middle of an ornamented park, about two miles from *Enmore* castle. What chiefly attracts the attention of strangers, are the decorated grounds. The riding which leads to the principal points of view, crosses the park from the house; commanding a fine view of the rich vale of *Bridgwater*. It then

high prices of provisions! The present use made of this moor is not of the value of 2s. 6d. an acre.

Quantoc hills are an other very extensive tract of waste land; the soil part rocky; and what is called in this country a *stone rush*; which I take to be excellent land for sainfoine; but much of this space is of a better quality; I was informed that it would let inclosed, and without further improvement,

then runs by the side of a woody precipice, and up through some new plantations; from a dark part of which you enter through a door into a temple dedicated to *Robin Hood*; upon which a most noble prospect breaks at once on the beholder; which acts not a little by the surprize of the entrance. The ground shelves from it in front, and to the right gradually; but to the left in bolder slopes; where the dips are beautifully grouped with wood; and the hills above them rise in waving inclosures.

About the house the groves thicken; and a vast vale of rich inclosures, spotted in a beautiful manner, with white objects stretch beyond it to the distance of 12 miles; then you command the channel, which is here 9 miles over; the *Holm* rising in the midst of it very boldly; and beyond the whole, the mountains of *Wales* rise
one

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ment, at 4s. an acre; at present it does not yield as many farthings. It is 14 miles long by 2 broad, on an average; so here are 17,920 acres more that want only inclosing to be advanced from nothing to 4s.

Hunsfield moors are another waste that wants inclosing alone, to be made worth 20s. an acre; rich meadow.

About *Glastonbury* there are very extensive tracts of fine meadows that let from

20s.

one behind another. This view, I think, much excels that from *Cutberston* lodge.

From hence the riding leads up the hills, commanding all the way a most extensive prospect. After which it turns down through a plantation to a single small oak, with a few pales about it, and a bench. Here the grounds sinking from the eye, form a most sweet landscape. The lawns undulate in the finest manner, and the groves of oak seem to drop into the hollows. The clumps and scattered trees have an uncommon elegance, and unite the fore ground of the scene with *Robin Hood's* temple, which is here seen to great advantage. Beyond the whole you have the distant extensive prospect.

From hence the riding leads down the hill to a wood of noble oaks, which shade a wild sequestered spot; where a limpid spring rises at
the

20s. to 40s. an acre. It is applied to keeping many cows and fattening beasts. Here likewise is a vast moor called the turfery, in which they dig turf for burning: it is a flat bog, and might all be made very good meadow. There is a full view of all these lands from the *Tor* and *Windmill* hills. The latter hill consists of a fine rich sandy loam; the principal part of which is let to potatoe men, at 40s. an acre. Their method of cultivating

ing

the foot of a rock, over-hung in a fine bold manner by wood which grows from its clefts. The water winds away through the grove in a proper manner.

Here is a tablet with these lines.

When *Israel's* wand'ring sons the desert trod,
 The melting rock obey'd the prophet's rod;
 Forth gush'd the stream, the tribes their thirst allay'd;
 Forgetful of their *God* they rose and play'd.
 Ye happy swains for whom these waters flow,
 Oh! may your hearts with grateful ardors glow;
 Lo, here a fountain streams at his command,
 Not o'er a barren, but a fruitful land;
 Where Nature's choicest gifts the vallies fill,
 And smiling Plenty gladdens ev'ry hill.

Turning the corner you catch a bridge, under a thick shade, and then come to the *Druid's* temple, built in a just stile of bark, &c. the view quite gloomy and confined; the water winds silently along, except a little gushing fall, which

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ing them is to dig the land into beds, 9 feet over; they dung all but the new land on first breaking up, at the rate of about 3 *C. wt.* of dung *per* lug, of 20 feet by 9 wide: 10 bushels of sets, which are chiefly small ones, plant an acre; they keep them clean by hand-weeding, and cover the beds with earth out of furrows; dig up the crop with spades; it amounts to from 6 pecks to 3 bushels *per* lug, average 9 pecks;
per

hurts not the emotions raised by so sequestered a scene.

Following the path towards the bridge, you catch, just before you come at it, a little landscape through the trees, of distant water finely united with wood.—From the bridge the river appears to great advantage; nobly embanked on one side with tall spreading trees; and on the other with green slopes scattered with single ones.

From these retired and gloomy spots, you leave the dark groves, and open into a more cheerful ground; the river is bounded only on one side by thick wood, and on the other by waving lawns open to the fields, and scattered thinly with trees. From a bench on the banks you view a slight fall of water well shaded.

Advancing, the character of the ground again changes most happily; the woods open on
both

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per acre 544 bushels, which is very considerable. They plant them two or three years running on the same land; but the two first crops are generally the best. They often sow wheat for the third crop, and sometimes get at the rate of 40 bushels *per* acre.

All the way to *Wells* the country is chiefly grass, which lets from 18s. to 30s. an acre.

Near

both sides the water; waving lawns of the most lively verdure—trees thinly scattered—brighter streams—touches of distant prospect—and elegant buildings—all unite to raise the most cheerful ideas, which were prepared for, by gradually leaving the gloom of the more sequestered woods. A break through the trees to the right, lets in a view of the rotunda.

Passing to the *Ionic* portico, which is excellently placed, the scenery in view is truly enchanting: the lawn is gently waved, and spotted with trees and shrubs in the happiest taste. The water seems to wind naturally through a falling vale; and a swelling hill, crowned by the rotunda, forms a complete picture. The whole scene is really elegant; every part is riant, and bears the stamp of pleasure.

As you cross the bridge, you look to the right on a very beautiful cascade, which makes five or six slight falls over a moss and ivy bank, under a dark shade of wood. The slopes, wood

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Near that town are very large tracts of flat marshy land, half poisoned with wet; it wants nothing but draining to be rendered the best meadow in the country.

There is very little manufacturing of consequence here besides some stockings; they have a little in the silk way, which employs some children.

About *Compton*, within 12 miles of *Bath*, their course is,

and water, unite to render the scene striking. But the point of view being the bridge, and standing on another cascade, is not agreeable; it somewhat weakens the effect.

Turning down by the water the lawn continues very beautiful, and you gain a fine view of the *Ionic* portico on a rising slope, which here appears to great advantage; but the middle cascade, which you here command, should be totally hid; it is an inferior repetition of the principal one.

Rising the hill by the side of the water, you have from a bench under a spreading wood an agreeable view of a bridge; and a little further, another commands the same object, and has also a very pleasing opening through the trees to the portico. The view to the left *up* to the water, is a confirmation of *Sbenstone's* observation.

The riding which follows on the bank of the river under the gloomy shade of numerous most venerable trees, is a fit residence for Contem-
I tion

- | | |
|-----------|-----------|
| 1. Fallow | 3. Barley |
| 2. Wheat | 4. Oats. |

The crops of wheat 30 bushels; of barley 30; and of oats 40. The land is rich; lets from 16s. to 40s. an acre; average 25s. Farms rise from small ones to 200l. a year.

At *Stone Easton* the road crosses a common of good dry sound land, that is visibly very improveable; the spontaneous growth, grafs, furze, or fern: I made some enquiries

C 3 ries

tion to dwell in. The openings across the water on the opposite lawn, are just sufficient to heighten by contrast. The awful shade—the solemn stillness of the scene, broken by nothing but the fall of distant waters; have altogether a great effect, and impress upon the mind a melancholy scarcely effaced by the chearful view of a rich vale with the water winding through it, which is seen on crossing the park towards the house.

Halfwell, upon the whole, has received rich gifts from nature, and very pleasing ones from art. The riding is of large extent, and commands a great variety of distant prospect, and rich landscapes; the home scenes are elegant, and set off by the shade of such noble wood, that every impression they make is rendered forcible. The buildings are in a light and pleasing stile.

ries concerning it, and found that Mr. Cox has inclosed 500 acres of it that was overrun with trumpery; he has ploughed and manured it richly with lime, and laid it down to grass, which is now 20 s. an acre. Such spirit is highly commendable; and many are the tracts of waste open land, at present of use to nobody, which would pay equally well for improvement.

About *Compton* there are great tracts of rich inclosed land that let at 30s. an acre. Respecting the management of a considerable part of their land, it is so curious as to deserve particular attention; first they marle, 30 loads an acre; and on the credit of that, the following is their course;

- | | |
|-----------|------------|
| 1. Wheat | 7. Barley |
| 2. Wheat | 8. Oats |
| 3. Wheat | 9. Wheat |
| 4. Oats | 10. Barley |
| 5. Barley | 11. Oats |
| 6. Wheat | 12. Wheat. |

Bravo! my *Somersetshire* lads! And what then? Why then, Sir, we lime on a fallow, and take seven crops more. Incomparable!

They

They lay 20 quarters of lime *per* acre, at 10*d.* a quarter.—Their products are as follow.

Wheat, 3 quarters.

Barley, 4.

Oats, 5.

Pease, 2.

Very few turnips, and none hoed. No beans. These crops are a strong proof (if any was wanting) of their vile husbandry. Land at 30*s.* an acre, marled and limed, to yield no better products than the worst soils in the kingdom under good management. I will not venture a positive assertion, but I do not, at present, think there is any country very well cultivated, whatever the soil, but what yields equal products: soil, rent, lime and marle considered, their courses of crops ought to be some of these;

- | | |
|-----------|-----------|
| 1. Beans | 3. Clover |
| 2. Barley | 4. Wheat. |
| 1. Beans | 2. Wheat. |
| 1. Beans | 4. Barley |
| 2. Wheat | 5. Clover |
| 3. Pease | 6. Wheat |

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But above all;

- | | |
|-------------|------------|
| 1. Cabbages | 6. Barley |
| 2. Barley | 7. Pease |
| 3. Clover | 8. Oats |
| 4. Wheat | 9. Clover |
| 5. Beans | 10. Wheat. |

The beans and pease all drilled, and horse and hand-hoed; the crops certainly would not be less than, Wheat, 4 quarters; Barley, 6; Oats, 8; Beans, 6; Pease, 4; a system that would pay them infinitely better than their present one.

Nine miles from *Bath* I observed the wheat land well water-furrowed, for the first time since I had been in *Somersetshire*. Against the seventh mile stone is a field of fine sainfoine on a hill; from which I conclude that it would do on the poorest hills in this country. A few miles before I came to *Bath*, it was with pleasure that I observed most of the grass fields, on the sides of steep hills, cut across with small trenches for conveying water over them out of the ditches which receive all that come from the higher lands. This is excellent management, and deserves universal imitation.

In

In all this course of country the hay is chiefly stacked about the fields.—Their tillage is performed with four or six oxen and a horse. Rents are generally high; I found none under 20*s.*

 LETTER XXXI.

I DO not expect much information in crossing *Wiltshire*, except concerning sheep: about that part of their management I shall be particular in my enquiries. Near *Bath**, the lands, as may be supposed, are artificially very rich, and let at high rents. Four miles from thence, I came to *King's Down*. Rent of land in that neighbourhood rises from 10*s.* to 40*s.* an acre. The sheep here are all *Wiltshires*:
they

* The additions every day making to this city are uncommon, and greatly is it to the honour of all those concerned in raising the new streets, that they build on a regular plan; so that every side is a complete front. Besides the Circus, which is now finished, and is an area no where equalled in the kingdom, there is a street leads from it to a set of buildings now raising, to be in the form of a crescent, which will have a very noble effect; yet the architecture is not faultless: the ground-floor being plain walls instead of rustics is an experiment

they fold the ewes most part of the winter, with no more hurt to them than to wethers.

The profit they reckon,

Lamb, 10s. to 15s. .

Wool, 2s.

Two hundred will fold an acre in a week.

Farms are in general from 100l. to 300l. a year. Their courses of crops,

- | | |
|-----------|------------|
| 1. Fallow | 3. Barley |
| 2. Wheat | 4. Clover. |

And some, not all, add,

- | | |
|----------|------------|
| 5. Wheat | 6. Barley. |
|----------|------------|

Also,

- | | |
|-----------|------------|
| 1. Fallow | 3. Barley. |
| 2. Wheat | |

There

not perfectly successful. Against the principal floor and attic is a regular range of *Ionic* pillars; but the windows of the attic are crowded quite into the capitals of the pillars, which offends the eye. Besides this pile, there are several others, whose magnitude shews how flourishing this city is: *Paragon Buildings*, a concave range, *York Buildings*, *Edgar Buildings*, &c. amazing edifices for a town supported by pleasure and dissipation! The seat neither of government nor commerce.

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There are some turnips, and most of them hoed; the value from 40s. to 3*l.* an acre.

From *Melksham* to the *Devizes*, nine tenths of the country is grafs, and lets from 20s. to 40s. an acre; average 25s. It is mostly applied to dairies, which rise to 60 cows; many are let; the price used to be 3*l.* but now it is 4*l.* They give four, five or six gallons of milk a day.

About *Rundevey* the country is chiefly open field, and the course,

- | | |
|-----------|-----------|
| 1. Fallow | 3. Barley |
| 2. Wheat | 4. Oats. |

Wheat yields three quarters and a hal *per* acre; barley and oats not more on an average. Land lets from 15s. to 18s. an acre: the farms large. In their ploughs they use six oxen, sometimes four; and three or four horses.

They fold their ewes as well as wethers all winter long on the land for barley; while they are lambing they pen them in the farm yard, and after that fold them with the wethers. They hand-hoe their turnips twice; an acre is worth from 40s. to 50s.

At

At *Bishops-Cannons* I made fresh enquiries concerning sheep: they here fold the ewes quite through the year upon the cold hills, lambs and all; nor do they ever find any inconvenience from the practice. They lamb in the fold, and the lambs find out their dams without any difficulty. Ewes they reckon make more water than wethers; but the latter dung most. The balance of value for folding they think even. They leave them in the fold till nine or ten o'clock in the morning: 200 sheep will fold an acre in 10 nights.

Rents here run at 15s. an acre. The course of crops,

- | | |
|-----------|-----------|
| 1. Fallow | 3. Barley |
| 2. Wheat | 4. Oats. |

Wheat yields four quarters an acre; and barley and oats the same.

L A B O U R.

Ten-pence a day all the year round.

Reaping, 5s.

Mowing corn, 10d.

————— grafs, 1s. 6d. to 20d.

Head-man's wages, 6l. to 7l.

Next ditto, 3l. to 4l.

PROVISIONS.

Bread,	-	2 d. per lb.
Butter,	-	7 for 18 oz.
Cheese,	-	3 $\frac{3}{4}$ per lb.
Beef,	-	2 $\frac{1}{2}$
Mutton,	-	3 $\frac{3}{4}$
Pork,	-	3
Milk,	-	$\frac{1}{2}$ d. per pint.
Potatoes,	-	6 a peck.
Labourer's house-rent, 30s. to 40s.		

~~————~~ Firing, 30s. The farmers sell all their pea and bean straw to the labourers for burning: as vile a piece of husbandry as can well be supposed.

In a few miles more, repeating my enquiries about sheep, I again found that they penned them in the farm yards, littered warmly with straw, and feed them with hay in racks till the lambs get strength, when they fold them as usual. A flock of 300 will annually sell 100 old ones, at 20s. to 23s. and 100 lambs at 10s. or 12s.

I observed in several places in the way to *Marlborough*, that they had a very new way of getting gravel: they open a hole,
and

and sifting the gravel that arises, take out the stones, and leaving the earth, &c. in it, lay down the turf again, so that the grass is not at all damaged: this is a practice which much deserves imitation.

Land lets about *Overtan*, the inclosure at 20s. an acre, and the open fields at 12s. The course is,

- | | |
|-----------|------------|
| 1. Fallow | 3. Barley. |
| 2. Wheat | |

Wheat yields $3\frac{1}{2}$ quarters an acre, barley 4 quarters; but few turnips: their flocks of sheep are about 1000: they fold them all the year through, except at lambing, and then pen in the yard: they use no lime or marle in this country in manuring, only the fold and yard dung.

No oxen in tillage; four horses in a plough.

From *Marlborough* to *Hungerford*, the average rent is about 15s. or 16s. an acre: there are tracts of exceeding rich watered meadows here, particularly some belonging to Mr. *Popham*, that let from 40s. to 4*l.* an acre: they very often mow them twice, and get two ton of hay the first cutting, and from one to one and a half
the

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the second; the after-grafs of some meadows alone let for 40s. an acre. These are immense rates, and much exceed the grafs in the neighbourhood of great cities; and shews strongly the uncommon importance of having a command of water to throw at pleasure over grafs lands.

It was here I first met with peat ashes. They bring them from *Newbury*; but many farmers buy the peat itself there, and burn it here; if bought at *Newbury*, they cost 5*d.*; burnt here it comes to 6*d.* but this extra penny they think well laid out, because the *Newbury* burners mix dross with the peat; so that the quality is more than a penny worse. They lay them chiefly on clover from 10 to 20 bushels an acre. It does great good to this crop, and some to the following wheat; but on the clover in a wet year the effect is to be seen to an inch. Peat ashes are sometimes sown on the green wheat in spring. They here fold their ewes through the winter, as well as the wethers: here and there a farmer, who pens them while lambing on straw in the farm yard. Lambs
sell.

fell up to 15s. wool 3s. The course of crops here is,

- | | |
|-----------|-----------|
| 1. Fallow | 3. Barley |
| 2. Wheat | 4. Oats. |

Also,

- | | |
|-----------|------------|
| 1. Fallow | 3. Barley |
| 2. Wheat | 4. Clover. |

Also,

- | | |
|------------|------------|
| 1. Turnips | 4. Clover |
| 2. Barley | 5. Wheat |
| 3. Barley | 6. Barley. |

Wheat yields 2 quarters an acre, barley 3, oats 4.

Of husbandry in the neighbourhood of *Newbury*, particularly about *Donnington*, I am enabled to give a more minute account through the obliging attention of *Petty Andrews*, and *Frederick Cowslade*, Esqrs.

Farms rise from 30*l.* to 300*l.* a year; but are in general about 100*l.* a year. The soil is a strong loam on clay, chalk, and gravel; not much that is light enough for turnips. It lets from 10s. to 40s. a year; average, 15s.

To *Reading*, 17s.

To *Hungerford*, 13s.

The *Vale of White Horse*, 20s.

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The courses of crops most common are,

- | | |
|------------|--------------------|
| 1. Turnips | 3. Clover one year |
| 2. Barley | 4. Wheat. |

- | | |
|------------|--------------------|
| 1. Turnips | 4. Clover one year |
| 2. Wheat | 5. Oats. |
| 3. Barley | |

- | | |
|------------------|--------------------|
| 1. Turnips | 5. Pease and beans |
| 2. Barley | mixed |
| 3. Clover | 6. Wheat. |
| 4. Summer fallow | |

And this last is one of the strangest courses I ever heard of.

For wheat on clover land they plough but once ; otherwise from three to five times ; sow two bushels and a peck of seed, and reckon three quarters the average produce. They have an uncommon high opinion of changing seed ; have large quantities from *Surry*, the *Ile of Thanet*, &c. They plough thrice for barley, sow three bushels an acre, and get four quarters in return. For oats they give but one earth, sow four bushels an acre ; the average crop five quarters ; they rise to ten quarters. They stir thrice for pease, drill
four

four bushels an acre, in rows equally distant 15 inches; they hand-hoe them twice; and a few farmers horse-hoe them with the *Berkshire* shim; the crop four quarters an acre. They give but one earth for beans, plant three bushels an acre in rows 18 inches asunder, and drop them in holes nine or ten inches asunder, and four or five beans in a hole, so that they come up in bunches. I should apprehend this crowding the roots together must prevent the tillering, and answer no good purpose, especially in rich land: they hand-hoe them twice, and reap about four quarters and a half *per* acre.

In the *Vale of White Horse*, the crops rise to,

Wheat, 4 to 8 quarters.

Oats, 6 quarters.

Beans, 5 quarters.

Pease, 5 quarters.

Very little barley.

No rape or cole-seed is cultivated here; for turnips they plough from thrice to six times, hand-hoe twice, and feed them on the land with sheep; the average value 1*l.* 11*s.* 6*d.* *per* acre. Clover they mow

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once for hay, and get from two to three tons an acre, at 30s. a ton, and feed the second growth. Respecting the goodness of the wheat crop that follows, they do not reckon that there is any difference between mowing and feeding.

Both summer and winter tares are cultivated for feeding sheep, and also for foiling horses in the stable: one acre will keep six horses a month; this, at 2s. 6d. a week, comes to 3*l.* an acre: a good return, considering the ameliorating quality of the tares, and the plenty of dung raised in foiling.

They have a great deal of sainfoine, sow it on all poor lands, without regarding the under strata of the earth; it does without a chalk rock: lasts 15 years, and mown every year. A good acre will give three tons of hay, at 30s. and an after-grass worth 20s.; in all, 5*l.* 10s.: a vast produce, and on their poor lands too! I will engage, that it much exceeds their richest arable.

In regard to manuring, they are excellent farmers in their attention to that part of husbandry; and here it is necessary to
begin.

begin with peat, for which they are most famous.

Peat is a very regular stratum, under another of common earth, but generally under a black meadow mold, from 1 to 3 feet deep; it is itself generally from 7 to 10 feet deep; but in one peat earth I was in, it is not more than 4 feet thick: under it is a body, which they call *marne*, a whitish, stiff, sticking clay. The peat looks and feels very much like black butter; there is no roughness in it, nor any roots; so that it differs materially from the peat common in most parts of the kingdom, which is a net-work of roots, a sponge of them. The common conjecture is, that peat was formed by the destruction of a whole forest, and is composed of the rotten timber; acorns, leaves, moss, branches, and whole trees, are sometimes found in it perfectly found. The peat moors about *Thorne* in *Yorkshire*, are five or six feet deep, very flat and regular, and under them much such a clay as at *Nevebury*. In them they also find whole trees, and many of them quite found: they are chiefly firs, and the whole country are very desirous of getting

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these firs, to make pales of; for by long experience it has been found, that they are almost incorruptible, no instance scarcely being known of their decaying. But this peat is all a fibrous mass of little roots, and yields very few ashes. The quality they both possess of preserving timber, seems rather an objection to the real peat being composed of rotten wood, especially as the trees are found so deep in the peat, as to make it reasonable to think they must have been among those which composed the mass; however, this is only a conjecture.

Most of the peat in digging is under water, and the peat-spoon, with which it is dug, should always be in the water, from the ease thereby acquired of cutting and throwing it off the spoon; it is after drying burnt, not as some people have imagined in heaps, merely for the ashes, but in houses, like all other peat, and then the ashes are collected. The price at the pit is 9s. for a waggon load of 40 bushels, and the ashes are worth half the money; the price 6*d.* a bushel. They burn in the peat grounds an inferior sort for the mere ashes, mixing the upper stratum of black earth

earth with it; and these ashes they sell at 3*d.* a bushel. An acre of peat ground is worth 200*l.*

Many farmers come from 15 to 16 miles for it.

The general quantity spread on an acre is ten bushels: they use it only on clover in *March*. The red ash is the most esteemed: it lasts only the clover crop; but that is increased by it, as 3 to 2.

Larger quantities have been tried *per* acre, but without greater effects. They have a story, common here, of a man who sowed forty or fifty bushels *per* acre, and the wind blowing a small quantity over the hedge on to his neighbour's clover, he was surprised afterwards to find, that the wind had judged much better than himself; for his neighbour's clover was more improved than his own.

But the farmers here do not confine themselves to peat; rags they have from *London*, and find them very serviceable to their lighter lands. Soot they sow on their green wheat in the spring, 12 bushels an acre, at 8*d.*; and they use malt dust on their barley lands. Chalk they use by

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way of mellowing the land, and making it plough the easier.

They do not chop their stubbles; but their hay they stack at home.

In their fences they follow the plashing method.

Their best grass land is the watered meadow, which lets at 40s. an acre. They water it all the year, except two months while the crop is growing: they mow twice, and get four tons an acre, worth 25s. a ton; and the spring and after grass food is worth about 10s. more. All these meadows rot sheep, turn them in when you will; except ewes with lamb. This is directly opposite to the practice of the whole county of *Dorset*: and if both are right, the rot does not arise from the *water*, but the *soil*. But there is no point so disputed as this of the rot.

The breed of cattle here is the long-horned *Derbyshire*; cows give 4 or 5 lb. of butter a week, from two gallons of milk a day; the total produce 4 or 5 l. They do not keep the more swine on account of cows. The winter food is wholly hay and straw.

straw. In rearing calves, they do not suck at all.

Swine fatten in general from ten to fifty score.

In my *Six Months Tour through the North of England*, I mentioned a hog being fattened by Mr. *Selwood* to 57 score, which is 81 stone 6 lb. at 14 lb. to the stone. I have been much ridiculed for offering to pretend to think of such a thing. Mr. *Andrews* did not recollect the exact particulars, but wrote to Col. *Sellwood*; and since I left the *Grove*, I had a letter from him, in which he writes as follows: — “Lieut. Col. *Sellwood* has sent me the following well-attested particulars.

“Pigs fatted by *Richard Sellwood*, Esq. of *Bright Walton, Berks.*

“*March*, 1752, a hog killed, that weighed, exclusive of the blood, sixty-one score twelve pounds; when opened and cut out, it weighed fifty-seven score eleven pounds.

“*February*, 1770, killed another, which, when cut out, weighed forty-four score fourteen pounds. Signed by *R. Sellwood.*”

I think these particulars are a sufficient
answer

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answer to those, who before made themselves so merry at my expence.

Flocks of sheep rise to 3 or 400: they are chiefly stock sheep of the *Wiltshire* breed; the profit,

Lamb,	-	-	£.	0	10	0
Wool,	-	-		0	2	6
<hr/>						
Total,	-	-		0	12	6
<hr/>						

The winter food turnips, and a little hay. They value the fold at *4d. per* night *per* score. Relative to the rot, besides the above fact of their meadows effecting it, they observe that no sheep will ever rot, while it has a lamb by the side. Springs they think have nothing to do with the disease, nor will all wet places rot, but all watered meadows will. This is consonant with a part of Mr. *Bakerwell's* opinion, mentioned in the first volume, that no water rots but what *flows*.

In their tillage they reckon five horses necessary for 100 acres of arable land, use four in a plough, and do an acre a day, five inches deep; the price 6s. an acre. Cutting straw into chaff is practised.

There

THROUGH ENGLAND. 43

There are some oxen used ; but they do not answer so well as horses.

The time of breaking up stubbles is after the wheat sowing. They use wheel ploughs, with the beam resting on very high gallows, something like the *Norfolk* ones, but not near so light.

In hiring farms, they reckon five rents necessary to stock.

Land sells at 30 years purchase ; land tax at 4s. is 2s. 6d.

Tythes both gathered and compounded ; the composition 3s. an acre round.

Poor rates 4s. in the pound ; 20 years ago only 6d. In the town of *Newbury* 7s. but not to the full amount of real rents. The employment of the women and children spinning. They all drink tea twice a day.

The following are the particulars of a farm ;

150 Acres in all	40 Acres wheat
20 Grass	40 Barley
130 Arable	15 Oats
100% Rent	15 Turnips
8 Horses	20 Clover
6 Cows	3 Men
8 Young cattle	2 Boys
150 Sheep	1 Maid
30 Swine	2 Labourers,

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Mr. *Cowslade*, of the *Priory* at *Donnington*, has tried some experiments which well deserve being known.

Experiment, No. 1.

To discover the importance of brining wheat seed, he has tried it for several years drying with lime; and on comparison with the seed unbrined, he observes, that it is a preservative from the smut; for corn will be smutty, that comes from seed unbrined, while that brined is quite free, and the soil the same.

Experiment, No. 2.

Three acres were in 1763 drilled with wheat, in equally distant rows, 18 inches asunder, one and a half bushel seed *per* acre; it was carefully hand-hoed: the crop three quarters and a half *per* acre; which is a produce considerable enough to prove the merit of the culture.

Experiment, No. 3.

Two acres, in 1764, were drilled with wheat in equally distant rows, one foot asunder; a bushel and half of seed *per* acre; it was hand-hoed once; the crop three quarters and a half *per* acre. Adjoining was a piece of broad-cast wheat; soil, tillage,

lage,

lage, &c. the same, sown with 2 bushels and a quarter *per* acre; the crop five quarters *per* acre: this great superiority of the broad-cast, induced Mr. *Cowslade* to give up drilling wheat, as the common method was so evidently better.

But he drills all his pease and beans, and seldom gets less than four or five quarters *per* acre.

Experiment, No. 4.

Sainfoine this gentleman finds a most profitable crop; he has got at one cutting 5 tons of hay *per* acre, which is the greatest crop (well authenticated) that I have heard of.

Experiment, No. 5.

Mr. *Cowslade* planted one *Batavia* potatoe which weighed 2 oz. and it produced 10 lb.—This trial should be pursued, for the sort is not generally known; it may turn out more productive than the common ones.*

Near

* Mr. *Andrews* has built a house at the grove near *Newbury*, in the *Gothic* stile; and ornamented the grounds about it with much taste. The situation is on a rising ground, backed by a hill crowned with wood; out of which rises *Donnington* castle. A lawn spreads around the house, and falls to a very fine water; a stream

46 THE FARMER'S TOUR

Near *Reading* the soil is a good rich loam on gravel, which lets at 20 s. an acre. The course of crops here used is,

- | | |
|-----------|------------------------|
| 1. Fallow | 4. Clover 1 or 2 years |
| 2. Wheat | 5. Wheat |
| 3. Barley | 6. Barley. |

There are not many turnips; when they are sown, it is now and then instead of a fallow. Wheat yields 3, or $3\frac{1}{2}$ quarters *per* acre; Barley, 5; Oats, 6; Pease they drill

enlarged into a river, which takes a winding easy course near a mile long, and of a considerable breadth; there are three or four islands in it, one of which is thickly planted, and affords shelter to many swans and wild fowl which frequent the water, at the same time that they add to the beauty of the place. Over the river the country consists of corn fields which rise agreeably. The lawn is very neat; the trees and clumps well managed, and the wood, in which the water terminates at each end, finishes the scene in a pleasing manner. There is a winding gravel walk through both the groves on the banks of the river, which opens to several retired and pleasing scenes; at one spot is a pretty rustic *Gothic* temple, built of flint, near a cascade, which the river forms by falling over a natural ridge of stone. The whole place is laid out with great taste.

Plate XXIX. is a plate of Mr. *Andrews's*, taken from a drawing of his own; the point of view the grove by the river to the right of the house.



drill in equally distant rows, 18 inches asunder; hand-hoe them once; the crop $3\frac{1}{2}$ quarters *per* acre.

Farms here are in general from 100*l.* to 200*l.* a year.

In their tillage they generally use 4 horses and a driver, but sometimes, after several ploughings, only 2 horses, but a driver always.

There

The house is a good one; the stair-case peculiar, but agreeable; and the library a large, handsome, and well proportioned room. Mr. *Andrews* has several pictures by some of the principal masters.

Rembrandt. An old man's head. Very strong: the expression of the hands and face fine.

Corn. Johnson. Portrait of a duke of *Austria*. The head in a noble stile of expression. Its companion. A lady. The colouring and minute expression great.

Hall. A copy from a laughing boy: well done.

M. Angelo Carravaggio. Fruit: well executed.

Unknown. A small portrait of king *James*. Good.

Swaine. A moonlight piece of shipping. The effects of the light agreeable.

De Neff. A piece of architecture in perspective. Natural.

Baptist. Two flower pieces.

Berghem. Cattle.

Fluens. Two small pieces of scripture history. Pleasing.

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There are many variations around *Marlow* and *Harleyford*, the seat of *William Clayton*, Esq. for the particulars of the following account, I am obliged to that gentleman.

Farms rise from 40*l.* to 300*l.* a year; but are in general about 100*l.* The soils are various, gravel, loam, chalk, and clay; the hills let at 10*s.* or 12*s.* an acre; the whole in general, meadows included, at 15*s.*

To

Carlo Dolci. A small head of Christ.

Swaine. A piece of shipping.

Vel. Brugle. Two landscapes.

Collet. Small landscapes with figures and buildings. There is a warmth and mellowness in the colours that are pleasing.

Old Frank. A city taken by storm. Singular and very strong expression.

Sir Joseph Andrews has a seat in this neighbourhood, where are, among other pictures, a boy by *Amiconi*, which is executed with a pleasing tenderness of tints. Also six views of *Rome* by *Occioli*, of which the colouring is fine; the perspective good, and well finished. Here also is a *Wake* by *Rubens*, with many figures of capital expression; there are various attitudes spirited, and some men's heads in a great stile. His wife in one corner; a better figure than common with *Rubens*; and the back of another woman in the front ground in fine relief. Likewise a *re-past*; the master unknown; the group agreeable. There are also six pieces by *Canaletti*.

To *Henley*, it runs at 15s.

To *Reading*, 15s.

To *Beconsfield*, 7s. 6d.

The course of crops common here, is,

- | | |
|-------------------|-------------------|
| 1. Turnips | 5. Pease. |
| 2. Barley | And sometimes add |
| 3. Clover, 1 year | 6. Wheat. |
| 4. Wheat | |

Also,

- | | |
|-----------|-----------|
| 1. Fallow | 3. Barley |
| 2. Wheat | 4. Pease. |

They plough but once for wheat on clover; 3, 4, or 5 times in a fallow; sow 3 bushels an acre; the crop 3 quarters. For barley they plough three times; sow $3\frac{1}{2}$ bushels; the crop $4\frac{1}{2}$ quarters. They give but one stirring for oats; sow 4 bushels an acre; the crop $4\frac{1}{2}$ or 5 quarters an acre. They give two earths for pease; sow 3 bushels an acre; many are drilled in equally distant rows, and twice horse-hoed with the shim; the crop $3\frac{1}{2}$ quarters.

For turnips they plough from three to six times; hand-hoe them twice at the expence of 5s. and 3s. 6d.; and feed them all on the land with sheep. Clover they

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mow twice for hay, and get 3 loads an acre. Winter vetches they cultivate for foiling horses; 1 acre will keep 4 or 5 a month. They sow much sainfoine on the hills; mow it for hay, and get from 1 to 2 loads of hay an acre; but manure it with ashes once in two years.

In manuring they depend most on purchased dressings. Peat ashes they have from *Newbury*; and some ashes, foot, &c. are bought at different towns. But few of their flocks are large enough for folding. No stubbles here are chopt; and they sell all their hay; so the farm-yard system may be guessed. On their strong lands they sow buck-wheat, and plough it in.

The breed of cattle here, is the *Derbyshire* long-horned cows for dairies, but they are not of consequence. Mr. *Clayton* has a *Holderness* cow that has given 12 lb. of butter a week; she gave 18 quarts of milk at a meal. Lord *Granville* had one that gave 20 quarts.

Swine fatten up to 30 stone.

In their tillage they reckon 6 horses necessary for 100 acres of arable land; use 4
in

in a plough, and do an acre a day; they stir 6 or 7 inches deep; the price 9s. an acre. Cutting straw into chaff is well known. The time of breaking stubbles for a fallow, is between *Michaelmas* and *Christmas*. Wheel ploughs chiefly used.

Land sells at 30 years purchase. Tythes are gathered. Land-tax, at 4s. in the pound, is 2s. 8d. Poor rates were 4s. 9d. in the pound; now only 2s. 6d.; and at the same time that this deduction has been made, they have almost paid off the debt they contracted for building a poor-house; and this measure is what has sunk the rates. They allow no tea in the house; but they have had much trouble to effect it.

The employment is lace making; it is very difficult to get women, &c. to work in the fields.—All drink tea.

There are many vast woods of beech in this country; most of which are in the hands of the landlords themselves. The management of them is peculiar. They do not take regular fells, as of underwood, but let them grow up in single stems till they are young trees: they pick them every 6 or 7 years; cutting down from the 12th to

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the 20th part, at 32 or 33 years growth; and the whole product is rived into billets for firing, and all goes to *London*: this pays about 10*s.* *per* acre *per* ann. rent. Most of these woods have 30*l.* or 35*l.* an acre in wood on them, are consequently more valuable in that, than in the fee-simple of the land.

LABOUR.

In harvest, 35*s.* a month and board.

In hay-time and winter, 1*s.* 2*d.* a day.

Reaping, 5*s.*

Mowing corn, 1*s.* 6*d.*

————— grafs, 2*s.*

The rates of labour not risen in 20 years.

PROVISIONS.

Bread, - 2*d.* *per* *lb.*

Cheese, - 4

Butter, - 7 $\frac{1}{2}$

Beef, - 4

Mutton, - 4

Veal, - 5

Pork, - 4

Bacon, - 6

Labourer's house-rent, 30*s.* to 40*s.*

————— firing, the labour of digging roots.

BUILDING.

Bricks *per* thousand, 16 *s.*

Tiles, 18 *s.*

Oak timber *per* foot, 1 *s.* to 2 *s.*

Ash ditto, 1 *s.*

Elm ditto, 10 *d.*

Beech ditto, 6 *d.*

The trials and observations made by Mr. *Clayton*, are highly deserving the attention of the public; that he practises husbandry on no small scale, will appear from the particulars of his farm.

550 Acres in all	20 Turnips
360 Wood	14 Horses
80 Grass	10 Cows
120 Arable	6 Young cattle
400 <i>l.</i> Rent	300 Sheep
40 Wheat	16 Swine
40 Barley	8 Labourers
20 Clover	3 Boys.

Experiment, No. 1.

Sainfoine Mr. *Clayton* tried comparatively in three pieces of ground on the hills, six years ago.

No. 1. A stoney surface 2 feet deep on chalk.

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No. 2. A loamy soil on clay, on the side of a hill, 5 or 6 feet deep, on chalk.

No. 3. Very shallow soil, but a few inches deep, on chalk.

The event ;

No. 1. has yielded annually 2 loads of hay an acre, worth 30 s. a load ; the after-grass 8 s. 6 d.

No. 2. The same.

No. 3. Has produced only 1 load an acre. But it is very observable that this field has a sharp declivity on both sides into a bottom ; so that there the soil is 6 feet deep of the washings from the hills ; in this part, the crop has always been so great, that it could scarcely stand on the ground ; but on all the rest of the field not more than 1 load an acre.

From this experiment, which is a valuable one, it is very evident that the stratum of chalk being near the surface, is not at all necessary for the crop ; for the product is better from 6 feet than from 6 inches. Which shews that the idea, common, of sainfoin thriving only on very shallow soils, is a false one.

Experiment, No. 2.

In preparing a strong clay field for laying down to grafs; the foil proved fo tough, that it could not be got into order by the common tools: Mr. *Clayton* made a fpiky roller for it, which effected the bufinefs completely. He accordingly fowed it with very fine hay feeds; and defigns it as a nurfery to gather from by hand; the forts fo gained he purpofes to fow in drills. This trial fhews how important a fpiky roller is in many cafes; the lofing a feafon, or, what is worfe, fowing land when not in proper order, are often confequences of wanting this machine.

Experiment, No. 3.

An acre and half of ftony loam on clay, and under that chalk, was cleaned by a fummer fallow, and fown with lucerne (no corn) in 1765, part broad-caft, and part in drills equally diftant, 18 inches afunder. It was kept clean by hand-hoeing; and mown once, befides a flight feeding; but the produce inconfiderable.

In 1766 it was mown thrice for horfes: The broad-caft was harrowed; but that

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operation being ineffective from the hardness of the soil, this induced him to plough it with a round share, and left it like a fallow; but still that part of it was not to be kept clean. The broad-cast maintained at the rate of 5 horses, from the middle of *May* till *Michaelmas*; the drilled 4; the value 2*s.* per horse per week.

1767.

This year the drilled was cleaned by horse and hand-hoeing; and the broad-cast by ploughing and harrowing; the produce of both the same as last year.

And thus it has continued ever since. Mr. *Clayton* tried also transplanting in rows equally distant, 18 inches asunder; but there was no difference between that and the drilled.

Soiling horses with lucerne he has for three years observed to be an infallible cure for botts.

5 Horses, at 28 <i>s.</i>	-	-	£.9	0	0
4, At ditto,	-	-	7	4	0
			<hr/>		

Experiment, No. 4.

In 1767 fourteen acres were laid to grass after a very clean fallow without corn; the following feeds per acre.

Cow grafs,	-	3 lb.
<i>Dutch</i> clover,	-	6
Three poa's	-	3
Two trefoiles	-	2
		—
		14 lb.
		—

The 11th of *July*, in two years, he mowed 2 ton an acre of excellent hay, besides having a very valuable after-grafs. — That the land was in great heart may easily be conceived from so very small a quantity of seeds answering so well. But *Mr. Clayton* from this trial thinks that there are no better sorts to be recommended than these.

Experiment, No. 5.

Twenty five acres of land were laid down to grafs, after a clean fallow, with corn; nothing sown but a plenty of common hay feeds. The result was very unfavourable; it turned out sower bad grafs, and came to no good turf. In four years he manured it well, and sowed white clover; this was of great service to it—since then it has been a good pasture.

These

These two experiments prove that land should be laid *without* corn; and also that a very few good grass seeds are far preferable to the greatest quantity of that rubbish commonly called hay feeds.

Experiment, No. 6.

Peat Mr. *Clayton* has found in one of his meadows; it is black, but full of roots; burns to a red ash, and sells at 6 *d.* a bushel on the spot; a burner from *Newbury* preferred it to *Newbury* ashes. He has tried it on clover; 10 bushels *per* acre; and the effect is as great as the *Newbury*: the clover, not peated, did not produce so much, as that manured, by half. He also tried it on sainfoine, but it did not so much good as sea-coal ashes; for the latter he gives 6 *d.* a bushel at *Marlow*; they are brought from *London*; and he lays from 12 to 20 bushels *per* acre—the effect always very great on both clover and sainfoine.

Experiment, No. 7.

The worst weed with which Mr. *Clayton* is troubled in his grass-land, is moss; and he has tried various methods to destroy it
without

without effect: At last he manured it with foot, and that totally killed it.

Experiment, No. 8.

Among other manures, this gentleman has tried woollen rags; that they are a beneficial dressing, cannot be doubted, but I was desirous of knowing on what soils they do best. Common husbandmen lay them chiefly on wet stiff soils, with a view to keep them open and mellow; but it is asserted by some, that their attracting so much moisture from the air, renders them proper only for hot dry soils. Mr. Clayton has used them on both; his expression was, “that he finds them more beneficial on wet cold land, than on hot, dry, gravelly soils.”—This is, as far as it extends, decisive; and I need not add that theory, in these points, must give way to practice.

Experiment, No. 9.

Two contiguous fields of wheat, sown on a fallow, were, for a comparison, manured differently; one with lime, 80 bushels an acre, after the corn was sown; the other was part dunged from the yard, and

part dressed with woollen rags. The product of the latter field was most considerable, but it was much blighted; whereas the limed one was nearly free from that distemper.

Experiment, No. 10.

Mud from the river *Thames*, Mr. Clayton has tried on both grass and arable land, fresh from the river, and also kept some time, and turned over. The principal effect he has observed from it is the production of an amazing quantity of weeds, though less on grass than arable: this has deterred him from using more of it; but I should apprehend, if it was kept two years, turned over several times, and well mixed with lime, that it would prove a rich manure. As to the producing weeds, if it then had that effect, I would lay it on for a hoeing crop, when the effect would not matter. It certainly is probable, that the mud brings seeds, but not clear: it may be its excellence as a manure, that forces all those in the land to vegetate.

Experiment, No. 11.

In 1769, four acres well fallowed were planted with turnip cabbages, and fed off with sheep in *April* and *May*, 1770: they kept 60 ewes, 60 lambs, and 30 fat wethers five weeks and a half, which Mr. *Clayton* reckons at 4*d.* per week: this amounts to 8*l.* 5*s.* or per acre 2*l.* 1*s.* which, upon the whole, is a result favourable to the plant; as they last through the season, that is the most critical in the whole year. In a snow, Mr. *Clayton* has observed some of them eaten down by the hares, and afterwards grown over with a coat, and been quite secure from the weather. This year he has a crop of *Reynolds's* cabbage turnip, which promises to be good sheep feed.

Experiment, No. 12.

Mr. *Clayton* had a crop of wheat, drilled in equally-distant rows, five inches asunder; it was kept clean hand-hoed, proved a good crop, but not equal to the broadcast.

Experiment, No. 13.

Burnet was tried in laying down a field of 28 acres, part of it with sainfoine, part

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white *Dutch* clover, part bird grafs, and part burnet, and the field has at various seasons been fed with sheep, cows, horses, &c. and they all eat the burnet quite as close as any of the other grafses; and the cattle of all sorts are generally on the burnet part once or twice a day. This is a very fair trial, and shews that burnet is by no means so despicable a plant as many would have us imagine.

Experiment, No. 14.

Sixteen acres were laid down with *Rocque's* bird grafs. Mr. *Clayton* thinks it a valuable grafs; it is as early in the spring as ray grafs; it thickens very much on the ground. All cattle are fond of it, and sheep remarkably so.

Experiment, No. 15.

In planting, Mr. *Clayton* has also been attentive. *Weymouth* pines, spruce, *Scotch* silver, balm of *Gilead*, the larch, cedar of *Lebanon*, and the *Virginia* cedar, all at ten feet square, of 13 years growth: they are worth 1 s. a tree now: the larch is best, next the *Weymouth* pine and spruce; the balm of *Gilead* does not thrive at all.

Mr.

Mr. *Clayton* plants all sorts of trees, ever-greens as well as others, in *November* and *December*, if not frosty, and has had better success than with spring planting.

A pinafter of an hundred years old was blown down, and being sawn out, it proved a red deal, but very coarse: it contained a load and a half of timber. Some *Scotch* also, of the same age, were blown down: they were red deals, and much harder and better than the foreign. The soil a thin sharp loam near the chalk*.

Sir

* Mr. *Clayton* has built one of the most agreeable houses I know, in a most elegant situation, and has disposed the grounds in a manner that does great honour to his taste. A fine swelling knole rises from the bank of the river *Thames*, on which the house is built, and has (from the offices being quite hid behind wood) the exact appearance of a large temple: an effect, which is never completely gained without being uncommonly agreeable. An extensive lawn waves around it, bounded on one side by the river, and on the other by a fine hanging grove, which spreads over the sides of the hill. A finer union of wood, water and lawn, can hardly be imagined.

The

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Sir John Hoby Mill, Bart. of Bisham-abbey near Marlow, has this year a very important experiment on cabbages, carrots, and turnips; the particulars of which he was so kind as to give me.

A small field was this year cropped with these vegetables. The soil is a rich, deep, black loam, worth 3*l.* an acre: it was ploughed in *October* very deep; and twice more in the spring; the latter of these spring ploughings was given while the land was quite wet, which was very prejudicial to the crop, and also occasioned such delay, that

The wood is of a dark shade; in some places it projects down to the level of the lawn; in others it retires from it, and admits the livelier green among its deeper tints. It crowns the brows of some of the declivities, boldly hanging on their edges; while, on other spots, it thickens over the whole hill, to form a dark, unvaried back ground to the house, and contrasts the resplendent stream, which glides through the vale below.

The principal floor of the house is exceedingly well disposed into a dining-room, 27 by 21, with an ellipsis bow, through the windows of which the river is commanded in a most striking manner. In this room is a small antique bust of
Venus,

that the carrots could not be sown till *April*. They were kept clean by hand-hoeing. All the expences of tillage, cleaning, &c. &c. came to 4*l.* 4*s.* *per* acre; and the drawing, cleaning the roots, carting home, came to 1*l.* 10*s.* *per* acre; the distance to which they were carted 300 yards.

The turnips were sown in *June*; and hand-hoed twice.

The cabbages were planted at the same time, in rows, 3 feet by 2; and kept clean by hand-hoeing.

Early in *November* I marked a square
perch

Venus, and several portraits by Sir *Peter Lely*. On one side it opens into a drawing-room, 27 by 18; and on the other, into a noble library, of 36 by 18, with a bow of 18 by 7. The chimney-piece *Doric*, the entablature supported by columns of variegated marble. On the staircase is a very good piece by *Snyders*.

The offices, though near the house, are quite hid by the wood. Lady *Louisa Clayton* has a neat little rustic temple in the grove, which opens into her dairy. The whole building agreeable and in taste. From hence, on the brow of the hill, there is a fine winding terras, which commands various beautiful views of the river.

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perch of each, and cutting off the tops of the turnips and carrots, and the roots of the cabbages; the produce was as follows.

CARROTS.

		<i>Carrots.</i>		<i>lb.</i>
No. 1.	A bushel basket,	70		57
2.	—	66	—	59
3.	—	50	—	51
4.	—	78	—	67
5.	—	10	—	13
		<hr/>		<hr/>
		274		247
		<hr/>		<hr/>

From hence it appears that the carrots weighed above $\frac{3}{4}$ *lb.* each.

A perch yielding 4 bushel baskets and 1-6th, is in the proportion of 667 *per* acre, each 66 *lb.*

247 *lb.* *per* perch, are 17 tons, 12 *C.* 96 *lb.* *per* acre.

But this produce would have been much more considerable, had the tillage been given while the land was dry and in good order.

Respecting the application of the crop, one porker was fattened quite on carrots; two others were confined 10 days to carrots, and eat 1 bushel a day; after this, 10 days more

more at carrots, 9 pecks a day, and barley-meal 2 bushels in the ten days; when killed they weighed 64 *lb.* and 56 *lb.*

Had barley-meal only been used, they would have eat 6 bushels, the carrots therefore saved 4 bushels. They eat 15 bushels of carrots; which are therefore tantamount in value to 4 bushels of barley-meal, or 12 *s.*: this is 9 *d.* $\frac{1}{2}$ *per* bushel of 66 *lb.* Suppose 56 *lb.* the average bushel of carrots, this is 8 *d.* *per* bushel; and the crop in such bushels amounts to 700.

At the same time 8 bacon hogs, that will be 10 score each, were put to carrots, and fed one month on them, to the saving 32 bushels of barley meal; after which they will have 4 bushels of barley each, but must otherwise have had 8.

The crop is 667 bushels *per* acre; this, at 9 *d.* $\frac{1}{2}$ *per* bushel, amounts to

	- - - £. 25 0 0
Expences,	£. 4 4 0
Cleaning and carting,	1 10 0
Rent,	- - 3 0 0
	8 14 0
Clear profit,	16 6 0

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A square perch of the cabbages was as follows.

No.	1. Bushel.	Cabbages.	—	Wt.
		6	—	31
2.	—	5	—	31
3.	—	6	—	33
4.	—	7	—	31
5.	—	8	—	47
6.	—	8	—	44
7.	—	11	—	49
		<hr/>		<hr/>
		51		266
		<hr/>		<hr/>

This is rather better than 5 *lb.* each.

266 *lb.* on a perch, are 19 tons *per* acre.

The turnips were ;

No.	1. Bushel.	Turnips.	—	lb.
		43	—	55
2.	—	103	—	57
3.	—	57	—	56
4.	—	54	—	55
5.	—	40	—	51
6.	—	47	—	51
7.	—	12	—	14
		<hr/>		<hr/>
		356		339
		<hr/>		<hr/>

This is not one pound each.

339 *lb.* *per* perch, are 24 tons and 4 *C. wt.* *per* acre.

Here it appears that the turnips exceed the cabbages in weight, but then I should observe that the latter are not the great *Scotch*, but a much inferior sort. However, the carrots much exceed in value both the turnips and cabbages.*

From *Marlow* I crossed the country to *Beconsfield*; for the following particulars of husbandry around that place, I am indebted to the very obliging attention of *Edmund Burke, Esq.*

Farms rise from 20*l.* to 200*l.* a year, but are in general about 80*l.* The soil is various; clays, loam on chalk, and gravelly clay, and much stoney loam. The arable lets from 7*s.* to 11*s.* an acre; the grafs from 15*s.* to 20*s.* an acre.

The courses of crops are,

- | | |
|---|-----------|
| 1. Turnips | 4. Wheat |
| 2. Barley | 5. Barley |
| 3. Clover and ray-
grafs one or two
years | 6. Clover |
| | 7. Oats. |

* *Bisham Abbey*, the seat of Sir *John Hobly Mill*, is very well situated on the banks of the *Thames*; a range of wood that partly furrounds it, crowns the hills in a very noble manner.

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There is nothing objectionable in this course, but the barley of the fifth year following the wheat, which occasions three crops of corn in the last four years, and the fourth clover, sown with a second corn crop. This must exhaust the soil, and fill it with weeds. Also,

- | | |
|-----------|----------|
| 1. Fallow | 3. Oats. |
| 2. Wheat | |

Another :

- | | |
|-----------|-----------|
| 1. Fallow | 3. Pease |
| 2. Wheat | 4. Wheat. |

For wheat on clover they plough but once, but three times in fallowing; sow nine pecks of seed on the latter, and ten on the former, and reckon the average produce at two quarters. They stir three times for barley, sow three or four bushels an acre; the crop three quarters. For oats they stir but once, sow three bushels an acre, and gain on a medium not more than three quarters. They give one or two stirrings for pease, use three or four bushels of seed, never hand-hoe them; the crop two quarters and a half. They plough but once for beans, sow four bushels an acre broad-cast, never hoe them; the crop the same as of pease.

For

For turnips three earths are given ; they are hand-hoed once or twice ; all are fed with sheep ; the average value 35s. an acre.

Clover they mow twice for hay, and get four loads an acre at the two ; and they reckon that the wheat sown on this grass, *mown*, is better than that which follows it when *fed*.

Both winter and summer tares are used for foiling horses ; an acre of summer ones will keep four horses a month.

There is much sainfoine on their white chalky land ; they sow four bushels an acre, and it lasts twenty years ; always mow it once for hay : some farmers have mown it twice in a year, without finding their crops damaged by so doing : the product at once cutting rises to three loads an acre ; but in general not exceeding two.

Buck-wheat is sometimes cultivated on their poorest lands ; they sow two pecks an acre, and get three quarters in return.

In respect to manuring, there is not much to commend in their practice : they do not chop their stubble ; and though they stack their hay at home, yet as much

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is fold as they can dispose of; nor do they fold any sheep but wethers.

Chalk they lay on their strong soils, 15 or 20 loads an acre, in order to mellow, and make it plough the better. After grubbing up a wood, they reckon the land must be chalked, in order to sweeten it. Composts of dung, earth and chalk, they think extremely beneficial.

Coal ashes they sow on clover, 40 bushels an acre, and find that they answer better than any other manure; they give at *London* 6s. the load of 50 bushels, and they reckon the carriage, by the time they are on the land, at 14s. more.

Soot they sow in *March* on the green wheat, 30 or 40 bushels an acre, at 5d. or 6d. a bushel. They reckon that it forces the straw much, but is apt to cause a blight. Both soot and ashes they also use for sainfoin, 40 bushels an acre, in *March*.

Some few farmers use rabbit's dung for turnips; also malt dust for the same roots, 30 bushels an acre, at 5d.; but the effect is not so good as rabbit dung.

They

They know nothing of draining in this country.

Plashing hedges is commonly practised.

The meadows are the richest grass lands here ; they let from 20s. to 40s. an acre ; all are mown for hay. The breed of cattle most common is the long-horned *Derbyshire* : a good cow they reckon will give 7 lb. of butter a week, from three gallons of milk a day, but most are applied to suckling : the product about 5l. 5s. a cow. The winter food chiefly hay, no turnips ; which is very strange, where suckling is practised ; to give cows, so applied, hay, while turnips are to be had, is a most unprofitable conduct.

It is a common practice to put many beasts of all sorts to fatten in the vale of *Aylesbury*, during 20 weeks, at 1s. 6d. a week ; if the beast fattens sooner, another is sent instead of it ; but if it takes a longer time, no more is paid than the 30s.

Swine they fatten from eight to twenty five score.

Flocks rise to 3 or 400 ; but not so many the whole year, not more than half. They buy in every year, either *Dorset* or *Wiltshire* ewes :

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ewes : the former reckoned best, because they lamb earlier; the price 18s. for the *Dorset*, and 15s. for the *Wiltshire*; they fatten them; and sell the lambs at 16s. to 20s.

Average,	-	-	£. 0 18 0
The ewe at,	-	-	0 18 0
The wool,	-	-	0 2 0
			<hr/>
Total,	-	-	1 18 0
First cost,	-	-	0 18 0
			<hr/>
Profit,	-	-	1 0 0
			<hr/>

This the *Dorsets*; but the wool of the *Wiltshires* are not worth more than 1s. 6d. They buy in in *March*, and sell at that time twelvemonth; but the most profitable time would be at *Weyhill* fair in *October*.

In their tillage, they reckon six horses necessary for 100 acres of arable land; they use from four to six in a plough, do an acre a day, from four to six inches deep, the price 7s. or 8s. an acre. They allow their horses a peck of oats a day, and some more: cutting straw into chaff is commonly practised. They break up their stubbles for a fallow about *Christmas*.

Single-

Single-wheel ploughs chiefly used.

In the hiring and stocking farms, they reckon that three rents will do.

Land sells at from 25 to 30 years purchase.

Tythes chiefly gathered.

Poor rates 2 *s.* 6 *d.* in the pound. The employment, lace-making. All drink tea.

There are some leases; but on many estates none.

LABOUR.

In harvest, 2 *s.* and beer.

In hay-time, 1 *s.* 4 *d.* and ditto.

In winter, 1 *s.* 2 *d.*

Reaping, 6 *s.* to 7 *s.*

Mowing corn, 1 *s.* 3 *d.* to 1 *s.* 4 *d.*

——— grafs, 2 *s.* to 2 *s.* 6 *d.*

Hoeing turnips, 5 *s.*

Head-man's wages, 8 *l.*

Next ditto, 6 *l.*

Lad's, 4 *l.*

Dairy-maid's, 3 *l.* to 4 *l.*

Women a day in harvest, 10 *d.* and beer.

In hay-time, ditto.

PROVISIONS.

Bread,	1 <i>d.</i> $\frac{1}{4}$ <i>per lb.</i> (9 <i>lb.</i> for 11 <i>d.</i> $\frac{1}{4}$.)
Cheese,	4 $\frac{1}{4}$
Butter,	7 $\frac{1}{4}$
Beef,	3
Mutton,	4
Veal,	5
Pork,	4
Bacon,	7
Milk,	$\frac{1}{2}$ <i>per pint</i> ; but very little to be had.
Potatoes,	8 <i>per peck.</i>
Labourer's house-rent,	40 <i>s.</i> to 50 <i>s.</i>
———— firing,	30 <i>s.</i>

There are many beech woods in this country, managed pretty much in the same manner as those about *Menlow*. They thin them here once in nine years, and pick the best trees, to the amount of from 4 *l.* to 10 *l.* an acre.

Mr. *Burke* has been an arable farmer but a short time; he has however made so good a use of it, as to have formed several experiments, which will speak sufficiently for themselves; but let me first insert the particulars of his farm, which will shew that the scale of his husbandry is not small,

410 Acres in all	2 Carrots
160 Grass	1 Cabbages
160 Arable	2 Potatoes
90 Wood	8 Vetches
250 <i>l.</i> Rent	6 Horses
40 Acres wheat	14 Cows
25 Barley	6 Young cattle
16 Oats	40 Swine
16 Pease	1 Man
25 Turnips	2 Boys
25 Clover	6 Labourers.

CARROTS.

Experiment, No. 1.

Two acres of good rich deep wheat loam, more inclinable to gravel than sand, and rather wet, were fallowed in 1769, receiving three common ploughings; in the winter manured with 30 loads of yard dung thoroughly rotten, ploughed 16 inches deep in *January*, with four horses in a plough, going twice in a furrow: the middle of *February* harrowed in 4*lb.* per acre of carrot seed. It came up very well, and the plants were twice hand-hoed, at the expence of 30*s.* an acre; being set out, at the distance of eight inches from

1 each

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each other. In *October*, &c. they were taken up as wanted; the expence of digging up and cleaning, is 7*s.* 6*d.* a load of 50 bushels.

The carrots are not so straight and fair as those which grow in sand, but are of an higher and finer colour, and most aromatic smell; firm, and admirably tasted. In the application of the crop, Mr. *Burke* tried the boiling them for fattening hogs; he put up several porkers of about 20*lb.* the quarter, some to barley meal, and others to boiled carrots, with which they were supplied very plentifully; 3 weeks elapsed without their making the smallest progress. Mr. *Burke* had made a similar trial the year before, and the result was the same. This result is unfortunate; but he intends next year to renew the trials, until success attends them; or a clear knowledge is gained, why it cannot be expected. I am not sorry to find some experiments, in which carrots for this application turn out inferior, because I hope it will animate the farming part of my readers to give their attention minutely to this point; that it may be fully and clearly known in what degree this root given alone will fatten:
whether

whether porkers or hogs for bacon—whether compleatly, or only getting them in better flesh—whether they must be longer confined to them, than to the more usual sorts of food? All these are points of consequence, but in which we are by no means clear.

DEEP PLOUGHING.

Mr. *Burke* ploughs in common from 10 to 12 inches deep : this being double what the farmers ever attempt, surprized his bailiff, who declared that his crops would be utterly ruined ; but a regular and unbroken success in every one has convinced him, that deep ploughing is not so pernicious a practice as he apprehended. The products have been better than those of the neighbouring farmers. Now this is a most material point, for if he has such crops at first, he most undoubtedly will have great ones afterwards ; for by keeping to that depth in the successive tillage, the whole soil so deep will become one uniform mass ; and there cannot remain a doubt, but all sorts of vegetables will come to greater perfection in such a stratum, than in one of only four or five inches deep ; for the roots even of

I white

white corn will presently strike a foot deep, and it is idle to suppose that such a power is given them for nothing : wherever they go, they certainly draw nourishment.

DRAINING.

Experiment, No. 2.

Ten acres of land were so very wet, that the crops produced by it were trifling. Mr. *Burke* cut hollow drains across it, 18 inches deep, and three wide at bottom ; some of them three feet deep, varying with the fall of the land ; they were filled with chalk stones, and some with bushes the latter the cheapest : the drains answered extremely well, for the land has since been quite dry.

DRILLED BEANS.

Experiment, No. 3.

A field of a strong loamy soil very foul, that came in course to be fallowed, was drilled with beans in equally-distant rows, 18 inches asunder, as a trial of this husbandry, for cleaning land when out of order, instead of a fallow : they were hand-hoed twice ; the crop turned out indifferent, but the field was perfectly cleaned by them.

POTATOES.

Experiment, No. 4.

Two acres, contiguous to the carrots of *Experiment, No. 1*, were planted with potatoes in *March, 1770*, in rows equally-distant, one foot asunder; they were manured for with 15 loads an acre of rotten yard dung; they were twice hand-hoed, and as often weeded.

LUCERNE.

Experiment, No. 5.

A rood of land, a good stoney loam, was manured with a common dressing of yard dung, and drilled with lucerne, in equally-distant rows, 18 inches asunder. In 1769, it was cut three times; and kept perfectly free from weeds by hoeing. This year it has been cut four times, and kept clean as before: the produce has in general been, each cutting, keeping two horses eight days: this is an acre keeping two horses four weeks and half, and the three cuttings of 1769, consequently kept them thirteen weeks and a half, which, at 2s. 6d. per horse per week, amounts to

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3*l.* 7*s.* 6*d.* The four of 1769, to 4*l.* 10*s.* but the plantation is not near arrived at perfection.

MANURES.

Experiment, No. 6.

Lime was tried on pasture, the soil a gravelly loam, 100 bushels *per* acre; but it proved of no service.

Experiment, No. 7.

A comparison was made between pigeon's dung, rabbit's dung, and yard dung, proportioned to their respective values. The pigeon's dung was the best; then the rabbit's dung, and lastly the yard dung.

OXEN.

Oxen this gentleman uses in his tillage with great success; he works them in harness in the manner already mentioned to be practised by Mr. *Cooke* and Sir *Charles Tynte*; he uses three and one horse in a plough, or four oxen, and they do an acre a day; whereas the farmers plough no more land with from four to six horses: it is from hence very evident, that the practice must answer very greatly; it reduces the price of tillage more than half,

- THROUGH ENGLAND, 83
SHEEP.

It is the custom of this country to fold only the wethers; but Mr. *Burke* has regularly practised the folding his ewes as well as wethers, and without the least inconvenience to his flock.

CABBAGES.

Experiment, No. 8.

In the same field, as the carrots of *Experiment, No. 2.* half an acre was winter-fallowed, trench-ploughed, and manured with yard dung; it was then thrown on to the four-feet ridge, and at *Midsummer* planted with cabbages (the seed sown for the great *Scotch*) in single rows on each ridge, two feet asunder. They turned out a *Scotch* kale; very strong, branching and luxuriant in growth; the leaves were stripping in *November* for cattle, and the stalks left for producing a spring crop of shoots; and I doubt not, but the quantity will then also be very considerable.

These experiments are valuable, and cannot but be attended with very good effects to the husbandry of the neighbourhood; but the introducing the culture

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of carrots, the folding ewes, the use of oxen, and the practice of hollow draining can scarcely fail of proving highly important: these articles of management continued with the spirit, with which Mr. *Burke* will prosecute them, will by degrees bring his tenants into the same conduct: the advantages which must result from such an imitation are many and striking. His country is much indebted to him for giving so laudable an attention to the improvement of her husbandry*.

From

* This gentleman's seat, near *Beconsfield*, is a large, regular, and convenient house, extremely well situated in the midst of an agreeable park, which commands various views of the adjacent country, rendered fine by the uncommon number of woods, which spread over the sides of the hills. The north front of the house looks over a large extent of country, wholly surrounded with distant woods, which have so magnificent an appearance, that one would think every tree planted with design to ornament it.

In the house is a very fine collection of antique busts and statues, likewise several pictures by the greatest hands: among others,

Guido. Europa: her figure is not agreeable, but the picture very well executed; the colouring is chaste.

From *Beconsfield*, I took the road through *Uxbridge* to *Brentford*, where I turned off to *Sion-Hill*.

The Earl of *Holderness*, at his elegant villa, *Sion-Hill*, has laid down much arable land to grass, and with great success. His farm was all wet arable land and unprofitable; this determined him to throw the whole to grass; and in executing it, his
 lordship,

Morello. *Venus* rising from the bath; a very large picture; fine.

Carlo Marratt. Holy family.

Poussin. A dance of boy angels; strong relief, and very good colouring.

Titian. Exceeding fine; the colouring striking.

Gas. Poussin. A landscape: the keeping and colours fine; but the figures admirable: the attitude of the virgin turning to the boy presenting fruit, is inimitable, and the child in her arms, reaching out its hand to the figure on the pedestal, natural: the whole group complete and elegant.

Carlo Marratt. The *Virgin* teaching a boy, *Jesus*, to read: her head is well done, the fall of the countenance easy.

Unknown. Holy family, the *Virgin*, *Christ*, and *St. John*, elegantly grouped: the *Virgin's* countenance and attention pleasing,

lordship, instead of the slovenly custom of many of his neighbours, of sowing only ray grass and clover, with such a design, he used nothing but clean dressed hay seeds, white clover and trefoile; the lands were all laid by the previous tillage, perfectly level, were clean, fine and in good heart. The seeds were all sown *without* corn, a method which lord *Holderness* has practised on all his estates, and with such success, that

he

pleasing, and extremely well coloured; the boy fine.

Unknown. The marriage of *St. Catharine*, a pleasing group; the countenance very attentive, the boy excellent; the colours lively, but tender.

Ditto. *Jupiter*, and two bold and well-executed figures; the outlines strong and expressive, and the colouring good.

Gas. Poussin. Landscape: were it not for the buildings, the piece would be a total gloom; but it is finely done: the composition and colouring are good.

Ditto. Its companion, a more chearful subject, very fine.

Titian. A sleeping *Cupid*, exceedingly beautiful.

Unknown. A sea-piece; fine.

Ditto. A small figure of a saint, most highly finished; the drapery good, and the colouring very brilliant.

he has determined never to pursue any other. The fields are all well turfed, and of a good herbage.

Cabbages his lordship has cultivated some years at *Sion*. The sort a large flat-headed winter cabbage, which he procured from *Newbury* in *Berkshire*; the method used was to draw furrows at four feet, across the fields both ways; and where they intersect the plants are set, consequently

Unknown. Venus: a small picture, finely finished; her attitude is pleasing, and the flow of the drapery elegant.

Ditto. Mars and Venus; in small.

Ditto. A flower-piece, finished in the highest manner.

Carlo Maratt. The Aurora after *Guido*; exceeding fine; the grace and elegance of the original happily preserved.

Titian. A group of female figures; good.

Guido. An old man's head.

Raphael Mengs. Two heads in a peculiar but pleasing stile.

Borgognone. Two battle-pieces.

Gas. Poussin. Five landscapes, admirably fine.

Velasque. A revelling scene; a strong dark expression, the light and shade quite blotches.

Luca Giordano. Two pieces; fine.

Scarlatti. A sick man's dreams; strangely wild,

quently they are lower than the surface of the field: this his lordship thinks is an advantage, as they enjoy more moisture, the earth is easier drawn to their shanks; and what is of very great consequence, standing in squares, the horse-hoeing is given *both* ways, crossing each other, which saves much expence of hand-hoeing, at the same time that the land is so much better tilled.

This method has turned out very advantageous, many of the cabbages rising from 25 to 30 *lb.* The use they are applied to is fattening oxen. His lordship grazes many large beasts on his new-laid fields, and he finishes them with cabbages; gives them on a dry grass field, with hay in a small house constantly for them: turnips he sometimes uses in the same manner.

His lordship's dairy of cows is a very fine one, of the *Holderness* breed; but the cow-
house

but fanciful: it is in the same stile as a madman's brains at *Kiplin*; and Lord *Spencer* has one of witchcraft.

Unknown. *Suzanna* and the Elders; a copy: her attitude, the eagerness of the old men, the light and shade, and keeping, are well done.

house is extremely well contrived; there is a space before their heads, wide enough to walk with the hay; and what I have not before seen, a trench is cut in the pavement just at their heels, and so close to them, that all the dung falls into it: there is no drain from it, so all the dung, urine, and the refuse hay, is mixed up together, and barrowed on to the dunghill; all the urine is preserved thus, and without any trouble: the dunghill is close to the pigsties (which are also very well contrived) so the different dungs are regularly mixed together, which is certainly an advantage*.

From *Sion* I returned to *Uxbridge*, and took the road home through *Stanmore*
and

* *Sion-Hill* is not a large house, but the apartments excellently disposed: a dining-room 22 by 18, where is a large fine portrait of the Duke of *Chandois*. A drawing-room, 50 by 20, with a bow; the chimney-piece is of white marble, the cornice projecting beyond the center, and resting on *Ionic* pillars of *Siena* marble. The view from the bow is pleasing, the grounds wave and fall agreeably. Besides these rooms, there is a breakfast-room, and a handsome library. In the *Attic* story are three bed-chambers, and three dressing-rooms. Lady *Holdernesse's*

and *Edgware*. In the way to the former place, there is some meadow that lets at 25s. to 40s. an acre : but many open fields at 12s. and 13s. which are cultivated in the following course.

- | | |
|-----------|-----------|
| 1. Fallow | 3. Beans, |
| 2. Wheat | |

Wheat yields three quarters an acre. The beans are set in rows, at 12 or 14 inches asunder, and kept clean by hand-hoeing : an uncommon instance of good husbandry, with a crop that is succeeded by a fallow ; the product five quarters *per* acre.

About *Edgware* and *Stanmore* the ground is chiefly grass, richly manured, it lets
from

Holderness's is elegantly furnished : the chimney-piece white marble, with fluted *Ionic* pillars of *Siens* ; in the frieze, a tablet, representing painting and sculpture, neatly executed. Over it a glass in gilt ornaments, very light, intermixed with porcelain figures. There is an anti-room with books, and a closet out of it, with a case of china, gilt in a very neat and elegant manner. Over these rooms are several bed-chambers and dressing-rooms. Her ladyship's dairy is extremely well contrived for coolness, &c.

from 30s. to 3*l.* an acre. From hence I entered the great north road at *Barnet*; there joining the country before travelled, and where I shall accordingly take my leave of you for the present.

* * *

And now, sir, having finished my journey, I must proceed to give you a general view of the articles of the most consequence, scattered up and down in a various manner throughout the preceding minutes: each has in numerous places a very different appearance, owing to variations of soil, culture, &c. but a clear and comprehensive idea of any one can only be gained by an average of all circumstances: a person, who cultivates a plant on a soil peculiarly adapted to it, may probably have a greater success, than others are to expect: some likewise might, from contrary reasons, have worse success, and yet without proving any thing generally against the plant: all such variations should be taken into a general account, and an average drawn, which would then be a fair representation of the culture,

Respecting

Respecting the products, and other circumstances attending common crops, the rates of labour and provision, and the particulars of farms, which are data for the state of the whole kingdom to be deduced from, with other matters of the same kind, I am happy in finding, from very many persons, whose judgment I have the highest opinion of, as well as from the criticisms of several foreign writers (who must speak unprejudiced) that the deductions I made in the 4th volume of the *Northern Tour*, on this plan, have met with the approbation I could wish, and been pronounced as important a part as any of the work; I shall therefore, in the present case, proceed in the same path, notwithstanding the assertions of some persons, who characterised that volume by mentioning nothing concerning it but *prolixity*; such readers should be referred to *pretty light summer reading for the ladies*.

Without further introduction, I shall proceed to the particulars.

And am, &c.

L E T T E R XXXII.

CARROTS in the minutes of this Tour make a distinguished figure: I met with so many experiments on this most excellent root, that I think there is great reason to expect it will soon become common husbandry; which would be one of the most fortunate circumstances that could possibly happen to the agriculture of *Britain*. It has been tried in scarcely any place without being adhered to: Indeed, we may safely pronounce that whoever does justice to it in the cultivation, will certainly find it one of the most profitable crops in the world; but a review of the particulars bringing the most material points into one view, will best prove the truth of this assertion.

Mr. Cope, at *Arnold, Nottinghamshire*.

Soil. Rich, deep, dark-coloured sand, at 18 s.

Culture. Three earths 12 inches deep.
Manures 50 s. to 3 l. an acre. Hoes at the expence of 30 s. to 50 s.

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Product. 21 Tons.

Use. Feeding and fattening cows, oxen, sheep, horses, hogs. Cows 2 bushels a day. Completely fattened to 12 *l.* 12 *s.* each, and oxen to 20 *l.* Fats hogs completely to 12 and 14 stone (14 *lb.*)

Expences. - - - £. 8 9 0

Mr. Mellish, Blyth.

Soil. Rich deep sand, at 20 *s.*

Culture. Ploughs for them. Hoes, at 2 *l.* 2 *s.*

No manure.

Product. 20 Tons, at 20 *s.* a ton.

Use. Feeding horses and cows, and fattening hogs.

Expences. - - - £. 6 2 0

Profit. - - - 13 18 0

Mr. Wharton, of Carr-house.

Soil. Rich sand, at 50 *s.*

Produce. 20 Tons.

Mr. Stovin, Doncaster.

Soil. Rich sand, at 40 *s.*

Culture. Trench ploughing from a lay, but turf carried off. Hoed at expence 8 *l.* 8 *s.* 3 *d.*

Product. 6 ½ Ton, at 4 l.

Use. Pigs bought and fatted on them boiled, and then sold; paid 4 l. a ton, and feeding cart-horses.

Mr. Cook, *Wheatly.*

Soil. Light loam on lime-stone, 10 inches deep.

Use. Feeding horses, excellent for the wind.

Mr. Moody, *Retford.*

Soil. Rich sand, at 40 s.

Culture. Ploughed 12 inches deep; hand-hoed clean, 9 inches asunder.

Product. 20 Tons, at 20 s.; also 25 tons, at 20 s.

Use. Fattening of oxen of from 80 to 110 stone; four beasts to an acre 14 weeks. No food fattens better; as well as oil cake.

Expences. - - £: 7 9 3

Profit. - - 15 0 9

And by dung, - 5 0 0

About *Norwich.*

Soil. A sandy loam, 16 s.

Culture. Trench ploughing; manure with 10 loads of long dung. Three hoeings, at 1 l. 1 s.

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Mr. *Fellowes, Shottesham.*

Soil. Light loam.

Culture. Trench ploughed 10 inches;
manures with 12 loads of yard dung.

Hoes, at 1 *l.* 1 *s.*

<i>Product.</i>	600 bushels.
	778 ditto.
	350 ditto, being 8 tons 17 <i>C. wt.</i>

1728

576 average.

Use. Feeding horses.

Expences. - - - £. 5 14 0

About *Saxmundham.*

Soil. Rich sand, at 14 *s.*

Product. 800 Bushels.

Use. Fattening hogs, and feeding horses,

About *Woodbridge.*

Soil. Rich deep sand, at 20 *s.*

Culture. Trench ploughed 12 inches
deep; no manuring. Three hand-
hoeings, at from 16 *s.* to 21 *s.* *per* acre.

Product. 698 Bushels, at 6 *d.* £. 17 9 0

Use. Feeding horses; allow a bushel *per*
horse *per* day, and give no corn. And
fatten hogs completely.

Mr. *Acton, Bramford.*

Soil. A sandy loam, at 12s. 6d.

Culture. Trench ploughing. No manuring. Three hand-hoeings, 30s. an acre.

Product. 960 Bushels.
765 Ditto.

1725

862 average.

Which, at 8d. are, - £.25 10 0

Use. Feeding horses.

Mr. *Hilton, Feversham.*

Soil. Rich black loam, at 4l.

Product. 1000 Bushels.

Expences. - - - £.9 0 0

Mr. *Taylor, Bifrons.*

Soil. Good loam, at 20s.

Culture. Ploughed 12 inches. Hand-hoed twice.

Product. 8 Tons, at 20s.
16 ditto.
10 ditto.

34

11 average.

Which, at 20s. - £11 0 0

Use. Feeding horses.

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Mr. *Legrand*, *Asb.*

Soil. A sandy loam, at 20 s.

Culture. Ploughing 8 or 9 inches deep; manuring, 80 loads compost, kept clean by hoeing.

Produce. 30 tons.
20 ditto.

50

25 average.

Use. Horses; a ton *per* week to the team; swine, cows, and fattening wethers.

<i>Expences,</i>	-	-	-	£. 9	15	3
<i>Profit,</i>	-	-	-	7	4	9
<i>Value per ton,</i>	-	-	-	0	17	0
<i>And per bushel,</i>	-	-	-	0	0	4 $\frac{1}{4}$

Sir *John Hoby Mill*, Bart. at *Bisbam*.

Soil. Rich black loam, at 3 l.

Culture. Three ploughings very deep, and kept clean by hand-hoeing.

Product. 17 Tons, 12 C. wt. 96 lb. or 700 bushels, at 8d. *per* bushel, 25 l.

Use. Fattening hogs.

<i>Expences,</i>	-	-	-	£. 8	14	0
<i>Profit,</i>	-	-	-	16	6	0

Mr. *Burke*, at *Beconsfield*.

Soil. Rich deep loam.

Culture. Well manured and ploughed 16 inches deep, and kept clean by hoeing.

Use. Feeding various cattle, but hogs (even porkers) would not fatten on them.

There is upon the whole a greater variation in these minutes than I have met with in most articles ; but we must throw those that will admit it into complete views.

The first enquiry I shall make is into the value of the carrots: all the minutes do not contain this material information ; many of them do ; but some valuations being by the ton, and others by the bushel, I shall give both rates, by calculating the bushel to weigh 56 *lb.* which is the average of many bushels I have weighed myself : in the preceding tour other weights are mentioned : but it was in compliance with the ideas of the various persons concerned. The rates marked with an asterism are those minuted, the others are calculated.

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CROPS.	Value per ton.			Value per bush.	
	l.	s.	d.	s.	d.
Mr. Cope, the felling price,	1	0	0	0	6*
Mr. Mellish, ditto,	1	0	0	0	6
Mr. Stovin, fattening hogs,	4	0	0*	2	0
Mr. Moody, fattening oxen,	1	0	0*	0	6
At Woodbridge, felling price,	1	0	0	0	6*
Mr. Aston, ditto,	1	6	8	0	8*
Mr. Taylor, value,	1	0	0*	0	6
Mr. Legrand, fattening sheep,	0	14	0*	0	4½
Sir J. Mill, ditto hogs,	1	6	8	0	8*
Average,	1	7	5½	0	8½

Upon this table I must remark, that the high price of Mr. Stovin's carrots is by no means to be rejected, because the expenditure was uncommonly accurate: 26 hogs were bought lean and sold from carrots fat, which is of all others the fairest method of trying the value; it is also *weight* not *measure* that was depended on; the latter is not always accurate; and I may further remark, that the value is not at all impeached by the other prices, because none of the other applications were similar: Sir John Mill's crop was given to hogs, but raw, whereas Mr. Stovin's were boiled: there is no absolute authority extant, that boiling will make a great difference,

difference, but we do not know the contrary. Hence therefore, the price of 4*l.* per ton, or 2*s.* a bushel, must undoubtedly be relied on as accurate, and the superiority of it to the other prices attributed to the circumstances of giving them *boiled to hogs*. We may divide the table thus.

	<i>Boiled for hogs.</i>						
	<i>l.</i>	<i>s.</i>	<i>d.</i>		<i>l.</i>	<i>s.</i>	<i>d.</i>
Mr. Stovin,	4	0	0		0	2	0
	<i>Raw to hogs.</i>						
Sir J. Mill,	1	6	8		0	0	8
	<i>Fattening oxen.</i>						
Mr. Moody,	1	0	0		0	0	6
	<i>Fattening sheep.</i>						
Mr. Legrand,	0	14	0		0	0	4
	<i>Selling prices.</i>						
Mr. Cope,	1	0	0		0	0	6
Mr. Mellish,	1	0	0		0	0	6
Woodbridge,	1	0	0		0	0	6
Mr. Acton,	1	6	8		0	0	8
	<hr/>				<hr/>		
Average,	1	1	8		0	0	6½
	<hr/>				<hr/>		
	<i>Feeding horses.</i>						
Mr. Taylor,	1	0	0		0	0	6

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In the next place, I shall give the products in both tons and bushels. Those marked are the quantities minuted, and the others calculated at 56*lb.* a bushel.

		<i>Tons.</i>	<i>Bushels.</i>
Mr. Cope,	-	*21	840
Mr. Mellish,	- -	*20	800
Mr. Wharton,	-	*20	800
Mr. Stovin,	- -	*6 $\frac{1}{2}$	260
Mr. Moody,	-	*22 $\frac{1}{2}$	900
Mr. Fellowes,	-	14 $\frac{1}{2}$	576*
Saxmundham,	- -	20	800*
Woodbridge,	-	17	698*
Mr. Acton,	- -	21 $\frac{1}{2}$	862*
Mr. Hilton,	-	25	1000*
Mr. Taylor,	- -	*11	440
Mr. Legrand,	-	*25	1000
Sir John Mill,	-	*17 $\frac{1}{2}$	700
		<hr/>	<hr/>
		<i>T. C.</i>	
Average,	-	18 12	744
		<hr/>	<hr/>

These products are great, and shew plainly, that carrots will in general yield a very considerable quantity of food. Eighteen tons of so rich and solid food must go very far in fattening or keeping any kind of cattle. But on this head, we have in two articles the exact truth.

Mr.

Mr. *Moody* found that 20 tons fattened four beasts, weighing on an average 95 stone (14*lb.*) during 14 weeks, each beast having 7*lb.* of hay *per diem*.

But the fattening season for such large beasts lasting from the first of *November* to the end of *March*, or near it, may be called 20 weeks, consequently an acre of 18 ton 12 *C. wt.* will completely fatten about three beasts during that time; it is not an exact proportion, but near it. Hence we find, that if the carrots are applied to fattening such large oxen, three must be procured to every average acre. The very purchase of the beasts will therefore be near 40*l. per* acre, besides hay. This shews clearly, that the culture of carrots, for fattening oxen, can be undertaken by nobody that has not a great plenty of money always ready.

In fattening sheep, Mr. *Legrand's* trials inform us, that 20 wethers, of 30*lb.* a quarter, will eat a ton a week, and 4 *C. wt.* of hay; and that they are 20 weeks in fattening; the average acre will therefore fat 18 $\frac{1}{2}$. This at 25*s.* come to 23*l. per* acre, besides hay. We also find by the

same gentleman, that four horses should have a ton a week. But at *Woodbridge* they give but 14 C. wt. per week. The average of these two accounts is 17 C. wt.; the average acre of $18\frac{1}{2}$ tons will therefore feed a team of four horses 21 weeks; that is, from the first of *November* to the end of *March*. Seven weeks, or a third longer, would last till lucerne, &c. was ready, so one acre and one third is sufficient for wintering four horses without oats: this is a very important article.

In feeding milch cows, Mr. *Cope* of *Arnold*, gives each two bushels a day; this is a ton and a half per month. In a winter of six months a cow would therefore eat nine tons, consequently an acre would winter feed two cows: but this would by no means answer; for one cow would eat in value 12*l.* in winter: hence it is clearly proved, that no one but a fool will give a cow meat enough to keep her in good order, of a sort that will fat an ox; for in this instance the cow's butter would cost you perhaps 5*s.* or 6*s.* a pound, at the same time that the ox in fat would pay you considerable profit. I never see cows
well

well kept in winter (that is on any thing but straw) without being extremely clear, that money is daily lost by them. If they calve early, they must have hay or green food; for the former they can never pay, and I much question whether they near pay even for turnips.

From these data we may see, that a small quantity of land, cultivated under carrots, will enable a man to keep great stocks of cattle. Suppose, for instance, that he has ten acres of this root annually, and that he keeps eight horses, his stock on carrots may be,

On $2 \frac{2}{3}$ acres, the horses,	-	8
On $3 \frac{1}{3}$ acres, sheep,	-	60
On 4 acres, oxen,	-	12

In what other husbandry will ten acres of land be made to winter keep eight horses, and fatten twelve oxen, of 95 stone, and 60 wethers, worth 45s. a-piece? In no other application of the land can any thing like this be done.

In the next place we should review the expences, the value of the crops, and the profit.

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<i>Crops.</i>	<i>Rent.</i>			<i>Expences.</i>			<i>Value.</i>			<i>Profit.</i>		
Mr. Cope,	0	13	0	3	9	0	21	0	0	12	21	0
Mr. Mellish,	1	0	0	6	2	0	20	0	0	13	18	0
Mr. W'barton,	2	10	0	-	-	-	27	9	0*	-	-	-
Mr. Stovin,	2	0	0	-	-	-	26	0	0	-	-	-
Mr. Moody,	2	0	0	7	9	3	22	10	0	15	0	9
Mr. Fellowes,	0	16	0	5	14	0	19	18	6*	14	4	6
Stamfordham,	0	14	0	-	-	-	27	14	2*	-	-	-
Woodbridge,	1	0	0	-	-	-	17	0	0	-	-	-
Mr. Acton,	0	12	6	-	-	-	28	13	4	-	-	-
Mr. Hilton,	4	0	0	9	0	0	34	6	10*	25	6	10
Mr. Taylor,	1	0	0	-	-	-	11	0	0	-	-	-
Mr. Le Grand,	1	0	0	9	15	3	17	10	0	7	14	9
Sir J. Mill,	3	0	0	8	14	0	23	6	8	14	12	8
Averages,	1	11	7	7	17	7	22	16	0	14	15	6

The first object that calls for our attention in this table, is, the richness of the soil; the average of the rents being a guinea and half an acre; this is an uncommon degree of fertility; besides which natural richness, some of the crops are amply manured; this evidently shews that great success, such for instance, as here appears, much depends on the soil either being naturally extremely fertile, or rendered so by the force of manures. The true carrot soil appears plainly to be the rich black mould, the *putre solum*, at three or four pounds an acre rent. This is the

land

* These articles valued by the average rate.

land which yields the greatest crops. But carrots, at the same time, thrive nobly in inferior soils. The average rent of the *Saxmundham* ones, Mr. *Fellowes* and Mr. *Acton*, is but 14 s. 2 d. and yet the average product of those three, is so high as 25 l. 8 s. 8 d.; which shews how well it will answer on land of no extraordinary fertility.

The average expence rising to 7 l. 17 s. 7 d. indicates that the husbandry is correct and spirited; indeed, such noble crops must not be expected without great expences. From that sum we find, that any person who would cultivate ten acres of carrots to advantage, must appropriate 78 l. 15 s. 10 d. to the work, besides the sum requisite for buying cattle, which is about 35 l. an acre; or for ten 350 l. It is from hence plain, that they will never be much cultivated by common farmers, whose husbandry, in general, is so bad, from a want of money to carry on better.

The product of 22 l. 16 s. and the clear profit of fourteen guineas an acre, are the material proofs of the excellency of the husbandry. On ten acres you reap a clear advantage (all expences paid) of 147 l. 15 s.

What

108 THE FARMER'S TOUR

What other culture will equal this? Common husbandry must be extended over a large tract of land to yield such a profit, and what a vast difference between this sum arising from 10 acres, admirably cleaned, and richly manured, and the general run of crops, which foul and exhaust the soil, and are attended by numerous expences arising from the quantity of land. Nor is this the only point, for the dung arising in the expenditure of the crop is of vast consequence in the improvement of other fields. This circumstance leads me to a further examination.

AN acre of 20 tons produced, in fattening oxen, as much dung as was worth 5 *l.* expence of straw, for litter, deducted. This new value is therefore exactly 5 *s.* *per* ton on the crop.

Mr. *Legrand*, of *Ash*, from attending for some years, very minutely, to the improvement of his grafs, by fattening sheep on carrots; determines the benefit from each acre of 20 tons, to be 3 *l.*; which is 3 *s.* *per* ton on the crop.

Mr. <i>Moody</i> ,	-	-	-	£.	0	5	0
Mr. <i>Legrand</i> ,	-	-	-		0	3	0
<hr/>							
Average,	-	-	-		0	4	0
<hr/>							

Consequently the dung arising from the crop of $18\frac{1}{2}$ tons, comes to 3*l.* 14*s.* This taken into the account, and calculated to all the crops, will enable us to have a complete view of their most important circumstances.

Crops.	Tons.	At per ton.			Product.			Profit.		
					Value.					
Mr. Cope,	21	1	4	0	25	4	0	16	15	0
Mr. Mellish,	20	1	4	0	24	0	0	17	18	0
Mr. Wharton,	20	1	11	5	†31	14	2	—	—	—
Mr. Stovin,	6 $\frac{1}{2}$	4	4	0	27	6	0	—	—	—
Mr. Moody,	22 $\frac{1}{2}$	1	4	0	27	0	0	19	10	9
Mr. Fellowes,	14 $\frac{1}{2}$	1	11	5	22	16	6	17	2	6
Saxmundham,	20	1	11	5	†31	14	2	—	—	—
Woodbridge,	17	1	4	0	20	8	0	—	—	—
Mr. Aston,	21 $\frac{1}{2}$	1	10	8	32	19	4	—	—	—
Mr. Hilton,	25	1	11	5	39	6	10	30	6	10
Mr. Taylor,	11	1	4	0	13	4	0	—	—	—
Mr. Legrand,	25	0	18	0	22	10	0	12	14	9
Sir J. Mill,	17 $\frac{1}{2}$	1	10	8	26	16	8	18	2	8
<hr/>		<hr/>			<hr/>			<hr/>		
T. Cwt.		*1	11	5	26	10	8	18	18	7
18 12		<hr/>			<hr/>			<hr/>		

This table includes the most material circumstances of the experiments on carrots. Had the article, Expenses, been complete, the column of profit would have been the same; but the profit may be calculated in another manner.

† There is a small difference in these products, owing to fractions, one being calculated, originally, from the bushel, and the other from the ton.

* The old average price with addition of 4*s.*

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Product,	-	-	-	£.26	10	8
Expences,	-	-	-	7	17	7
				<hr/>		
Profit,	-	-	-	18	13	1
				<hr/>		

Which remainder coming so near to the other average, gives us no slight reason to suppose, that the average of the seven crops, whereof the profit is minuted, is very near the average of the whole thirteen, had they all been expressed.

Thus including the value of the dung in the account, I must be allowed to think totally necessary: It is as much a part of the product as the cash, and a good husbandman will always have it as strongly in view. The best farmers in the kingdom make a very considerable difference between the price of a crop of turnips, to be drawn and carted from the land, and to be fed on it with sheep; in one case they will sell at 30s. but in the other not under 3*l*. This clearly shews that the manure arising from the crop, they esteem a principal part of it: it is on this account they will have turnips that cost them 40s. or 50s. an acre, and sell them for 30s. Nor is it possible, too often, to inculcate the real importance

portance of hoeing crops, which, in consuming, yield great quantities of manure. It is these crops which keep the fields of a farm in fine order, and increasing in fertility: they are the foundation of great products of corn; in a word, the essence of good husbandry; and I should here remark on the preceding trials of carrots, that we do not yet see the *whole* product resulting from them, for, besides the vast benefit the land receives from the carrot tillage, and incessant hoeings, there is the remaining value of the manure, the whole expence of which is, in several of the trials, carried to the account of carrots, though all the succeeding crops of the course are greatly benefited by it.

The clear profit of EIGHTEEN GUINEAS *per* acre, on a crop which cleans and ameliorates the ground in a very high degree, is so considerable, that all good husbandmen who are situated on sands or rich loams, should eagerly embrace the culture. I will venture to assert that they, in no other article, will equal it. And as it appears from the experiments, both of Mr. *Moody* and Mr. *Legrant*, that carrots may
succesfully

successively be cultivated on the same land with increasing profit; a man who has but one or two fields of the right soil, may every year have those in carrots; which would prove peculiarly advantageous: To extend the idea a little, let us think of an hundred acres of land yielding a profit of near TWO THOUSAND POUNDS A YEAR. Such a space of ground, indeed, so cultivated, would require a capital, appropriated to that alone, of above four thousand pounds; but then the profit would be 50% *per cent.*

L E T T E R XXXIII.

THE culture of potatoes is another article of husbandry highly deserving the attention of all persons, who are desirous of advancing their husbandry to perfection. The following minutes will shew, that few crops can in profit be ranked with them.

Mr. Kendal, at Alfreton.

Soil. Dry crumbling loam on quarries,
at 20s.

Culture. Kept clean by hoeing, &c.

Product. Six hundred bushels, at 1s.;
30l.

Use. Applies all to fattening brawns, boils them, and mixes two bushels of rye or barley meal to 20 of potatoes; more fattening than corn alone.

About Castleton.

Soil. Light loam on lime-stone.

Culture. In rows, and also the lazy-bed method; keep them tolerably clean.

114 THE FARMER'S TOUR

Product. Four hundred bushels, at 2 s.;
40 l.

About *Chesterfield*.

Soil. Hafel loam, at 17 s.

Culture. Plough four or five times, and
manure 20 loads an acre.

Product. Thirty pounds an acre; this, at
the *Castleton* price of 2 s. a bushel, is
300 bushels.

Mr. *Wharton, Doncaster.*

Soil. Rich sand, at 50 s.

Culture. Plants in equally-distant rows,
three quarters of a yard asunder;
manures with twelve loads an acre
rotten dung; only the knots or eyes
used for sets; earthed up with hand-
hoes several times.

Produce. 1767, — 242 Bushels.

1768, — 242

1769, — 300

1770, — 719

Total, 1503

Average, 375

At 1 s. 4 d.

£. 24 16 6

THROUGH ENGLAND. 115

Use. Applied chiefly to fattening swine; fats porkers with them; generally boils them, and mixes half a peck barley-meal to six bushels of potatoes; also in half fattening bacon hogs.

<i>Expences,</i>	-	-	£. 9	8	10
<i>Profit,</i>	-	-	15	7	2

Mr. Cook, Wheatley.

Soil. Light loam on a lime-stone.

Culture. Planted in rows three feet asunder; manured for with seven loads dung.

Product. 12*l.* besides the expence of taking up; suppose 13*l.*; at 1*s.* 4*d.* a bushel, it is 195 bushels.

Use. Feeding cows and hogs; the former eat them very heartily, and the milk and butter proved exceedingly good.

Mr. Moody, Retford.

Soil. Rich sand, at 40*s.*

Product. 20*l.*

About *Bootham*, near *Lincoln*.

Soil. Sandy, at 10*s.*

Culture. Plant in rows, one foot asunder.

Product. 15*l.*

116 THE FARMER'S TOUR

Mr. *Arbutnot*, *Ravenbury*.

Soil. Rich loam on clay, at 16s.

Culture. In rows, three and a half feet
afunder; manured with 15 loads an
acre of yard dung; horse and hand-
hoed several times, earthing them up
often; but they were not planted till
May.

Product. One hundred and thirty-six
bushels, each 80 *lb.* at 2s. 6d. which
is 230 bushels, at 48 *lb.* value 17*l.*

Use. Given to cows instead of hay;
porkers were fattened on them, boiled
and mashed with a little barley meal.

<i>Expences,</i>	-	-	£. 8	13	6
<i>Profit,</i>	-	-	8	6	6

Mr. *Taylor*, at *Bifrons*.

Soil. Rich loam, at 20s.

Culture. Planted in rows equally distant,
two feet; kept clean by horse and
hand-hoeing.

Product. Four hundred bushels, at 9d.;
15*l.*

Mr. *Pool*, at *Hook*.

Soil. Stiffish loam.

Culture. Planted eighteen inches square ;
dunged and hand-weeded.

Product. Six hundred thirty-three bushels.

Use. Fattening hogs ; boiled and mixed one
third barley meal with two thirds po-
tatoes, beat pease, and barley alone.

Mr. Rodney, at *Alresford*.

Use. Fattened porkers on them boiled,
and given alone ; nothing could fatten
better.

Mr. Sturt, *Brownsea*.

Soil. Black moory peat earth, at $4 \frac{1}{2} d.$ an
acre.

Product. Six hundred bushels, at 2s. ;
60l.

Mr. Maxde, at *Clift*.

Soil. Rich sandy loam, at 20s.

Culture. Planted in squares of three feet ;
20 bushels of sets used,

Produce. Value 21l.

At *Glastonbury*.

Soil. Good sand, at 40s.

Culture. Dug into beds, and earthed from
the furrows ; kept clean by weeding ;
ten bushel sets to an acre ; plant two
or three years successively.

118 THE FARMER'S TOUR

Product. Five hundred and forty-four bushels.

In gaining the average of the most material circumstances, I shall begin with the price at which the crop is valued or sold.

	<i>Price per bushel.</i>		
Mr. Kendal, fattening hogs,	£.	0	1 0
Castleton felling price,	-	0	2 0
Mr. Wharton, ditto,	-	0	1 4
Mr. Taylor, ditto,	-	0	0 9
Mr. Sturt, ditto,	-	0	2 0
Total,	-	0	7 1
Average,	-	0	1 5

This table would have been more satisfactory, had all the prices been the value consumed at home; but the felling rates are not to be despised, since in numerous situations it would be much more beneficial to sell the crop, than to eat them with cattle.

The products are as follow.

	<i>Bushels.</i>	<i>Value.</i>
Mr. Kendal, -	600	£. 30 0 0
Castleton, -	400	40 0 0
Chesterfield, -	300	30 0 0
Mr. Wharton,	375	24 16 6
Mr. Cook, -	195	13 0 0
Mr. Moody, -	—	20 0 0
Bootham, -	—	15 0 0
Mr. Arbutnot,	230	17 0 0
Mr. Taylor, -	400	15 0 0
Mr. Poole, -	633	- - -
Mr. Sturt, -	600	60 0 0
Mr. Marwde, -	—	21 0 0
Glastonbury, -	544	- - -
	<hr/>	<hr/>
Average,	427	25 19 8
	<hr/>	<hr/>

These products are very considerable ; 26*l.* an acre on a crop, which like carrots are kept quite clean, and generally manured for very richly, which consequently cleans the land, and as every one knows, greatly improves it, forms upon the whole an object of uncommon importance ; and shews that the culture of potatoes cannot be too much promoted. But that the clearer view of the whole may be had, I shall give the other particulars of soil, expences and profit.

120 THE FARMER'S TOUR

Crops.	Soil.	Rent.			Expences.			Product.			Profit.		
		l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.
Mr. <i>Kendal</i>	Loam	1	0	0				50	0	0			
<i>Coffey</i>	Limeft.							40	0	0			
<i>Clifford</i>	Loam	0	17	0				30	0	0			
Mr. <i>Wentworth</i>	Sand	2	10	0	9	8	10	24	19	6	15	7	2
Mr. <i>Cox</i>	Limeft.							13	0	0			
Mr. <i>Murray</i>	Sand	2	0	0				20	0	0			
<i>Beetham</i>	Sand	0	10	0				15	0	0			
Mr. <i>Arbuthnot</i>	Loam	0	16	0	8	13	6	17	0	0	8	6	6
Mr. <i>Taylor</i>	Loam	1	0	0				15	0	0			
Mr. <i>Sturt</i>	Moory	0	0	4 $\frac{1}{2}$				60	0	0			
Mr. <i>Munroe</i>	Loam	1	0	0				21	0	0			
Average		1	1	3	9	1	2	25	19	8	11	16	10

The soils in general, and in the average, are good; but I shall not divide the table according to the rent, because it is evident, that no useful conclusions could be drawn from it. Mr. *Sturt's* poor (as commonly reputed) moory soil, yields a vast produce. The *Castleton* lime-stone is not rich, but the product great. A proper soil is plainly as necessary as high rented ones; moors for instance, that are to be had for a trifle; but ample manuring, and good culture in the cleaning, are of high consequence. It appears from these tables that land at an average of 1 $\frac{1}{2}$ l. s. an acre will yield 427 bushels per acre, worth 26 $\frac{1}{2}$ l.

Relative to the methods of culture, the variations in the product seem little to depend on them.

↪ *Application of the crop.*

This is a point of very great importance; and the preceding minutes offer some valuable intelligence in it.

It appears by Mr. *Kendal's* experiments, that boiled potatoes, mixed with rye or barley meal, in the proportion of one or two bushels in 20, fatten brawns better than corn alone, and reckoned at the price of 1s. a bushel.

Mr. *Wharton* also boils them for his hogs, and mixes in the same manner; but his proportion is half a peck of meal to six bushels of potatoes; he fattens porkers thus, and half fattens bacon hogs.

Mr. *Kendal's* proportion is *one tenth* of meal.

Mr. *Wharton's* *one forty eighth*.

This difference may perhaps account for one fattening brawns, and the other only porkers.

Mr. *Arbutnot* fattened porkers on them, boiled and mashed with a little barley meal.

One

One third barley meal and two thirds potatoes boiled, with Mr. *Poole*, exceeded pease and barley alone in fattening hogs; this is very important.

The great object is to know what proportion of meal should be mixed with the mashed potatoes. Now it appears that Mr. *Kendal's tenth* equals Mr. *Poole's third*. Something indeed may be allowed for part of the former being rye meal, which in that case may be better than that of barley. The just quantity in all probability lies between a third and a tenth.

Mr. *Rodney's* intelligence is yet more material; for it appears, that they will fatten porkers as well as possible, boiled and *given alone*.

Feeding cows has likewise been tried. Mr. *Cook's* crop was given to milch ones, and the milk and butter proved exceedingly good. Mr. *Arbutnot's* were also applied in the same manner to save hay: but I may here remark, what I did before on carrots, that it is impossible it should answer to give cows in winter a food that will fatten any animal.

Upon

Upon the whole, the grand object of the culture seems to be for fattening hogs; that they will answer in great perfection for this use cannot be more clearly proved, not only for porkers, but even large hogs.

It seems equally clear from these trials, that it is *adviseable* to boil them; and if the hogs are not small, *necessary* to mix a small proportion of barley meal with the mash of the potatoes.

The application of all roots to the food of cattle is the material object; because the difference in good husbandry between selling a crop and using it at home is immense; upon the most moderate computation, one acre of carrots or potatoes (if the cattle are kept well littered) will in the consumption raise dung enough to manure two acres well; the increasing fertility of a farm, a part of which is so applied, wants no illustration: it is an object alone sufficient to change the face of land.

The cultivators of this root should attend more than they have done to the value of a bushel or ton used at home; this is a material point, but much neglected.

L E T T E R XXXIV.

IN the enquiries I made concerning the culture of madder, I was, upon the whole, very fortunate, for besides the capital experiments of Mr. *Arbutnot*, whose attention to this plant has been more minute, and his trials on a larger scale than those, I apprehend, of any man in Europe, there are some other articles of it which are very valuable, and the more so, as they were executed on a soil, different from the above-mentioned gentleman's. I shall proceed with the minutes of this culture, as I have done with the preceding ones, and draw them into one view, that the most material circumstances may be comprehended at once.

Mr. *Arbutnot*, at *Ravenfourey*.

Soil. Sandy loam, more inclinable to clay than mere sand; too wet for turnips, at 16s.

THROUGH ENGLAND. 125

<i>Expences.</i>	No.	<i>Manure.</i>			<i>Total.</i>		
		<i>l.</i>	<i>s.</i>	<i>d.</i>	<i>l.</i>	<i>s.</i>	<i>d.</i>
	8.	3	10	0	30	8	6
	9.	3	10	0	26	11	0
	10.	3	12	6	23	15	10
	Ditto.	3	12	6	23	17	2
	Ditto.	3	12	6	23	1	6
	12.	2	4	0	23	10	2
	14.	6	0	0	24	17	6
	Ditto.	3	12	0	11	0	6
	15.	6	0	0	24	17	6
		35	13	6	211	19	8
Average,		3	19	3	23	11	11

<i>Product.</i>	No.	<i>Weight.</i>			<i>Value.</i>		
		<i>T.</i>	<i>C.</i>	<i>Q.</i>	<i>l.</i>	<i>s.</i>	<i>d.</i>
	8.	0	12	0	54	0	0
	9.	0	12	0	54	0	0
	10.	0	12	0	54	0	0
	Ditto.	0	8	0	36	0	0
	Ditto.	0	10	0	45	0	0
	12.	0	12	0	48	0	0
	14.	0	15	0	60	0	0
	Ditto.	0	10	0	40	0	0
	15.	0	15	0	60	0	0
Tons,		5	6	0	451	0	0
Average,		0	11	3	50	2	2

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		<i>Per acre.</i>			<i>Per acre per ann.</i>		
		<i>l.</i>	<i>s.</i>	<i>d.</i>	<i>l.</i>	<i>s.</i>	<i>d.</i>
<i>Profit.*</i>	No. 8.	22	11	6	7	10	6
	9.	26	9	0	8	16	8
	10.	29	4	2	7	6	0
	Ditto.	11	2	10	2	15	8
	Ditto.	20	18	6	5	4	7
	12.	23	9	10	5	17	5
	14.	34	2	6	8	10	7
	Ditto.	27	19	6	6	19	10
	15.	34	2	6	8	10	7
		<hr/>			<hr/>		
		210	0	4	61	11	10
		<hr/>			<hr/>		
Average,		23	6	8	6	17	7
		<hr/>			<hr/>		

Mr. *Crowe*, at *Feversham*.

Soil. A rich, deep, black mould, at 4*l.*

Expences. The average of five

crops - - - £.39 6 10
l. s. d.

Product. Ditto weight, 1 5 0 2
l. s. d.

Value, - - - £.112 11 1

Ditto *per ann.* 3 years £.41 6 4

Ditto 2 ditto - - - £.33 9 4

Profit. Ditto, - - - £.73 1 9

Per acre per ann. - - - £.25 13 11

Mr. *Hilton*, at *Feversham*.

Soil. Ditto.

Product. 18 C. wt. - - - £.73 10 0

* 1*l.* *Per acre* deducted for the plants. See Page 232. Vol. II.

Mr. Reynolds, at Addisbam.

Soil. Rich loam, at 20s.

Expences. - - - £.45 0 0

Product. Plants to the amount of 1 l. 6 s.

Loss. 43 l. 14 s. 1 d. per acre per

ann. - - - £.14 11 4

Mr. Harrison, at Preston.

Soil. Rich loam, at 20 s.

Expences. 22 l. 3 s. 2 d.

Product. 16 C. wt. £.64

7 28

23 92

Average, 11 $\frac{1}{2}$ 46

Profit. On 16 C. wt. 41 l. 16 s. 10 d.; and

per acre per ann. 13 l. 18 s. 11 d. On

7 C. wt. 6 l.; or per acre per ann. 2 l.

Average per acre, £.23 18 5

Ditto per ann. - 7 19 5

Mr. Simmons, Osprenge.

Product. 1 Ton, at 4 l.—80 l.

Recapitulation.

Expences.

Mr. Arbuthnot, per acre, - £.23 11 11

Mr. Crowe, - - - 39 6 10

Mr. Reynolds, - - * 45 0 0



* 35 l. For plants.

128 THE FARMER'S TOUR

Mr. <i>Harrison</i> ,	-	-	22	3	2
			<hr/>		
Average,	-	-	32	10	5
			<hr/>		
Average, of No. 1, 2, and 4,			28	7	3

Produce.

	Weight.			Value.			
	T.	C.	Q.	lb.	l.	s.	d.
Mr. <i>Arbutnot</i> ,	0	11	3	0	50	2	2
Mr. <i>Crowe</i> ,	1	5	0	2	112	11	1
Mr. <i>Hilton</i> ,	0	18	0	0	73	10	0
Mr. <i>Harrison</i> ,	0	11	2	0	46	0	0
Mr. <i>Simmons</i> ,	1	0	0	0	80	0	0
			<hr/>				
Average,	0	17	1	0	72	8	7
			<hr/>				

Profit.

	Per acre.			Per a. per ann.			
	l.	s.	d.	l.	s.	d.	
Mr. <i>Arbutnot</i> ,	23	6	8	6	16	7	
Mr. <i>Crowe</i> ,	73	1	9	25	13	11	
Mr. <i>Harrison</i> ,	23	18	5	7	19	5	
			<hr/>				
	120	6	10	40	9	11	
Mr. <i>Reynold's</i> loss,	43	14	1	14	11	4	
			<hr/>				
Profit,	76	12	9	25	18	7	
			<hr/>				
Average of four,	19	3	2	6	9	7	
			<hr/>				
Average profit of the first three,	40	2	3	13	9	11	
			<hr/>				

I think Mr. *Reynolds's* ill success should come into the account, that too sanguine expectations may not be formed of madder: that it is a most profitable branch cannot be doubted; but every article of culture is subject to miscarriages, and that writer who admits none into his works, is but a deceiver of mankind. In the article carrots, there is one gentleman that gained but $6\frac{1}{2}$ tons *per acre*, on a rich sand of 40s. rent; now such a crop must be considered as a failure, yet it is registered, and I think that Mr. *Reynolds's* madder ought, in the same manner, to come into the account, more particularly, as there does not, from his minutes, appear to be any error or misconduct in the case.

Thirteen pounds *per acre*, clear profit, on the other crops, and 6*l.* 9*s.* 7*d.* including his, are either of them articles much superior to common husbandry. The first shews, that if total ill success does not attend the cultivation, the profit to be expected is very great, and highly deserving the attention of all spirited husbandmen.

The average expence of the profitable crops is 28*l.* 7*s.* 3*d.* and the profit 40*l.* 2*s.* 3*d.*; this is 142*l.* *per cent.* profit in 3 years, or 47*l.* *per cent.* *per ann.* Mr. Reynolds including the expence, is 32*l.* 10*s.* 5*d.* and the profit 19*l.* 3*s.* 2*d.*; this is 60*l.* *per cent.* in three years, and 20*l.* *per cent.* *per ann.*

Considerable as this is, carrots exceed it; the average expence of all the crops is 7*l.* 17*s.* 7*d.*; and that of the profit 18*l.* 18*s.* 7*d.*; which is 240*l.* *per cent.* *per ann.* whereas, the profitable madder is but 47*l.* The superiority is therefore immense.

L E T T E R XXXV.

IN summing up the intelligence I received concerning BURNET, in my tour in 1768, I found the accounts very contradictory; some strongly in favour of this grass, and others that arraigned it severely, and treated it as an imposition on the public. The uncertainty about it still continues; for I have again found opinions strangely various. However, by giving them in one view, the testimonies will be clearly seen on all sides.

Col. St. Leger, at Parkbill.

Soil. Deep loam on lime-stone, at 21 s.

Culture. Broad-cast alone; limed and dunged at 5*l.* expence; weeded at 10*l.* an acre.

Produce. Seed, hay and straw, 8*l.* 7*s.* 6*d.* in three years.

Expences. Twelve pounds thirteen shillings and six-pence the first year.

Use. The straw cattle in the farm yard eat, but not without waste; value 3*s.* a

load. Cattle of all forts pined and fell off in their looks in the after-grafs; in *February*, fattening sheep would not touch it; hay eat freely by horses and cattle; worth 25 s. a load.

Mr. *Stanniforth*, near *Bawtry*.

Soil. Loam on lime-stone.

Use. Kept eight acres three years, but no cattle would touch it; they all broke out of the field when hungry.

Mr. *Hall*, at *Swaith*.

Soil. A good loamy sand.

Culture. Sown with barley; afterwards hand-hoed.

Use. Horses, beasts and sheep, turned into it, but none would touch it.

Sir *Cecil Wray*, *Summer-Castle*.

Soil. Light loam on lime-stone.

Culture. Sown with white clover, trefoile, and fine hay feeds; in another piece, sowed it on dead land, with other feeds, and that alone succeeded.

Use. Fed with sheep and other cattle, and always kept as low as the rest; sheep fond of the hay.

Mr. *Reynolds*, at *Addisham*.

Soil. Light loam.

Use. Not liked by cows or beasts, unless mixed with other feeds; but with grafs much esteemed, especially by sheep and lambs; and it makes rich butter and milk.

Mr. *Harrison*, *Preston*.

Soil. Rich loam.

Use. Every thing eat it freely; and several sheep were fattened on it.

Mr. *Pool*, at *Hook*.

Use. Tried in small quantities; no cattle would eat it.

Mr. *Anderdon*, at *Henlade*.

Soil. Old rich orchard ground, also clay on lime-stone, and poor land.

Use. Horses, cows, oxen, sheep and pigs, eat it freely. "All cattle, (says Mr. *Anderdon*) eat it green, but are not remarkably fond of it; and when feeded do not care to eat it at all." Fed with oxen, sheep and horses, none eat it greedily, but without waste. In *January*, that which was

cut in *December*, good pasture for sheep. Vegetates in winter; no frost hurts it.

Mr. *Clayton, Harleyford.*

Use. Twenty-eight acres laid down, part with burnet, part sainfoine; part white clover, and part bird-grass; the field fed at various seasons with sheep, cows, horses, &c. and they all eat the burnet quite as close as any of the other grasses.

Respecting the quantity of product, and some other circumstances, these experimenters are silent, except Col. *St. Leger*, whose loss arose from sowing it without corn. The only point that these minutes, will allow an inquiry into, is the question, *Will cattle eat it? And, Is it a wholesome good food for cattle?*

The contradictions which we here meet with are amazing; it seems to be the fatality of this plant, that its merit or worthlessness are never to be known. As to the variations being precise, and that it is a good pasture in some places, and a bad one in others, this I must be allowed to suppose

suppose an impossibility, or at least a great improbability: in such a matter, on what are we to reason, unless by similar cases of other plants; now lucerne, sainfoine, clover, trefoile, and those numerous plants, which form what we call natural grafs, are eaten every where; they fat beasts, they feed cows, they keep horses and sheep: every man knows what they will do, without enquiring the soil, or other circumstances; and that the same certainty attends burnet, cannot be doubted.

The diversity of accounts must arise from circumstances being unrelated, and in some instances perhaps from prejudice.

Let us for a moment consider the history of the plant. A seedsman produced it, and made considerable sums by selling the seed. This at once accounts for the whole. He and his friends magnified it beyond all bounds: those who were thus deceived, and tricked out of a scandalous price for the seed, were immediately loud in their condemnation of it; and through prejudice would not allow the real merit of the plant, small as it might be. Then came others, who had tried it, and at first reported fa-

vourably, who piqued at being represented in the gross as so many fools by their antagonists, defended themselves by defending the plant, and of course ran their panegyrick too far. Thus it came that the culture has been attended with such contradictory accounts; and partly will justify one in yet attributing some small part of them to prejudice.

But the nature of the plant itself will account for some variations. Cattle may be turned to it after it is got a head and near feeding; then all agree they will not touch it; but who from thence will assert in general, that no cattle will eat it? It is precisely the same with ray grass; the seed bents of which are stubble. What is ray grass good for as feed after *Midsummer*? The seed of burnet being valuable, much has been seeded, and the *straw* has too often been confounded with the *hay*. The original intention of using it was for a *winter pasture*, in which season cattle will eat and thrive on food, which at other times they will not touch; this has not been sufficiently attended to. On the other hand, such great profit has been made by the
seed,

feed, that it may have proved something active in recommendations of the plant in general. Cattle may have been turned into a burnet field so hungry, that they might feed on it for a time, without proving it to be good food in general; conclusions of this sort may appear greatly in favour of a plant, and yet prove very little in fact.

From the preceding minutes there are several facts to be deduced, which will lead us to a clearer knowledge of the case.

H O R S E S.

Col. St. Leger. Eat the hay freely.

Mr. Hall. Turned into it green, but would not eat it.

Mr. Harrison. Eat it freely.

Mr. Anderdon. Eat it freely.

Mr. Clayton. Eat it as much as other grasses.

The balance of this account is greatly in favour of horses eating it in the common manner of all other food.

S H E E P.

Col. St. Leger. Fattening sheep in *February* will not touch it.

Mr.

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Mr. *Starriforth*. Fattening sheep in *February* will not touch it.

Mr. *Hall*. Turned into burnet, but would not touch it.

Sir *Cecil Wray*. Fed readily by sheep; fond of the hay.

Mr. *Reynolds*. Mixed with other grasses much esteemed by sheep.

Mr. *Harrison*. Several sheep fattened on it.

Mr. *Anderdon*. Eat it freely.

Mr. *Clayton*. Fed it as close as other grasses.

From these minutes, we cannot deny burnet to be a good food for sheep; but here are two articles of particular importance. Mr. *Harrison* sold several fat sheep from burnet, and Mr. *Clayton* turned them into 28 acres, sown with various feeds in divisions: the burnet was eaten as close as the rest. These particulars are absolutely decisive. Col. *St. Leger's* sheep were fat in *February*, when they refused it: from whence we may conjecture, that they were from turnips; so different a food might be refused at first. However, the balance of the intelligence lies much in favour of the grass.

COWS and OXEN.

Col. *St. Leger*. Eat the hay freely.

Mr. *Stanniforth*. Turned in, but would not touch it.

Mr. *Hall*. Ditto.

Sir *Cecil Wray*. Eat it freely.

Mr. *Reynolds*. Makes rich butter and milk.

Mr. *Harrison*. Eat it freely.

Mr. *Anderdon*. Ditto.

Mr. *Clayton*. Ditto.

The same observation is applicable here in a few instances, cows and oxen dislike it; in many they eat it freely.

And upon the whole I shall beg leave to remark, that in general the reports are favourable to this grass: whoever throws the slightest eye over the preceding articles, will see this very clearly; but we may venture to conjecture, that the proper application of burnet is to leave it a good head in autumn ready for sheep in the spring, for them to keep it down as close as possible about two months, upon the plan of ray grass, after that to let it stand for a crop of hay

But the most advantageous method of
all

all is, to sow it with other grasses in laying land down to pasture ; this appears in the clearest manner possible, and is very strongly confirmed by the known fact of burnet being so common a plant in many old meadows highly valued. Sir *Cecil Wray* and Mr. *Reynolds* prove this very strongly ; and the fine meadow on the *Thames*, of Mr. *Ducket's*, has a great quantity of burnet in it.

L E T T E R XXXVI.

SAINFOINE is cultivated in vastly greater quantities than lucerne, being in many parts of *England* common husbandry. The reason of its having obtained this preference is easy to be conceived; it will thrive to very considerable profit in the broad-cast mode, sown with corn; which, and not drilling or transplanting, is probably the very best way of cultivating it; but advantageous as for many years great tracts of country have found it, still has it not been able nearly to spread throughout the kingdom, even to this day; which is remarkable. For this reason, among others, I shall present the reader with the particulars I gained concerning it, in one view, that farmers in countries where it is not yet cultivated, may easily gain a complete knowledge of the principal circumstances attending it. The soils it yields most on will appear; the rent of them, and the products that may under given advantages be expected from it.

Place.	Soil.	Rent.	Produce. Loads.	Duration. Years.	Particulars in the culture.
1. <i>Hempstead,</i>	loams on chalk and clay	0 10 0	2 $\frac{1}{2}$	20	Manure every third year; 50 bushels coal ashes.
2. <i>Fring,</i>	chalk	0 10 0	2 $\frac{1}{2}$	14	
3. <i>Mr. Kendal,</i>	loam on quarries	1 0 0	2		In drills mixed with clover.
4. <i>Col. St. Leger,</i>	loam on limestone	0 5 0	2 load with after- grafs 3 <i>l.</i> 10 <i>s.</i>	16	Mixes some trefoile; harrows it. Manured in 3 or 4 years, 200 bushels of ashes, at 70 foot.
5. <i>Mr. Stan- forth,</i>	ditto	0 5 0	1 $\frac{1}{2}$	16	
6. <i>Carwick,</i>	thin loam on lime- stone	0 7 6	2	20	6 Bushels seed an acre.
7. <i>Sir Cecil Wray,</i>	ditto	0 5 0	1 $\frac{1}{2}$		Coal ashes did no good.
8. <i>Sir John Turner,</i>	light loam on chalk	0 10 0	1 $\frac{1}{2}$ 4 <i>l.</i> total 4 <i>l.</i> 15 <i>s.</i>		Clear profit 3 <i>l.</i> 15 <i>s.</i> 6 <i>d.</i>
9. <i>Cbeam,</i>	chalk	0 10 0	2	12	20 Bushels foot, at 6 <i>d.</i>
10. <i>Carshal- ton,</i>	ditto	0 10 0	1 $\frac{1}{2}$	15	
11. <i>Dartford,</i>	ditto	1 0 0	2	16	
12. <i>Fever- ham,</i>	ditto	0 5 0	1 $\frac{1}{2}$	8	
13. <i>Beakburn,</i>	light loam on chalk	0 6 0	2	10	50 Bushels foot, at 6 <i>d.</i>
14. <i>Minster,</i>	ditto	0 10 0	2	8	
15. <i>Alres- ford,</i>	chalk	0 6 0	1 $\frac{1}{2}$		
16. <i>Critchill,</i>	ditto	0 2 6	2		6 Bushels seed.
17. <i>Mr. Start,</i>	ditto	0 2 6	3		
			5 <i>l.</i> in all		
18. <i>Mr. An- derdon,</i>	stone	0 5 0	1 $\frac{1}{2}$		Seed in drills, 8 and half inches asunder.

Places.	Soil.	Rent.	Produce. Loads.	Duration. Years.	Particulars in the culture.
19. Donnington,	poor soils		3 tons, at 30 s. and after- grafs, at 20 s. 5l. 10s.	15	
20. Mr. Cowslade,	chalk	0 11 0 1 ½	5 tons		Manure with ashes once in two years.
21. Harleyford,					
22. Mr. Clayton,	various		2, at 30 s. after- grafs 8s. 6d.		Loams on clay better than on chalk rock.
23. Beconsfield,	chalk	0 9 0 2		20	Cut twice often with- out damage. Manure with foot and ashes, 40 bushels per acre.
Averages,		0 8 5 2	ton.	15	

This general table shews, in the clearest manner, that sainfoine is an article of vast consequence to *British* agriculture. Upon land whose average rent is so low as 8 s. 5 d. the product is 2 tons of hay, besides after-grafs; which is an amount far exceeding what such sorts can be supposed worth in any other application; and the duration of

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of fifteen years, gives it a fresh value of no slight consequence.

The value of the aftergrafs, and the total crop, are minuted at some places, and deserve attention.

	<i>After-grafs.</i>			<i>Total.</i>		
	<i>l.</i>	<i>s.</i>	<i>d.</i>	<i>l.</i>	<i>s.</i>	<i>d.</i>
Colonel <i>St. Leger,</i>				3	10	0
Sir <i>John Turner,</i>	0	15	0	4	15	0
Mr. <i>Sturt,</i> -				5	0	0
<i>Donnington,</i> -	1	0	0	5	10	0
Mr. <i>Clayton,</i> -	0	8	6	3	8	6
	<hr/>			<hr/>		
Average, -	0	14	6	4	8	8
	<hr/>			<hr/>		

All these foils are very poor, except Sir *John Turner's*, and that but 10 *s.* an acre: an annual product of 4 *l.* 8 *s.* 8 *d.* from such land, is carrying the husbandry of it to the highest perfection, and far more than to equal the profit of the best foils in *England* in common management; a slight calculation will explain this.

The total of 4 *l.* 8 *s.* 8 *d.* appears to be a fair general average, for that of all crops is 2 tons, which, at 40 *s.* is 4 *l.*; and 8 *s.* 8 *d.* for the aftergrafs is *low*.

Expences.

Rent of one acre, -	£.0	8	5
Tythe and town charges, -	0	4	0
Mowing, making, carting, stack- ing, and thatching, -	0	10	0
		<hr/>	
		1	2 5
		<hr/>	

Produce.

Total, - - - -	£.4	8	8
Expences, - - - -	1	2	5
		<hr/>	
Profit, - - - -	3	6	3
		<hr/>	

This, I will venture to assert, is infinitely beyond the best common husbandry of the finest clays in *England*. A clear profit of above three guineas an acre, from a crop that is the food of cattle—that lasts 15 years—that may be soon renewed, and whose culture is so cheap and simple. If 10s. *per* acre *per ann.* be allowed for foot or ashes, (though Col. *St. Leger's* is the only one of these dressed) still no common husbandry will equal it.

It is much to be wished that a culture so greatly advantageous, may spread itself over those numerous tracts of the kingdom, which at present yield but a paltry rent,

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though proper for this noble grass—If it required being sown in drills and kept clean by horse-hoeing, or other costly methods not usual with the farmer, there would not be reason for surprize; but a broad-cast crop sown among corn in the same way as clover, having no ungracious peculiarities in the management, ought to spread fast. Strange! that landlords should be so infatuated as to possess estates proper for the culture, and yet take no steps to introduce it.

The world has long been under the influence of an idea, which seems, from these minutes, to be perfectly erroneous. It has been thought that no soil is fit for sainfoine, that has not a rock or a stratum of chalk, &c. very near the surface to stop its roots. But at *Hempstead* they sow it often upon loams on a clay bottom—and Mr. Clayton's trials prove clearly, that the deeper the soil, the better the crop; loams on clay yielding as much as those on chalk. That this grass thrives admirably on extreme poor and shallow soils, is undeniable, many of the preceding instances being strong proofs; but I am apt to believe, that a depth of 2 or 3 feet of fine light mould, will

†

will

will agree wonderfully well with it, as with every thing else. The great point in the soil, is to have it free from springs and stagnant water; these excepted, I apprehend any soil will do for it; but certainly none like a fine deep light loam on chalk—I say on chalk, because that is a proof of the dryness of the land.

Colonel *St. Leger's* practice of harrowing the sainfoine till it has the appearance of a fallow, an operation he repeats as often as it grows weedy, deserves much attention: such a work must certainly be useful to all grasses that will bear it: There is no enemy the sainfoine fears so much as weeds and natural grasses, it being generally agreed that these decide its duration, the plant never dying through mere age; harrowing, therefore, must, by killing its enemies, add much to its duration.

The manures for it, chiefly recommended, are foot and ashes; but Sir *Cecil Wray*, who is very accurate, tried the latter without finding any benefit from them; this should instigate experimenters to decide the degree of advantage they reap from them.

L E T T E R XXXVII.

THE most important perhaps of the artificial grasses is LUCERNE, and at the same time the least understood. Opinions are at this day much divided concerning it, many persons asserting, *on experience*, that it is an incomparable article of culture; and others denying, also *on experience*, that it is of any value. This is remarkable among people of fortune particularly, as they may be supposed to give a plant fair play, by not regretting a little expence. But concerning lucerne, the diversity of opinions is as great in the higher as the lower ranks. Fortunately, however, I have in this journey met with a variety of intelligence concerning it, that will, when brought into one view, set its merit in the clearest light; for it has been cultivated on various soils in different methods, and applied to several uses: the
union

union of these particulars will, I flatter myself, give a more distinct knowledge of the subject than is any where else to be found.

Mr. *Stanniforth*, near *Bawtry*.

Soil. Rich light loam on lime-stone.

Culture. Drilled, equally-distant rows, 18 inches asunder, and some transplanted at three feet four inches.

Produce. The drilled maintains five horses *per* acre six months; the transplanted not so good by half; five horses, at 2*s.* are 13*l.* an acre.

Mr. *Hall*, at *Swaitb*.

Soil. Good loamy land, at 20*s.*

Culture. Broad-cast with barley, and transplanted in rows, two feet asunder; the first kept clean by harrowing, and the latter by hand-hoeing.

Produce. The broad-cast kept four or five horses 26 weeks; total 11*l.* 6*s.*; the transplanted 3 horses, total 6*l.* 19*s.* 3*d.*

Sir *Cecil Wray*, *Summer-Castle*.

Soil. A sandy loam, 12 inches deep on a quarry, at 5*s.*

Culture. Drilled in rows three feet asunder; kept clean by horse and hand-hoeing.

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Produce. Cut five times a year, kept three horses *per acre* six months, or 9*l.*

Sir John Turner, Warham.

Soil. A light sandy loam, at 7*s.* 6*d.*

Culture. Broad-cast, harrowed every spring, and manured with six loads of rotten dung.

Product. Regularly cut every five weeks; kept five horses 26 weeks, at 2*s.*; 13*l.*

<i>Expences,</i>	-	-	-	£.	1	14	6
<i>Profit,</i>	-	-	-		11	5	6

Mr. Thompson, Norwich.

Soil. A loamy sand, at 16*s.*

Culture. Drilled in rows, at 18 inches; hand-hoed, &c.

Product. Equal to five loads of common hay.

Mr. Ramey, at Yarmouth.

Soil. Fine rich light land, at 20*s.*

Culture. Broad-cast, and transplanted in three feet rows, one foot from plant to plant; kept clean for two years.

Product. One horse and a half *per acre* at first.

Dr. Tanner, at Hadleigh.

Soil. Good lightish loam, at 20*s.*

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Culture. Broad-cast, harrowed; manured once in four years, 12 loads.

Duration. It has lasted ten years.

Product. 8 l.; mown for horses and cows, and hay, makes excellent butter.

Mr. *Arbuthnot*, *Ravenbury*.

Soil. Rich black loam, at 40s.

Culture. Broad-cast, harrowed.

Duration. Five years.

Product. In hay, &c. average 11l. 5s.

Profit. Average 6l. 4s. 4d.

Mr. *Butcher*, at *Chalk*.

Soil. Light rich black loam on chalk, at 17s.

Culture. Broad-cast.

Duration. Seven years.

Product. Soils six horses 18 weeks, at 5s.; 18l.

Mr. *Bannister*, at *Chalk*.

Soil. The same.

Duration. Sixteen years.

Culture. Broad-cast.

Produce. Mown thrice a year for hay, six loads at 3l. is 18l.

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At *Feverſham*.

Soil. Old hop grounds, at 50s.

Culture. Broad-caſt.

Product. Five loads of hay, &c. 15l. 15s.

Mr. *Reynolds*, at *Addiſham*.

Soil. Light loam on chalk.

Culture. Broad-caſt, and drilled, at 18 inches.

Product. Prefers the broad-caſt; it keeps four horſes 23 weeks, at 2s. 6d.; 11l. 10s.

Mr. *Poole*, at *Hook*.

Soil. Good deep loam.

Culture. Drilled at two feet and 20 inches; could not keep it clean, though he dug between the rows; paring and burning did good.

Product. Cut ſeven times a year.

Mr. *Vernon*, at *Newick*.

Soil. Good loam, at 20s.

Culture. Drilled, rows two feet; dug twice a year.

Product. Keeps five horſes, at 2s. 6d. a week; 14l. 7s. 6d.

Expences, - - - £. 3 15 0

Profit, - - - 10 12 6

Mr. *Sturt*, at *Critchill*.

Soil. Strong loam, 18 inches, on chalk.

Culture. Drilled in rows 18 inches afunder; horse and hand-hoed.

Produce. Cut from three to five times a year; three loads of hay, 9*l.*

Dr. *Lloyd*, at *Puddleton*.

Soil. Good loam, at 10*s.* 6*d.*

Culture. Drilled equally distant, 18 inches afunder; hoed to one foot in the rows; kept clean by horse and hand-hoeing, at 22*s.* 6*d.*

Product. Keeps four horses 18 weeks, at 2*s.* 6*d.*; 9*l.*

Expences, - - £. 3 3 6

Profit, - - 5 16 6

Duration. Has lasted five years.

Mr. *Anderdon*, *Henlade*.

Soil. A rich deep sandy loam, at 20*s.*

Culture. Drilled in equally distant rows, two feet six inches afunder; kept clean by horse and hand-hoeing.

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			T.	C.	Q.	lb.
<i>Product</i> , 1767, (the first year)			0	8	0	14
1768,	-		5	2	0	13
1769,	-	-	6	19	2	3
1770,	-		8	18	3	6
Total,	-		21	0	1	22
Average,	-		7	0	0	16
1767,						
At 20s. a ton.	-		£.0	8		1½
1768,	-	-	5	2		1½
1769,	-	-	6	19		6
1770,	-	-	9	1		3
Total,	-		21	2		10½
Average,	-		7	0		11½
		<i>Expences.</i>				
1767,	-	-	7	0		1
1768,	-	-	4	3		10
1769,	-	-	2	17		11
1770,	-	-	3	11		7
Total,	-		10	13		4
Average,	-		3	11		1

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		<i>Profit.</i>			
1767, Loss,	-	£. 6	12	0	
<hr style="width: 50%; margin: 0 auto;"/>					
1768, profit,		1	3	2 $\frac{3}{4}$	
1769, ditto,	-	4	9	0	
1770, ditto,	-	5	9	7 $\frac{1}{2}$	
<hr style="width: 50%; margin: 0 auto;"/>					
Total,	-	11	1	10 $\frac{1}{4}$	
<hr style="width: 50%; margin: 0 auto;"/>					
Average,	-	3	13	11 $\frac{1}{4}$	
<hr style="width: 50%; margin: 0 auto;"/>					

Mr. Clayton, Harleyford.

Soil. Stoney loam on clay, and under that chalk.

Culture. Broad-cast without corn, and drilled in equally distant rows, 18 inches asunder; kept clean by horse-hoeing, &c. the broad-cast harrowed and ploughed with a round share.

Product. The broad-cast, five horses from middle of *May* till *Michaelmas*; the drilled four; at 2s.

Broad-cast, - - - £. 9 0 0

Drilled, - - - 7 4 0

Lucerne an infallible cure for the botts in horses.

Mr. Burke, Beconsfield.

Soil. Good stoney loam.

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Culture. Drilled, the rows equally distant, 18 inches asunder; kept clean by hoeing.

Product. In 1769, the second year, kept two horses 13 weeks and a half, at 2*s.* 6*d.*; 3*l.* 7*s.* 6*d.* In 1770, two horses 18 weeks, or 4*l.* 10*s.*; but it is not near perfection yet.

These articles of intelligence concerning lucerne are upon the whole uncommonly satisfactory, and will give a clear idea of the importance of the culture. In drawing an average of the whole, it will be proper to begin with the product.

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Crops.	Culture.	Cattle kept.	At p.		Amount.		
			week		l.	s.	d.
			s.	d.	l.	s.	d.
Mr. Staniforth	Rows 18 inch.	5 Horses 6 m.	2	0	13	0	0
Ditto	Transf. 3 f. 4 in.	5 Horses 3 m.	2	0	6	10	0
Mr. Hall	Broad-cast	4 ½ H. 26 week	2	6	11	6	0
Ditto	Transf. rows 2 f.	3 Horses ditto	2	6	6	19	3
Sir C. Wray	Ditto 3 feet	3 Ditto 6 m.	2	6	9	0	0
Sir J. Turner	Broad-cast	5 Ditto 26 w.	2	0	13	0	0
Mr. Thompson	Rows 18 inch.				7	10	0 †
Dr. Tanner*	Broad-cast				8	0	0
Mr. Arbuthnot	Ditto	Hav, &c.			11	5	0
Mr. Butcher	Ditto	6 Horses 18 w.	5	0	18	0	0
Mr. Bannister	Ditto	6 L. hay, at 3l.			18	0	0
Fewersham	Ditto	5 Loads			15	15	0
Mr. Reynolds	Ditto	4 H. 23 w.	2	6	11	10	0
Mr. Vernon	Rows 2 feet	5 H. 23 weeks	2	6	14	7	6
Mr. Sturt	Ditto 18 inch.	3 Loads hay			9	0	0
Dr. Lloyd	Ditto, ditto	4 H. 18 weeks	2	6	9	0	0
Mr. Anderdon	Ditto 2 f. 6 in.	Various	20	2	7	0	11 ½
				ton			
Mr. Clayton	Broad-cast	5 H. 18 weeks	2	0	9	0	0
Ditto	Rows 18 inch.	4 H. 18 weeks	2	0	7	4	0
Mr. Burke	Ditto, ditto	2 Ditto 18 w.	2	6	4	10	0
Averages		4 Horses 22 ¾	2	6	10	9	10

† Equal to five loads of common hay.

* Mr. Ramey's not included, as kept clean only two years; but lucerne seldom is profitable the first year, and inferior the second.

The principal article in this table is the average of the number of horses, and the time they are kept, which I have carefully calculated, and find the proportion to be four horses maintained 22 ¾ weeks on each acre. This is a fact of true importance, and independant of the propriety of weekly charges, or general valuations, which

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which are never equally satisfactory. Here we find, that on an average of these numerous crops of lucerne, one acre will maintain four horses foiled in the stable, from the middle of *May* till the end of *October*. I need not remark, that this product is prodigiously great, and forms an object in modern husbandry of the first magnitude.

But that this subject may be as thoroughly understood as possible, I beg leave to observe, that here are two circumstances united, which ought to be somewhat distinguished, though difficult; it is the *product of lucerne*, and the *practice of foiling horses in the stable*. Is the vast benefit here apparent all to be attributed to one or the other, or part to one, and part to the other? and in what degree? These queries I cannot exactly answer; but some light is to be thrown on them by minutes in the preceding Tour, not connected with lucerne, but which I must mention here for elucidating the present point.

Mr. *Hall*, of *Swaitb*, tried the application of clover to foiling horses, and two acres kept six during 19 weeks, or three *per* acre
that

that time, which at 2s. 6d. is 7l. 2s. 6d. In the field he remarked, that the six horses would have had nine acres.

Mr. Ramey, of Yarmouth, made the same experiment. Seven acres of clover keeps 20 horses, seven cows, five calves, &c. 17 weeks; the horses and cows at 2s. 6d. a week, the amount 9l. 2s. 1d. per acre.

And from a comparison with his tenants feeding clover in the field, Mr. Ramey found, that five acres soiled, lasted as long as 30 eaten in the field.

These two experiments are very important, and directly to the point in question. Mr. Hall's clover paid him 7l. 2s. 6d. per acre, Mr. Ramey's 9l. 2s. 1d. These are prices never heard of for clover in common management; and advance very nearly to the products of lucerne.

Mr. Hall,	-	-	£. 7	2	6
Mr. Ramey,	-	-	9	2	1
			<hr style="width: 100%;"/>		
Total,	-	-	16	4	7
			<hr style="width: 100%;"/>		
Average,	-	-	8	2	3½
			<hr style="width: 100%;"/>		

This is to 10l. 9s. 10d. the average of lucerne, nearly as four to five. So if lucerne

pays 5*l.* clover in this way may be expected to pay 4*l.* This difference is by no means so great as has been generally supposed between the two plants ; and if other attendant circumstances are taken into the account, will totally disappear. For it must be considered, that these accounts of lucerne are taken from the third, fourth, fifth, or after years of it ; whereas the first and second are losing or at least much inferior. Further, it is to be considered, that the clover products are without any expences, except the rent and mere mowing and carrying ; no preparatory years of loss, no horse or hand-hoeing, none of that attention to cleaning, which with lucerne is almost without bounds. If all these circumstances be duly considered, lucerne *applied in the manner of the preceding crops* will by no means be condemned, but the greatness of the products will be much attributed to the soiling. This idea is rather confirmed than contradicted by the products of hay. Mr. *Arbutnot's* was in the season four loads an acre ; Mr. *Bannister's* two loads ; at *Feverham* five loads ; Mr. *Sturt* three loads ; average of these,

these, four and a half; which is not more in quantity than clover, at two mowings on the same soils.

Upon the whole, I am desirous that a merit, which seems principally to depend on a most excellent practice, that of soiling, be not attributed as a peculiarity to lucerne; and I venture this the rather, as I much wish that these ingenious farmers would decide the *real value* of the plant, not by estimations of the weekly feeding horses, but the feeding or fattening sheep and small beasts, so that we may have other value than that vague one of *so much per week*.

I shall conclude these remarks with the expences and profit.

Crops.	Applic.	Expenc.			Product.			Profit.		
		l.	s.	d.	l.	s.	d.	l.	s.	d.
Sir J. Turner	Soiling	1	14	6	13	0	0	11	5	6
Mr. Arbuthnot	Hay	5	0	8	11	5	0	6	4	4
Mr. Vernon	Soiling	3	15	0	14	7	6	10	12	6
Dr. Lloyd	Ditto	3	3	6	9	0	0	5	16	0
Mr. Anderdon	Ditto	3	11	1	7	0	11½	3	13	11¼
Averages		3	8	11	10	18	8	7	10	5

The less is necessary to be observed on this, as I have already hinted how much is to be attributed to the *application*.

But let me not forget to remark, that the point in which lucerne seems most important is *duration*. It lasts many years, so that a man may keep just land enough for his purpose of soiling, without being plagued with corn crops; this cannot be with clover, and where it suits is an invaluable circumstance.

LETTER

L E T T E R XXXVIII.

IN this review, CLOVER must not be forgotten; the use it is of to many parts of the kingdom is so great, as to be one of the pillars of good husbandry; and yet it has not been able to make its way through all the counties: this grass is so truly serviceable to the farmer, that a clear knowledge of its product and value are the only means of spreading the culture, and of improving it where known.

Place.	Soil.	Rent.			Loads.		Value.			Sundry circumstances
		l.	s.	d.	1st cut	2d cut	l.	s.	d.	
1. <i>Hempsted</i>	Loams	0	10	0						
2. <i>Tring</i>	Ditto on chalk	0	10	0						50 Bushels of ashes.
3. <i>Blisworth</i>	Clay	0	16	0						Oats better after feeding than mowing.
4. <i>Quenby</i>	Clay	0	18	0						One acre white, fat 4 to 7 large sheep
5. <i>Alfreton</i>	Clayey	1	0	0	2					Feed the first.
6. <i>Formark</i>	Sandy loa.	0	15	0						
7. <i>Laxton</i>	Loam on lime-ston.	0	8	0 2						
8. <i>Gateford</i>	Sand	0	10	0						
9. <i>Blythe</i>	Ditto	0	10	0						
10. <i>Mr. Wharton</i>	Ditto	2	10	0						
11. <i>Mr. Hall</i>	Sandy loa.	0	10	0						White clover for feed and seed.

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Place.	Soil.	Rcpt.			Loads.		Value.			Sundry circumstances	
		l.	s.	d.	cut	uncut	l.	s.	d.		
12. <i>Wombwell</i>	Sandy loa.	0	16	0		4				The best wheat after mowing.	
13. <i>Retford</i>	Sand, &c.	0	12	6	2						
14. <i>Dunham</i>	Sandy, &c.	0	17	0		4					
15. <i>Boatlam</i>	Various	0	10	0		3					
16. <i>Carwick</i>	Lime-fto.	0	7	6		3					
17. <i>Summer-castie</i>	Loam on lime-ft.	0	10	0		2½					
18. <i>Walpole</i>	Clay	0	17	0		2					White clover.
19. <i>Maffingham</i>	Sandy	0	8	0	1½						Better wheat than if fed the whole year.
20. <i>Sberringham</i>	Sandy loa.	0	15	0	1	3					
21. <i>Aylsham</i>	Ditto	0	14	0	2		6	0	0		
22. <i>Earlam</i>	Ditto	0	16	0							Mow all twice, that the wheat may be the better.
23. <i>Brace Ash</i>	Clayey	0	15	0	2	1	3				
24. <i>Mr. Bever</i>	Ditto	0	16	0		3	6	0	0		
25. <i>Sbottesham</i>	Sandy loa.	0	14	0			3	3	0		
26. <i>Fleg Hundred</i>	Ditto	0	15	0							The best wheat after mowing.
27. <i>South of Becles</i>	Ditto	0	12	0		2					
28. <i>Saxm. to Woodbridge</i>	Sand	0	14	0		3					
29. <i>Mr. Aiton</i>	Sandy loa.	0	12	6		4½					
30. <i>Hadleigh</i>	Clayey lo.	0	15	0	2					Feed much with hogs, which they find very profitab. Also for seed, 4 to 8 bush. best wheat after feeding, but not so clean.	
31. <i>Hafstead</i>	Clayey	0	14	6	1½						
32. <i>Colchester</i>	Sandy gravel	0	16	0	2		4	4	0		
33. <i>Yaxley</i>	Heavy	0	12	0	1½	1	2½			Reckon wheat best after feeding.	
34. <i>Peterham</i>	Sandy	1	0	0		3½					
35. <i>Morden</i>	Clay	0	12	0		3					
36. <i>Cheam</i>	Chalk	0	10	0	1½						
37. <i>Cuddington</i>	On ditto	0	17	0		3					
38. <i>Carpham</i>	Ditto	0	10	0		3				Best wheat after feeding.	
39. <i>St. Mary Cray</i>	Loam	0	14	0		3					
40. <i>Misfic</i>	Rich dit.	0	17	0						Mixt with trefoile, keeps four large sheep per acre; better wheat after trefoile than clover.	
41. <i>Burwash</i>		0	10	0	1½						
42. <i>Findra</i>	Light loa.	0	17	6	2						

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Place.	Soil.	Rent.			Loads.		Value.			Sundry circumstances
		l.	s.	d.	1st cut.	2d. cut.	l.	s.	d.	
43. Mr. Turner	Clay				1½					Feeds much with hogs; 9 acres paid 50l. even fows and pigs.
44. Isle of Wight	Loam	1	0	0	1½					
45. Ditto	Dit. stoney	0	10	0	1½					
46. Gilbury	Ditto	0	10	6	1½					
47. Critchill	Loam	0	10	0	2¼					Most ray; feed it the second year.
48. Moreton	Ditto	0	12	0	1¼					
49. Leigh	Clay	0	12	6	1¼					
50. Taunton-vale	Clay	1	0	0	1¼		2	10	0	
51. Bridgwater	Clay				2					
52. Donnington	Loam	0	15	0	2½			At 30s.		No difference in the wheat, whether mown or fed. Wheat is better after mowing than feeding.
								a load		
53. Harleyford	Various	0	11	0	1½	1½	3			
54. Beconsfield	Ditto	0	9	0			4			
Averages		0	14	0	33½	22	64	5	4	0

Upon these averages it is to be remarked, that the profit of clover appears to uncommon advantage in them. On the average of so many soils, many of them poor ones, for the first mowing to yield 1 ton 13 C. wt. 2 quarters, is a circumstance most valuable to a farmer; and that even this product is below the truth, had the totals of the two cuttings been separated, appears from the average total being more than the first and second together.

The importance of a grass that is of so hardy a nature, as to bear sowing with

corn, and subject to scarcely any failures,— that will the very first year yield 3 ton 4 *C. wt.* of hay at two mowings — that will last one or perhaps two years longer, if it suits the farmer — that is for wheat a better preparation than the finest fallow, requiring at the same time but one ploughing — all these circumstances unite to render clover an object of the highest consequence to these kingdoms; and cannot but amaze one to reflect, that there are various parts of them, wherein it is yet unknown. And it is miserable to think of so many common fields yet remaining, where the farmers are tied down to most unprofitable courses to the exclusion of this noble grass.

Suppose the clover hay on an average to be worth but 40s. a ton, the product of hay amounts to 6*l.* 8*s.* *per* acre, which considering the low expences is great. Whatever price is named to suit any neighbourhood, still the profit will be uncommonly high.

Nor let it be forgotten, that these advantages are gained by a crop, which may be all, and usually is, consumed by cattle at home; hence opens new views

of its profit: the farmer is enabled to keep great stocks of cattle on foils, where he could not otherwise have any; raising much dung, and keeping his land in great heart.

The comparative advantage of the two applications of the clover, *mowing* and *feeding*, relative to the wheat that succeeds, is in favour of the former. I am not surprized at this, for mowing will always make the land cleaner from weeds, an effect particularly observed at *Hastead*; but the shade of a thick crop is the great object in summer; be it what it may, it will breed so putrid a fermentation in the foil, as to work a far greater and infinitely more regular improvement, than the random dunging and staling of cattle*. All experience proves the benefit of thick shade in summer. That this comparison may be the better understood, I shall compare the practice with the foil.

* I have treated the point of feeding and mowing meadows at large, in my *Course of Experimental Agriculture*, Vol. II. p. 372.

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<i>Place.</i>	<i>Soil.</i>	<i>Which best.</i>
<i>Blisworth</i>	Clay	Feeding
<i>Wombwell</i>	Sandy loam	Mowing
<i>Massingham</i>	Sand	Mowing
<i>Earlham</i>	Sandy loam	Ditto
<i>Fleg hundred</i>	Ditto	Ditto
<i>Hastead</i>	Clayey	Feeding
<i>Youngsberry</i>	Clayey	Ditto
<i>Carshalton</i>	Chalk loam	Ditto
<i>Beconsfield</i>	Loams	Mowing

If we were to reason on this point, we should naturally say that feeding must be best on light soils, and mowing on heavy ones; because the one wants to be trodden to make them more compact, and the other to be opened and rendered loose, the universal effect of mowing crops. But in this table such an idea is not justified: the advantages of mowing are so superior, that they succeed even on sandy loams much better than feeding. The *Hastead* feeding should be thrown out of the question; because they acknowledge that the crops are cleanest after mowing.

But as several places appear on the side
of

of feeding, and three of them on clays, on which it is impossible to be so, let me request, that some gentleman will accurately try the point, by fairly dividing a field, and feeding one half through the year, and mowing the other twice for hay.

LETTER

L E T T E R XXXIX.

I N the Tour I made through the North of *England*, in the year 1768, I gained an uncommon variety of intelligence, concerning the culture of the great *Scotch* cabbage, which it was very remarkable had been planted for several years in *Yorkshire* by many spirited gentlemen, and applied by them constantly to husbandry uses, without the publick knowing that such a plant existed. The registers of experiments, which I inserted in that Tour, kindled a curiosity throughout many counties, to try the merit of it, which has produced more experiments, several of which I am favoured with in the present work. Perhaps I may venture to hint, that this circumstance is one proof of the utility, which may possibly attend such an undertaking as this of publishing provincial and local customs, for the information of the nation in general.

Besides

Besides several trials on the *Scotch* cabbage, I have met with another sort, the *North American*, cultivated by some gentlemen in *Northamptonshire*, *Derbyshire*, &c. which seems to bid fair to be a most capital article of *British* husbandry, as appeared in the preceding minutes.

Bringing all my intelligence concerning cabbages into one view, will assist the reader in completing the idea of the culture, which he may have gained from the experiments, registered in the *Six Months Tour*.

Mr. *Booth*, at *Glendon*.

Soil. A red, light, rich loam, at 10s.

Sort. The *Dutch* cabbage.

Culture. Sows in *August*, and the latter end of *February*; pricks out both; plants the first in *March*, and the latter in *May* or *June*; plants in squares of two feet; keeps clean by hand-hoeing; gives a year's fallow, ploughing 12 inches deep in *October*, and manures with 40 loads an acre.

Product. The *Dutch* cabbage comes to so high as 40 lb.

Use. Feeds them on the ground with rams.

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Duration. They generally decay in *January*.

Mr. *Kendal*, at *Alfreton*.

Soil. Rich loam on quarries, at 20 s.

Culture. In *March* he plants beans in single rows, four feet asunder, and after that sets a row of cabbages between the rows of beans ; keeps them clean by earthing up.

Product. Twenty cart loads *per* acre, worth about 6*l.* They rise some to 23 *lb.*

Use. Given to cows, which yield vastly more milk on them than on any other food, and the cream and butter have not the least bad taste ; gives half a cart-load a day to seven or eight cows.

Sir *Robert Burdett*, *Formark*.

Soil. Rich sandy loam, at 20 s.

Sort. The *North American*.

Culture. Digs two spits deep, and richly manures and limes ; planted in rows three feet every way, the first week in *April* ; kept quite clean from weeds, by hand-hoeing.

Product. Many of them 50 *lb.* each.

Average in 1769,	-	35
In 1770,	-	30

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The latter is - 65 tons *per* acre.
 The former, - 76 ditto.

—————

141

—————

70 Average.

—————

Value in 1769, by fattening oxen and
 sheep, 39*l.* 8*s.* which is *per* ton 10*s.*

£. 39 8 0

Sixty-five tons, at 10*s.* 32 10 0

—————

Total, - - 71 18 0

—————

Average value *per* acre, 36 0 0

—————

Use. Fattening great oxen and sheep: never
 beasts fattened better or sooner.

Duration. In perfection the beginning
 of *October*; and none lasts longer
 than *January*.

Col. St. Leger, at Parkhill.

Soil. Thin loam on lime stone, at 2*s.* 6*d.*

Sort. Great Scotch.

Culture. Planted on a summer fallow;
 ploughed six times, and manured
 with 12 loads an acre of rotten
 dung; rows four feet by 20 inches.

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Seed part sown in *September* and part in *February*; the first twice pricked out; the second at once into field; hand and horse-hoed.

Use. They were given to dry cows, calves, and sheep; they all did exceedingly well on them.

Product. One acre was more than as good as three of turnips; and as the average of the latter is 35s. the cabbages amount to 5l. 5s.

Mr. Mellish, at *Blyth*.

Soil. Rich sand, at 20s.

Sort. Great *Scotch*.

Culture. Manured for 12 loads an acre farm yard compost; sown in *February*, and planted the end of *May* in squares of two feet; kept clean by hand-hoeing.

Product. Average value 7l. per acre.

Use. Sheep bought lean at 14s. and sold from them fat at 21s.

Mr. Wharton, *Carr-House*.

Soil. Rich sand, at 20s.

Sort. Great *Scotch*.

Culture. Sown in *August*, pricked out
in

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in *October*, again in *March*, and into field the middle of *June*; land prepared by five ploughings and 10 loads an acre of farm-yard dung; kept clean by horse and hand-hoeing.

Product. Average cabbage 21 lb. 12 oz. or 47 tons *per* acre.

Use. Given to fattening beasts, milch cows, young cattle, and swine; for beasts they answered but indifferently; cows give a vast quantity of milk, but strong, though ventilated; but kept pigs and in excellent order till put up to fattening; answered best in this manner. Mr. *Wharton* on the whole prefers a crop of turnips worth 3*l.* suppose the acre of 47 tons worth about 50*s.* it may be called 1*s.* a ton.

Candidates for Doncaster Premium.

Mr. <i>Crowle</i> ,	-	54 $\frac{1}{2}$ Tons
Mr. <i>Wright</i> ,	-	51 $\frac{1}{2}$
Mr. <i>Wharton</i> ,	-	46 $\frac{3}{4}$
Mr. <i>Hervey</i> ,	-	29
Mr. <i>Turner</i> ,	-	28 $\frac{3}{4}$
Mr. <i>Hewet</i> ,	-	14

Mr. *Hall*, at *Swaith*.

Soil. Rich loam, at 20*s.*

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Sort. Great Scotch.

Culture. Well fallowed and manured as for turnips; sown in *February*, and planted in *June* in rows four feet asunder, and two feet from plant to plant; kept quite clean by horse and hand-hoeing.

Product. Came to the average weight of 12 *lb.* which is 29 tons 13 *C. wt.* the value 3 *l.* or 2 *s.* a ton.

Use. Fattening sheep, which throve well on them.

Mr. Howman, Bracon-Ash.

Soil. A strong clay.

Sort. Turnip cabbages and *Reynold's* cabbage turnip.

Culture. Sown in *April*, and planted in *July*; those that were left in the feed-bed the best; frost destroyed the turnip cabbage.

Use. Horses, cows and sheep, eat them very freely.

Mr. Fellowes, at *Shottesham*.

Soil. Sandy loam.

Sort. Great Scotch.

Culture. Sown in *March*, and planted in
May,

May, in squares of two feet six inches; manured with 20 loads dung an acre.

Product. Fifteen tons 16 C. wt. 88 lb. per acre.

Mr. *Aeton*, at *Bramford*.

Soil. Good turnip loam.

Sort. Great *Scotch*, sown for but proved a bad sort; and *Reynolds's* cabbage turnip; sown first week in *April*; planted in *June*; the *Scotch* three feet by two; *Reynolds's* two by 18 inches; kept as clean as a garden.

Product. The common cabbage 2l. 16s. 10 $\frac{1}{4}$ d. by feeding cows, at 2s. a week.

Use. Milch cows; and the butter excellent, without any taste.

Mr. *Arbuthnot*, at *Mitcham*.

Soil. Brick earth loam.

Sort. Various kinds.

Culture. Ploughed 14 inches deep, and planted in *September*, rows equally distant, 18 inches and two feet, and the plants one foot in the rows; kept perfectly clean.

Product. 2l. 18s. 6d.

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Use. Feeding ewes and lambs in *April* and *May*.

Sir *Thomas Hales, Beaksbourn.*

Sort. The *Lombardy* cabbage.

Product. They rise to 60 *lb.* a cabbage.

Mr. *Reynolds, at Addisham.*

Soil. Light hazel loam.

Sort. Great white cabbage, and also the cabbage turnips.

Culture. Ploughs deep, and plants in rows of two feet by 20 inches; sows in *April*, and plants in *June*.

Product. Of the cabbage turnip, on an average, 33 tons, at 4*s.* 6*d.* a ton, or 7*l.* 8*s.* 6*d.* per acre. 1 *C. wt.* better than 2 *C. wt.* of common turnips.

Use. Of great utility in feeding all sorts of cattle; and late in the spring, cows give fine and sweet butter.

Mr. *Taylor, Bifrons.*

Soil. Good loam, at 20*s.*

Culture. Plants them between the rows of beans.

Product. 3*l.*

Mr. *Jessart, Minster.*

Soil. Rich loam, at 17s.

Sort. *Reynolds's* cabbage turnip.

Culture. Rows two feet by 20 inches, horse and hand-hoed.

Product. Thirty-five tons, and five of sprouts.

Duration. Fed off with sheep late in *April*.

Mr. *Edward Pett, Minster.*

The same soil, sort and culture; crop exceedingly fine.

Mr. *Anderdon, Henlade.*

Soil. Good loam, at 20s.

Sort. Turnip cabbage, cabbage turnip, great *Scotch*, and boorcole.

Duration. The turnip cabbage kept sound, and without any mealiness, till *May*, and sheep fonder of them than of turnips; both this and *Reynolds's* increases vastly in weight by green shoots, without the root being the worse; *Reynolds's* is heavier five times over by being left.

	T.	C.	Q.	lb.
<i>Product.</i> Brown boorcole,	6	7	0	16
<i>Scotch</i> , - - -	6	17	3	0
Common turnips, -	11	14	0	0

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Sir John Mill, Bisham.

Soil. Rich deep black loam, at 3/.

Sort. Unknown.

Culture. In rows three feet by two, kept clean.

Product. Nineteen tons; common turnips
24 tons.

Earl of Holderness, Sion.

Soil. Good loam.

Sort. Large winter cabbage from *Newbury*.

Culture. Planted in squares of four feet; horse-hoed both ways.

Product. Many from 25 to 30; at the average of 15 *lb.* 18 tons 4 *C. wt.* per acre.

Use. Fattening oxen.

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Crops.	Rent.		Rows.		Tons.	Value.		Dura- tion.	Applic- ation.	Sort.
	l.	s. d.	l.	s. d.		l.	s. d.			
Mr. Booth	0	10 0	2	Feet square				Jan.	Sheep	Dutch
Mr. Kendal	1	0 0	4	F. equal. dist.		6	0 0		Cows	
Sir R. Burdet	1	0 0	3	Feet square	70	36	0 0	Jan.	Oxen	American
Col. St. Leger	0	2 6	4	F. by 20 inc.		5	5 0		Various	Scotch
Mr. Mellish	1	0 0	2	Feet square		7	0 0		Fat sheep	Ditto
Mr. Warton	1	0 0			47	2	10 0		Various	Ditto
Mr. Crowle					54½					Ditto
Mr. Wright					51½					Ditto
Mr. Hervey					29					Ditto
Mr. Hall	1	0 0	4	Feet by 2	29½	3	0 0		Fat sheep	Ditto
Mr. Feltoves	0	16 0	2	F. 6 in. sq.	15¼	2	16 10		Cows	Ditto
Mr. Aſton	0	12 6	3	F. by 2		2	18 6	May	Sheep	Unknown
Mr. Arbutnot	0	16 0	2	F. equal. dist.		7	8 6	May	Various	Various
Mr. Reynolds	0	15 0	2	F. by 20 in.	33	7	8 0		Various	Cabbage turnip
Mr. Taylor	1	0 0				3	0 0			Aberdeen
Mr. Jeſſart	0	17 0	2	Feet by 20 in.	40			April	Sheep	Cabbage turnip
Mr. Anderdon	1	0 0			6½					Boorcole
Ditto	1	0 0			6¾					Scotch
Mr. J. Mill	3	0 0	3	by 2	19					Unknown
E. of Holdernesse			4	Feet square	18					Ditto
Averages	0	19 4			T. C.					
					32 6	7	11 10			

The average weight, exclusive of Sir Robert Burdet's, 29 tons 4 C. wt. value 4l. 8s. 9d. The amazing product of this American cabbage opens a new world in husbandry, and being so peculiar, must be thrown out of the question. The other crops do not, upon the whole, raise so great an idea of this husbandry, as upon other occasions have appeared: but upon this

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variation I must observe, that here are so many sorts of cabbages, that they may, and certainly do, differ as much as cabbages and turnips: on this account, the table must be divided into sorts, that we may thereby know what conclusions are to be drawn from each.

North American.

	Tons.	Value.		
		l.	s.	d.
Sir R. Burdet,	70	36	0	0

True Scotch.

Col. St. Leger,	-	-	5	5	0
Mr. Mellish,	-	-	7	0	0
Mr. Crowle,	-	54 $\frac{1}{2}$	-	-	-
Mr. Wharton,	-	47	2	10	0
Mr. Wright,	-	51 $\frac{1}{2}$	-	-	-
Mr. Harvey,	-	29	-	-	-
Mr. Hall,	-	29 $\frac{1}{2}$	3	0	0
Average,	-	42	4	8	9

Cabbage turnip.

Mr. Reynolds,	-	33	7	8	6
Mr. Jessart,	-	40	-	-	-
Average	-	36	-	-	-

Various sorts.

		Tons.	Value.		
			l.	s.	d.
Mr. Kendal,	-	-	6	0	0
Mr. Fellowes,	-	15 $\frac{3}{4}$	-	-	-
Mr. Acton,	-	-	2	16	10
Mr. Arbutnot,	-	-	2	18	6
Mr. Taylor,	-	-	3	0	0
Sir John Mill,	-	19	-	-	-
Earl of Holdernefs,	-	18	-	-	-
		17	3	18	5

The last of these tables must be considered only as a general proof, that any kind of cabbage will, in good management, turn out a profitable culture.

The true *Scotch*, in point of weight, makes a great figure; the average product of 42 tons, shew what an immense quantity *per acre* may be expected of this cabbage under a good culture. But in the value, the case is very different.

But here we must remark, that the average 4 *l.* 8 *s.* 9 *d.* takes in a crop on a thin limestone, of only 2 *s.* 6 *d.* an acre; it is astonishing it should come to 5 *l.* 5 *s.*; two other articles that decide it, are Mr. *Whar-*
ton 47 tons for 2 *l.* 10 *s.* and Mr. *Hall* 29 $\frac{1}{2}$

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for 3 *l.*; the first, 1 *s.* a ton, the second, 2 *s.*; by the way, a difference of *half* is very great, and shews that no just rule of valuation has been followed. Here I shall draw into one view the value, *per* ton, of all that contain the information.

Sir <i>Robert Burdet</i> ,	-	£. 0	10	0
Mr. <i>Wharton</i> ,	-	0	1	0
Mr. <i>Hall</i> ,	- - -	0	2	0
Mr. <i>Reynolds</i> ,	- - -	0	4	6
<hr/>				
Average,	-	0	4	4
<hr/>				

But how extravagant the difference of cabbages, paying with one person 1 *s.* and with another 10 *s.*! Such variations prove how little we know the real honest truth. But as to the 1 *s.* I leave it to any person of half an hour's winter experience in husbandry, to judge if a ton of green food can be worth so little; whether a ton of hay at 40 *s.* can go as far as 40 ton of cabbages!

I shall, however, include it, and take the average of 4 *s.* 4 *d.* as a valuation of those crops whose weight is minuted, but not the value, and give thereby as full a view of these experiments as possible,

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	Tons.	Value.			
		l.	s.	d.	
Mr. Kendal,	-	6	0	0	
Sir R. Burdet,	70	36	0	0	
Col. St. Leger,	-	5	5	0	
Mr. Mellish,	-	7	0	0	
Mr. Wharton,	47	2	10	0	
Mr. Crowle,	54 $\frac{1}{2}$	11	16	0	at 4s. 4d.
Mr. Wright,	51 $\frac{1}{2}$	11	3	0	at 4s. 4d.
Mr. Hervey,	29	6	5	0	at 4s. 4d.
Mr. Hall,	29 $\frac{1}{2}$	3	0	0	
Mr. Fellowes,	15 $\frac{3}{4}$	3	8	0	at 4s. 4d.
Mr. Acton,	-	2	16	10	
Mr. Arbutnot,	-	2	18	6	
Mr. Reynold,	33	7	8	6	
Mr. Taylor,	-	3	0	0	
Mr. Jessart,	40	8	13	0	at 4s. 4d.
Sir J. Mill,	19	4	2	0	at 4s. 4d.
Earl of Holderness,	18	3	18	0	at 4s. 4d.
Average,	37	7	7	3	

In the application of the crop, there is some very material intelligence that we can fully depend on.

C O W S.

Mr. Kendal. They give more milk than any other food. Cream and butter have not the least taste.

Mr. Wharton. Give vast quantities of milk, but strong.

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Mr. *Acton*. The butter excellent, without the least taste.

Mr. *Arbutnot*. * The butter, while the cows were fed on the cabbages from *Northamptonshire*, was exceedingly good, but tasted strong the moment they were put to the *Scotch*.

Mr. *Reynolds*. They give sweet butter and milk.

The point of sweet butter is still undecided, from Mr. *Arbutnot*'s discovering a difference between sorts.

O X E N.

Sir *Rob. Burdet*. Fats them as quick and well as possible.

Earl of *Holderness*. Fats them well,

S H E E P.

Sir *Rob. Burdet*. Fatted them well.

Col. *St. Leger*. Did extremely well on them.

Mr. *Mellish*. Sheep bought lean, at 14 s. and sold fat from them, at 21 s.

Mr. *Hall*. Fat sheep throve well on them.

* Not in the minutes, but I have received the information since.

H O G S.

Mr. *Wharton*. Found them of very great utility (beyond turnips) in keeping a large stock of store swine.

From all which it clearly appears, that cabbages are uncommonly beneficial in feeding and fattening oxen and sheep, and keeping swine.

GENERAL OBSERVATIONS.

It may be thought very surprizing, that a vegetable cultivated by such numbers of persons, should not yet be thoroughly known; but if the case is well considered, it will not be difficult to account for such seeming contradictions; and this enquiry may perhaps lead the way to more accurate ideas in future.

The culture of cabbages, as food for cattle, has been prosecuted under a general idea of supplying the place of turnips late in the spring; and this notion has run through the cultivators of all the various sorts, and at both the seasons of sowing; hence has arisen one grand error in the culture, and from which several of the enemies of cabbages have been led into their mistakes.

The

The culture of this plant for late spring food—and the most profitable culture of it in general, are perhaps very different things. From attentively considering the various intelligence I have received, I am clearly of opinion, that cabbages ought to be used before they decline in the least, that is, while all their loose leaves are fresh and green; this will universally be before *Christmas*; and if planted in the spring, at *Michaelmas*, then should fat oxen or sheep be put to them without the least view to late spring food; and that this will prove the most profitable conduct, I have not a doubt.

The vast importance of 40 or 50 tons of food well adapted to the autumn fattening of cattle is unaccountably lost sight of, for rambling after late spring food, which is quite another enquiry, and perhaps of much inferior importance. And this strange infatuation leads people to value crops by their use in the spring, which ought to have been consumed before *Christmas*. A gentleman weighs part of a crop in *November*; it turns out 40 or 50 ton; he leaves it to the spring, when it pays him only 40 s. or 50 s.; then, says he, cabbages are worth
1
only

only 1 s. or 2 s. a ton; forgetting, that instead of 40 tons, he has not, at the time of consuming, perhaps 20.

I am led into these reflections from Mr. *Crowle's* getting above 50 tons; and, as I am informed, reporting very unfavourably of the culture. How strange is this! Is it possible for a man to be possessed of 50 tons of what will undeniably fatten both oxen and sheep, and yet not know what to do with it? Here comes in another consideration.

Gentlemen keep cows for their families; some milked, some dry—young cattle—hogs, &c. &c. their cabbages are sometimes consumed in a miscellaneous manner, and turn out unprofitable: no wonder; it would be so with any other food: these applications, if accurately accounted for, are all unprofitable; four or five acres go one knows not how, that (reserved for the purpose) would have fattened, perhaps, 20 oxen or 100 wethers.

For these reasons I am induced to declare, that cabbages have not fair play till they are applied to fattening cattle or sheep—and at the time when the crop is in perfection. Is not this opinion strongly corroborated

rated by the great profit made by those gentlemen who thus apply their crops?

That the true *Scotch* cabbage will stand till *May* without bursting or sprouting, I know to be an undeniable fact; but if weighed in *December*, and again in *May*, there will be a wonderful difference.

In my Northern Tour, I spoke of feeding cows, but I am inclined to change my opinion, partly from a winter's experience, and partly from reflection: an animal that yields little or nothing for half the year, can never pay for a winter food that will fat an ox which pays a daily profit from the hour of putting up.

Upon the whole, I beg leave to recommend a better consideration of *the application* of cabbages, than seems hitherto to have been practised by many cultivators: gaining great crops seems very well understood; but what we now want, is to discover the value of them, in which enquiry, let me particularly mention the *completing the fattening of oxen, or wethers that have had the summer's grass*. Putting lean cattle or sheep to cabbages, will tell you nothing, and it is the same with turnips.

LETTER XL.

THE culture of TURNIPS being among the clearest proofs of good husbandry, when managed on the principles found most advantageous in the well cultivated counties, deserves particular attention. It cannot fail of being useful to see the average products of this root under various circumstances.

Places.	Soil.	Rent.			Value		Ditto unhoed.	Sundry circumstances.
		l.	s.	d.	l.	s.		
1. Hempstead,	stoney loam	0	10	0	2	2	0	Feed all with sheep.
2. Tring,	loam on chalk	0	10	0	2	10	0	Ditto.
3. Blisworth,	clayey, &c.	0	14	0	2	0	0	Ditto.
4. Glendon,	red loam	0	10	0	2	2	0	
5. Quenby,	clay	0	18	0	2	5	0	
6. Disbley,	loam	0	16	0	3	0	0	Ditto.
7. Fermark,	sandy ditto	0	15	0	2	10	0	
8. Chatsworth to Tiddswell,	loam	1	0	0	4	0	0	Many unhoed not so high.
9. About Tiddswell,	limestone loam	0	15	0		3	5	0 Various uses.
10. Chesterfield,	hazel loam	0	17	0	1	17	6	Ditto.
11. Lawton,	limestone	0	8	0		1	15	0 One acre will finish the fattening four beasts of 40 stone in stalling.

Places.	Soil.	Rent.			Value			Ditto unboed	Sundry circumstances.
		l.	s.	d.	l.	s.	d.		
12. Gateford,	land	0	10	0	3	5	0	1 15 0	One acre will, in stall- ling, fatten 5 or 6 beasts.
13. Blythe,	ditto	0	10	0				2 0 0	
14. Doncaster,	ditto	2	10	0				2 0 0	
15. Broadf- worth,	limestone	0	6	0				1 5 0	
16. Woomb- well,	sand loam	0	16	0	2	7	6		Both feed and carry off.
17. Retford,	sand	0	13	0				2 4 0	
18. Bootbam,	gravel	0	10	0				1 15 0	
19. Carrwick,	limestone	0	7	6				2 0 0	
20. Sir Cecil Wray,	ditto	0	7	0	2	5	0		Twice successively, the first 40s. the second 50s.
21. Runcton,	sandy	0	14	0	1	10	0		
22. Maljing- bam,	ditto	0	5	0	1	7	0		400 fat sheep will eat an acre every day; one acre drawn and carried to bullocks, will go as far as three on the land.
23. Szettif- bam,	ditto	0	12	0	1	15	0		
24. Burnham to Wells,	ditto	0	14	0	2	10	0		
25. Warham,	ditto	0	10	0	1	10	0		Fat beasts of 50 stone, in the field; barley better than after sheep alone.
26. Earlbam,	ditto	0	16	0	2	0	0		
27. Bacon Ash,	clayey	0	15	0	2	0	0		
28. Mr. Be- vor,	ditto	0	16	0	3	3	0		Feeds his horses on them to great advan- tage; $\frac{1}{2}$ an acre will winter a cow.
29. Shottesf- bam,	loam	0	14	0	2	2	0		
30. Flegg,	sandy loam	0	15	0					Buy lean beasts at 5l. about Michaelmas, and put them to tur- nips; sell fat in April, at 8l. 8s. or 9l. Three rood will fatten a beast of 45 stone, (14 lb.) or 6 North wethers.

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Places.	Soil.	Rent.			Value			Ditto unboed.	Sundry circumstances.
		l.	s.	d.	l.	s.	d.		
31. Mr. Ra- mey,	fandyloam	0	15	0	3	0	0		
32. Beccles,	fandy	0	12	0	1	10	0		
33. Saxmund- ham,	ditto	0	16	0	1	10	0		
34. Mr. Acton,	ditto loam	0	12	6	1	15	0		
35. Hadleigh,	loam	0	15	0	1	11	6		
36. Hastead,	clayey	0	14	6	2	0	0		
37. Colchester,	loam	0	16	0	3	0	0	One acre will, in the field, fatten a beast of 40 or 50 score.	
38. Youngs- berry,	clayey &c.	0	12	0	1	15	0		
39. Petersham,	fandy	1	0	0	2	10	0		
40. Morden,	clay	0	12	0	1	10	0		
41. Cheam,	chalk	0	10	0	1	15	0		
42. Carshal- ton,	ditto	0	10	0	2	0	0		
43. St. M. Cray,	ditto loam	0	14	0	2	5	0		
44. Fever- sham,	rich loam	1	0	0	2	0	0		
45. Beaks- burn,	chalk	0	10	0	3	0	0		
46. Isle Tha- net,	rich loam	0	17	0	3	0	0		
47. Mr. Poole,	clayey	0	10	0				Has kept 30 beasts 3 months on 5 $\frac{1}{2}$ acres drilled.	
48. Findon,	light	0	13	0	1	7	6		
49. Isle Wight,	loam	1	0	0	3	0	0		
50. Ditto,	stone	0	10	0	2	2	0		
51. Critchill,	limestone	0	10	0			1	10	0
52. Moreton,	loam	0	12	0			2	0	0
53. Came,	dit. on ch.	0	5	0			1	10	0
54. Bridport,	loam	2	0	0			1	10	0
55. Leigh,	clay	0	12	6			1	10	0
56. Taunton,	ditto	1	0	0			1	0	0
57. Kings- down,	loam				2	10	0		
58. Rundway,		0	16	0	2	5	0		
59. Donning- ton,	ditto	0	15	0	1	11	6		
60. Becons- field,	loam	0	9	0	1	15	0		
Averages,		0	14	12	3	10	1	16	9

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It is much to be regretted that so many places should continue in the unprofitable practice of not hoeing : In this comparison, the hoed ones are the most valuable, notwithstanding the general circumstance of being scarcer in countries that do not hoe.

General average of hoed and unhoed, 2 *l*,
2 *s*. 5 *d*.

L E T T E R X L I.

THE intelligence on the culture of HOPS, inserted in the preceding minutes, well deserves to be drawn into one point of view, being much more important, upon the whole, than any account of them I remember to have read; particularly in respect of the expences and produce. The general opinions concerning hops are extremely various; some have an idea of their being prodigiously profitable, while others assert it to be a culture that answers poorly; and this diversity is found even in the midst of the hop grounds of *Kent*. A want of knowledge in these points is generally owing to the cultivators not keeping regular accounts.

Place	Soil.	Rent.			Expences.			Product	Value.			PerCen.			Profit.				
		l.	s.	d.	l.	s.	d.	T.C.Q.	l.	s.	d.	l.	s.	d.	l.	s.	d.		
1. Mr. Brown, Ordsal,	black bog, 3 feet deep	0	3	0	10	0	0	8	0	72	0	0	9	0	0	62	0	0	
2. Mr. Jacob, Fe- versham,	rich black mould	3	10	0	23	15	0	10	0	30	0	0	3	0	0	6	5	0	
3. Sir T. Hales,	rich loam	3	0	0	23	9	6	8	2	44	4	8	5	4	1	20	15	2	
4. Preston,	ditto	1	0	0				0	7	36	8	7	*5	4	1				
5. Canterbury,	ditto black	3	0	0				0	11	57	4	11	*5	4	1				
6. Harokburst,	loam	1	0	0				0	7	21	0	0	3	0	0				
Averages,		1	18	10	19	1	6	0	8	2	43	9	8	5	2	0	29	8	0

* Supplied from the preceding price.

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The great point in this table, is the profit made by planting hops in a bog, which is amazing; and although 9 *l.* seems an extravagant rate, yet if we take 5, the product will be 40 *l. per acre*, and the profit 30 *l.*; an improvement which should make the possessors of such wastes reflect on what they have in their power to execute.

In less favourable circumstances, hops appear to be a most profitable article, and much to exceed common husbandry. If the column of profit was complete, the great advantage of them would be more striking, as may easily be conceived from that of product.

L E T T E R XLII.

I N several parts of the minutes of this Tour are inserted the register of various experiments in the new husbandry, on drillingwheat, barley, oats, pease, beans, turnips, &c. and the journey passed thro' a part of *Kent*, in which drilling most crops is common husbandry; it will therefore be proper to draw into one point of view all the intelligence received of this kind. Some material circumstances may appear from such a review, which would not otherwise be gained; for the average of many persons trials on various soils, and performed with various instruments, must give a better idea of the drill culture, than the trials of a single person confined to one soil, and using perhaps but one or two implements. It is grown of more consequence than ever, to have just ideas of the real merit of drilling, as the partizans of the culture become every day more numerous — as experiments very successful are frequently published,

lished, and as the *London* and *Dublin* Societies seem pretty much to patronise it. The latter, to my great surprize, thinks no other object worthy recommending to the very ingenious Mr. *Baker*, than the comparison of the broad-cast and drill husbandry; although I will venture to assert, that the providing winter and spring green food for cattle; the comparative merit of manures, and the culture of the artificial grasses, are any of them of ten times the importance. The new husbandry receiving such particular attention at present, without the real merit of it being generally known, should make one anxious to lay before the publick, in as clear a light as possible, the result of the information received concerning it.

Tring. The better sort of farmers drill pease in rows two feet, and hand-hoe twice; product 35 bushels; and clean so well, that wheat always follows; in the common way the product but 20 bushels.

Mr. Booth. Drills pease, and hand-hoes; product one quarter and a half *per* acre.

Col. St. Leger. Dibbled beans in double
rows,

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rows, eight inches, with 18 inch intervals ; hand-hoed well ; product greater than ever known in the common way ; wheat followed, which yielded 27 bushels an acre.

Mr. Hall. Rouncival pease, rows 18 inches asunder ; clean as a garden, and finer than any broad-cast.

Leverington. Many farmers drill their beans, 10 pecks *per* acre, instead of four bushels sown ; clean by horse-hoeing ; crops four quarters instead of three, and wheat follows ; as clean as a garden.

Walpole. Drill beans in every fourth furrow ; kept clean by horse and hand-hoeing ; much finer crops than common.

Mr. Canham. Ditto, product five and a half quarters *per* acre, and then five quarters of wheat over 60 acres.

Mr. Fellowes. Wheat in equally distant rows, 18 inches asunder ; kept quite clean ; product *per* acre two quarters five bushels.

Saxmundham. Beans in drills, hoed twice ; product four and a half quarters.

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Woodbridge. Pease drilled, and kept quite clean by hand-hoeing; product three and a half quarters; beans dibbled in rows, equally distant, 16 or 18 inches; hand-hoe at 8s.; product of the horse bean from five to seven and a half quarters, and of *Windsor* ticks four or five quarters, at 40s. to 3*l.* a quarter.

Colchester. Pease drilled; hand-hoe them as clean as a garden; get to six quarters an acre, average four; dibble beans in rows, nine inches asunder; keep them clean as pease; crops from five to 10 quarters; average six and a half.

Mr. Ducket. Drills his turnips from 12 inches to two feet asunder; wheat and oats from nine to 12 inches; keeps them clean by hand-hoeing; the crops much better than in the broadcast mode; sows clover before the last hoeing, and hoes it in.

Mr. Arbutnot. Drills wheat, barley, pease, beans, and turnips; four rows of wheat in general, at six inches, on ridges three and a half feet wide; some double rows; pease and beans various distances; turnips at two

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and three feet; average product of drilled wheat, 23 bushels; of beans 27 and a half; of barley one quarter seven bushels; pease have not succeeded; turnips middling.

Mr. William Neal. Drilled hotspur pease, the rows equally distant, 10 inches; broad-cast at same time.

Product, drilled,		£	3	0	0
Broad-cast,	-		2	5	0
			<hr/>		
Superiority,	-		0	3	0
			<hr/>		

The price 8 s. a bushel.

St. Mary Cray. Pease they drill in equally distant rows, two feet.

Dartford. Pease and beans drilled and hand-hoed; product from four to six quarters an acre.

Northfleet. Pease and beans drilled, and hand and horse-hoed; wheat after them; product, pease four to seven quarters; beans four to eight.

Sittingburn. Pease and beans drilled, hand and horse-hoed: product, pease three and a half quarters; beans, five to eight quarters.

Feverham. Pease and beans drilled in rows,
18 inches

18 inches asunder; hand-hoe the pease, and horse and hand-hoe the beans; crops from five to seven quarters; average five and a half.

Beaksburn. Drill pease and beans equally distant, at 20 inches; both horse and hand-hoe them; product three and a half quarters pease, and five of beans.

Mr. Taylor. Wheat equally distant, 10 inches asunder; hand-weed and horse-hoe with a narrow shim; product four quarters *per* acre; beans in double rows, at 16 inches, on four feet ridges; horse-hoed; crop four quarters: in this method he plants cabbages in *June*, in the middle of the intervals, and horse-hoes them after the beans are off; crop four quarters, and cabbages 3/. Oats in equally distant rows, 11 inches asunder; hand and horse-hoed, and clover harrowed in; the crop four and a half quarters; and the cleanest clover in the country.

Mr. Reynolds. Turnips in equally distant rows, 18 to 24 inches asunder; horse and hand-hoed, the crops better than broad-cast ones, up to 38 tons
per

per acre. Wheat in equally distant rows, one foot, horse and hand-hoed; product 20 bushels, broad-cast adjoining 14; the former exceeded the latter by 1*l.* 11*s.* 9*d.* *per* acre.

Preston. Beans in rows, 18 to 24 inches; kept quite clean by horse and hand-hoeing; crops five quarters; wheat always after them.

Isle of Thanet. Beans drilled and horse-hoed; crop four to five quarters, on an average.

Margate ditto. Wheat, barley and oats, equally distant, nine inches; hand and horse-hoed with a shim; beans and pease 16 to 24 inches: crops; beans four and a half quarters, pease four quarters, wheat four quarters, barley to eight quarters; five and a half average.

Minster ditto. Wheat, barley, and oats, ditto: crops, wheat three and a half, barley five and a half, oats seven, pease four quarters, beans four; wheat after pulse.

Dover. Beans, at 18 inches, hand and horse-hoed; crop four quarters; wheat after.

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Sandgate. Beans drilled, hand and horse-hoed; crop four quarters; wheat after them.

Mr. Poole. Tried *Tull's* wide intervals for many years; but found repeatedly, that they would not answer; he then contracted them to equally distant, which have proved regularly profitable.

Wheat, barley, and oats, at nine inches.

Pease, double rows, at nine inches, with intervals of two feet; turnips at 20 inches; crops of barley, five to seven quarters.

Mr. Turner. Beans drilled, hand-hoes once; crops, four to seven quarters; average five.

Mr. Anderdon. Wheat double rows, on five feet ridges; produced *per* acre;

No. 15. Clear crop,	B.	10	2	0
No. 16. Another crop,		8	3	1
No. 17. Another,	-	19	0	0
No. 18. Another,		13	2	0
No. 19. Another,		8	0	1
<hr/>				
Average,	-	12	0	0
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Profit and loss on these crops.

No. 15. Profit,	-	£. 1	3	1
No. 16. Ditto,	-	1	4	2
No. 17. Ditto,	-	1	1	5
No. 18. Ditto,	-	1	15	5
No. 19. Ditto,	-	0	4	0
		<hr/>		
Total,	5	5	8	1
		<hr/>		
Average,	-	1	1	7
		<hr/>		

Broad-cast compared with it.

	<i>Produce.</i>			<i>Profit.</i>			
	<i>B.P.G.</i>			<i>l. s. d.</i>			
No. 15, Broad-cast,	13	2	0	2	10	2	
Drilled,	10	2	0	1	3	1	
		<hr/>			<hr/>		
Superiority,	3	0	0	1	7	1	
		<hr/>			<hr/>		
No. 16, Drilled,	8	3	1	1	4	2	
		<hr/>			<i>Loss.</i>		
Broad-cast,	4	0	1	1	0	10	
		<hr/>			<hr/>		
Superiority,	4	3	0	2	5	0	
		<hr/>			<hr/>		

No. 15, Rent,	£. 1	0	0	<i>per acre.</i>
No. 16,	-	0	5	0
No. 17,	-	0	12	0
No. 18,	-	0	12	0
No. 19,	-	0	10	0

BARLEY.

No. 21. Four and 8 rows on
a ridge produced *per* acre

clear crop, -	B.	20	0	0
Profit, -	£.	2	2	0

No. 22. Equally distant rows, at one
foot, produced 3 quarters 2 bushels.

No. 21. Compared with broad-cast.

It produced, clear crop, B. 22 0 0

Drilled,	20	0	0
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Superiority, -	2	0	0
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Profit, broad-cast,	£.	2	4	8½
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Ditto, drilled, -	2	2	0
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Superiority, -	0	2	8½
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OATS.

Drill and broad-cast compared.

Four and 8 rows on a ridge,

produced clear,	B.	27	2	1	5
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Broad-cast, -	21	3	4	4
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Superiority,	5	3	0	1
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Drilled, profit, -	£.	0	19	3
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Broad-cast, -	0	2	0
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Superiority, -	0	17	3
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B E A N S.

Broad-cast and drilled compared.

Broad-cast, gross crop,	B.	35	2	P,
Drilled,	-	-	15	1

Superiority,	-	20	1
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Broad-cast, profit,	£.	3	17	4 $\frac{1}{2}$
Ditto drilled,	-	0	17	9 $\frac{1}{2}$

Superiority,	-	2	19	7
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Another drilled crop produced eight bushels *per* acre.

P E A S E.

Broad-cast and drilled compared.

No. 27. Broad-cast, clear
crop, - B. 15 3 0 0

Drilled, - 8 2 7 0

Superiority,	-	7	0	1	0
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No. 28. Drilled, Increase

per acre, - B. 0 2 7 0

Loss, broad-cast, 3 0 5 0

Superiority,	-	3	2	6	0
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M. Coombs. Drills pease in rows equally distant, 20 inches; cleans them by horse and hand-hoeings; product 30 bushels *per* acre.

Donnington. Drill their pease, rows equally distant, 15 inches; hand and horse-hoe; product four quarters.

Beans at 18 inches, hand-hoe; crop four and a half quarters.

Mr. Cowslade. Wheat in equally distant rows, 18 inches, hand-hoed; the crop three and a half quarters.

Another crop at one foot, hand-hoed, three and a half quarters; broad-cast adjoining five quarters.

Drills all his pease and beans; product four and a half quarters.

Reading. Drill their pease at 18 inches, and hand-hoe; the crop three and a half quarters.

Harleyford. Pease drilled, equally distant rows, and horse-hoed; crop three and a half quarters.

Mr. Clayton. Wheat equally distant, five inches, hand-hoed; not equal to broad-cast.

Having

Having thus given a general review of all the trials in drilling, we must, in the next place, draw each crop into one view, that the clearer idea may be had. I shall begin with

B E A N S.

<i>Crops.</i>	<i>Distance.</i>	<i>Seed</i>	<i>Product</i>	<i>What follows.</i>
			<i>Q. B.</i>	
<i>Leverington</i>		2½	4 0	Wheat
<i>Mr. Canham</i>	Every 4th fur.		5 4	Ditto 5 qrs
<i>Saxmundham</i>			4 4	
<i>Woodbridge</i>	16 or 18 inch.		6 2	Wheat
<i>Colchester</i>	9 Inches		6 4	Ditto
<i>Mr. Arbutnot</i>	Various	2	3 3½	Ditto
<i>Dartford</i>			5 0	Ditto
<i>Northfleet</i>			6 0	Ditto
<i>Sittingburn</i>			6 4	Ditto
<i>Feversham</i>	18 Inches		5 4	Ditto
<i>Beakburn</i>	20 Inches		5 0	Ditto
<i>Mr. Taylor</i>	Double rows, 16 inc. on 4 feet ridges		4 0	Barley
<i>Preston</i>	18 to 24 inch.		5 0	Wheat
<i>Thanet</i>			4 4	Ditto
<i>Ditto</i>	16 to 24 inch.		4 4	Ditto
<i>Ditto</i>			4 0	Ditto
<i>Dover</i>	18 Inches		4 0	Ditto
<i>Sandgate</i>			4 0	Ditto
<i>Mr. Turner</i>			5 0	
<i>Mr. Aulerdon</i>			1 3	
<i>Donnington</i>	18 Inches		4 4	
<i>Mr. Cowslade</i>			4 4	
<i>Average</i>			4 4	

From this account the importance of the drill culture of beans is sufficiently clear: four and a half quarters an acre are a product far beyond the average of broadcast crops. But the bean is peculiarly adapted to this husbandry; the stalks are strong, keep erect, and no weather has power to beat them down, or even to entangle them like wheat; so that the horse-hoe is admitted with the greatest ease, and without any damage, which is seldom the case with any other corn crop; and that horse-hoeing is of infinite consequence in improving the crop, and keeping the land quite clean, has never been doubted; indeed the constant practice of all the *Kentish common farmers* shews clearly enough that they find it highly profitable.

But the advantage, perhaps, the greatest of this careful bean culture is that crop being made a fallow for wheat; all *Kent* concurs in this course; it is the same with the best farmers in the marsh-land clays of *Norfolk*: let any person judge of the merit of that husbandry, which makes the fallow year yield four and a half quarters of beans *per* acre, which are certainly a product of above 5%. The same regular
practice

practice finds the advantage of sowing wheat after them, which would not be the case, if they were not to all purposes a real fallow.

What an amazing difference is there between this most advantageous practice, and the course of, 1. Fallow, 2. Wheat, 3. Beans; which is yet the practice throughout the *Vale of Aylesbury*, and many other clay countries! And in which the beans are sown broad-cast, and weeded by sheep. What shameful, execrable husbandry!

P E A S E.

<i>Crops.</i>	<i>Distance.</i>	<i>Produce</i> <i>Q. B.</i>	<i>What follows.</i>
<i>Tring</i>	2 Feet	4 3	Wheat
<i>Mr. Booth</i>		1 4	
<i>Woodbridge</i>		3 4	
<i>Colchester</i>		4 0	Wheat
<i>Mr. Neal</i>	10 Inches	3 0	
<i>Dartford</i>		5 0	Wheat
<i>Northfleet</i>		5 4	Ditto
<i>Sittingburn</i>		3 4	Ditto
<i>Beaksburn</i>	20 Inches	3 4	Ditto
<i>Thanet</i>	16 to 24 in.	4 0	Ditto
<i>Ditto</i>		4 0	Ditto
<i>Mr. Anderdon</i>		1 1	
<i>Mr. Coombs</i>	20 Inches	3 6	
<i>Donnington</i>	15 Inches	4 0	
<i>Mr. Cowslade</i>		4 4	
<i>Reading</i>	18 Inches	3 4	
<i>Harleyford</i>		3 4	
<i>Average</i>		3 5	

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Drilling in this table also appears a most beneficial culture for pease ; three quarters five bushels are a great crop ; and many products rising from four to more than five shew how advantageous the practice is. Every one must be sensible, that the broad-cast mode will not on an average nearly equal it.

W H E A T.

<i>Crops.</i>	<i>Distance.</i>	<i>Produce</i>		
		<i>Q.</i>	<i>B.</i>	
Mr. Fellowes	18 Inches	2	5	
Mr. Arbutnot	4 Rows at 8 in. on 3 $\frac{1}{2}$ feet ridges	2	7	Horse-hoes
Mr. Taylor	10 Inches	4	0	Ditto
Mr. Reynolds	12 Ditto	2	4	
Thanet	9 Ditto	4	0	Ditto
Ditto	Equally dist.	3	4	Ditto
Mr. Anderdon	2 Rows on 5 f.	1	4	Ditto
Mr. Cowslade	18 Inches	3	4	Hand-hoe
Ditto	1 Foot	3	4	
Average		3	1	

The product of wheat thus cultivated, on comparison with the old method in general, is not here so much the object, as the general importance of admitting the hand and horse-hoe ; which keeps the land clean and in much finer order than it can be in the broad-cast way.

BARLEY and OATS.

<i>Crops.</i>	<i>Sort.</i>	<i>Distance.</i>	<i>Prod.</i>		
Mr. <i>Arbuthnot</i>	Barley	Double rows, 3, 4, and 5 feet ridges	1	7	Horse
Mr. <i>Taylor</i>	Oats	11 Inches	4	4	Ditto
<i>Thanet</i>	Barley	9 Ditto	5	4	Ditto
Ditto	Ditto	Ditto	5	4	Ditto
Ditto	Oats	Ditto	7	0	Ditto
Mr. <i>Poole</i>	Barley	9 Inch	6	0	Hand
Mr. <i>Anderdon</i>	Barley	1 Foot	3	0	
Ditto	Oats	Ditto	3	3	
Average			4	4	

It is very clear from this table, that close drilling is on dry soils very beneficial, since the *Kentish* farmers have invented horse-hoes (shims) that will work in nine inches; and one practice of great importance (so great indeed that without it any product would be comparatively useless) is the sowing clover over the crop, and covering it by the last hoeing, hand or horse; which is much superior to the common mode of rolling it in.

Comparisons of the old and new methods.

Several of the preceding gentlemen have formed comparative trials between the two modes, which must by no means be passed over.

	Crops.	New husbandry, what.	Superiority in Product.	In cash.			Product old.			Product new.		
				l.	s.	d.	Q.	B.	P.	Q.	B.	P.
Mr. Arbuthnot	Wheat	2 Rows on 4 f. ridges	Old $\frac{1}{2}$ bushel	0	15	12	2	2	0	2	1	2
Ditto	Wheat	4 Rows on 3 $\frac{1}{2}$ feet	Old 2 $\frac{1}{2}$ pecks	0	3	14	0	0	3	7	1 $\frac{1}{2}$	
			the new									
Ditto	Barley	2 Rows on 3 feet	Old 2 bushels	0	18	10	1	4	0	1	2	0
Mr. Neal	Pease	10 Inches	New 3 bushels				2	5	0	3	0	0
Mr. Reynolds	Wheat	1 Foot	New 6 bushels	1	11	9	1	6	0	2	4	0
Mr. Anderson	Wheat	2 Rows on 5 feet	Old 3 bushels	1	7	11	1	5	2	1	2	2
Ditto	Ditto		New 4 $\frac{1}{4}$ bush.	2	5	0	0	4	1	8	3	1
Ditto	Barley		Old 2 bushels	0	2	8	2	6	0	2	4	0
Ditto	Oats	Equally	New 5 $\frac{1}{4}$ bush.	0	17	3	2	5	3	3	3	1
Ditto	Beans		Old 20 $\frac{1}{4}$ bush.	2	19	7	4	3	2	1	7	1
Ditto	Pease		Old 7 bushels				1	7	3	1	2	1
Ditto	Ditto		New 3 $\frac{1}{2}$ bush.									
Mr. Cowslade	Wheat	1 Foot	Old 1 $\frac{1}{2}$ qrs.				5	0	0	3	4	0
New product,				L.	2	7	1					
Old ditto,				-	2	4	3					
Superiority,					0	2	2					

2	4	3	2	7	1
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In cash, new superior,		£.	0	3	1
Ditto, - - -			1	11	9
Ditto, - - -			2	5	0
Ditto, - - -			0	17	3
Total, -			4	17	1

Average, -		£.	1	4	3
Ditto old ditto, -			0	15	1
Ditto, - - -			0	18	10
Ditto, - - -			1	7	1
Ditto, - - -			0	2	8
Ditto, - - -			2	19	7
Total, -			6	3	3

Average, - £. 1 4 7

I do not offer these tables as satisfactory evidence, but only as hints to shew that the comparison should be further enquired into. The real truth is, that drilling and horse-hoeing on the *Kentish* system of close rows, are most advantageous; but the broadcast much exceeds the *Tullian* system of wide intervals.

Upon the drill husbandry in general,

as it appears in the minutes of this Tour, I have to remark, that the methods pursued in *Kent*, with relation to beans and pease, seem to deserve universal imitation; because I know not any soils or circumstances that can make an exception. The same observation is undoubtedly to be made with respect to wheat, barley, and oats, on such soils as drilling is practised on in *East Kent* and the *Isle of Thanet*, viz. light loams, dry enough, always to be ploughed and kept on the flat; as they do with their turnwrest ploughs, leaving not one furrow in a whole field: the success there met with in this husbandry is so great, that no unfavourable conclusions can possibly be allowed: and I may further remark, that success also depends much on the implements used being strong, simple, and *in common use*: this is the case in *Kent*, where drill ploughs, and variety of horse-hoes, are found in every farm yard.

But on soils, that are so heavy or wet as to require ridge work, I am clear from these minutes, that (beans excepted) the broad-cast mode will be found much the
 most

most profitable; and I may also affirm, that in respect of good implements for the drill culture, no part of the kingdom, *Kent* excepted, though not the Society's room, is near perfection.

LETTER

L E T T E R XLIII.

GAINING certain information concerning the rental of the kingdom is one of the most important objects of this Tour; supposed amounts, varying in different periods, have for this century past been calculated by ingenious political arithmeticians, and numerous important reflections founded on the result: I apprehend the necessity of calculating on *real* authority, instead of supposition, whenever it can be gained, must be manifest to every one, and in proportion as the reflections of those politicians are of consequence, so much will be the advantage of calculating the average, from the various minutes of this and similar journeys.

From *North Mims*, through *St. Alban's* and *Hempstead* to *Tring*, within four miles of *Aylesbury* the soil is of moderate fertility; rents from 5s. to 20s. but principally at 10s; the average I reckon 11s. This is a tract of 28 miles through the country,

which *Ellis* calls the *Chiltern*. From thence, through the vale, 14s. About *Hockston* 16s. *Winslow* from 28s. to 3l. average 35s.; thence to *Buckingham* 15s.; from *Buckingham*, through *Towcester* to *Northampton*, is also rich clay about *Towcester*, and five miles towards *Northampton*, from 20s. to 3l. average 28s. Here we must stop: this is a line of 37 miles, all a very rich soil; the average of the averages is 21s. and is I believe near the truth.

From *Blisworth*, about which rents are 8s. to 20s. average 12s. through *Northampton*, the country improves; it is a fine red loam; for some miles from *Northampton*, from 20s. to 40s.; average 25s. About *Hazelbeach*, inclosed, 15s. to 25s.; but some large open fields from 2s. 6d. to 8s. will reduce the other to 16s. From *Hazelbeech* to *Kettering* the same. About *Glendon*, the average 15s. From *Hazelbeech* to *Quenby Hall* mostly grazing country; inclosures 18s. open fields 10s. average of both 15s. About *Tilton* on the hill 16s. From *Tilton* to *Leicester* and *Loughborough* chiefly grazing, 16s. About *Dishly* various soils,
16s.

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16s. From thence to *Nottingham* the same.

Here ends the rich country ; it is a line of 129 miles ; average of the whole, as nearly as I can calculate, 17s.

From *Nottingham* to *Arnold* about the town some rich at 30s.; about *Arnold*, at 18s. but much forest at 5s. general average 14s. To *Mansfield* by *Newstead* waste forest land ; we must not call the rent more than 2s. 6d. This is a tract of 26 miles, the average of which is not above 7s. 6d.

From *Mansfield* to *Alfreton* is inclosed and rich, 18s.; about *Alfreton* 20s.; to *Derby*, on an average, 16s; about *Derby*, 18s; from *Radburn*, about *Formark*, 17s.; to *Ilam*, *Longford*, &c. 10s.; from *Derby*, towards *Matlock*, 16s.; about *Matlock* 8s. to 40s.; average 12s. from thence to *Chatsworth* 15s.; about the latter place 20s. from *Chatsworth* to *Tiddswell*, most of it inclosed, and cultivated, from 5s. to 30s. average 14s; about *Tiddswell*, 15s.; thence to *Chesterfield* much at 12s. to 15s. but as there are some waste tracts, we must not reckon this line at more than 10s. About
Chesterfield

Chesterfield at 17s.; from *Chesterfield*, to *Laxton* and *Parkhill*, by *Worksop*; as part of this tract was included in my last Tour, I must allow for it, that no part of the kingdom may be reckoned twice; the average I shall call 10s. About *Gateford*, forest, 3s.; old inclosures 12s. 6d.; average 10s.; for some miles around *Blyth* 10s.; to *Doncaster* ditto; about that town 50s.; from *Doncaster* to *Broadsworth*, around the latter; a limestone at 6s.; about *Wombwell*, through a large tract, 16s.; about *Barnsley* and *Warth* 18s. Returning southward we come to *Retford*, about which place the rents are from 5s. to 40s; average 14s.; from *Retford*, great tracts, towards *Clumber* and *Thoresby*, waste, call it 2s. 6d. From *Durham* to *Lincoln* 17s. and part 10s.; average 12s.

Here ends a tract of various country, the extent 344 miles; I have calculated the proportions, and find the average 13s. 6d.

About *Lincoln* 4l.; *Bootham* 10s.; *Canwick* 6s.; to *Summer* castle, and about it 6s. 6d.; *Lincoln* to *Sleaford* 12s. This
is

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is a tract of poor land of 50 miles, the average of which is 12 s.

At *Sleaford* begins the richer country; about *Swinehead*, at 22 s.; to *Long Sutton* 20 s.; from *Barton*, on the *Humber*, to *Long Sutton*, 100 miles, at 20 s.; *Long Sutton* to *Leverington* 20 s.; thence to *Lynn* 16 s. This is a tract of 149 miles, at 20 s.

From and about *Lynn* to *Runcton* 17 s.; to *Massingham* 7 s. 6 d.; from *Lynn* to *Snettisham* 2 s. 6 d.; about *Snettisham* 10 s.; thence to *Warham* 10 s.; from *Warham* to *Holt* 14 s.; about *Blakeney* and *Sherringham* 15 s.; to *Melton*, some 14 s. but commons will reduce it to 12 s.; to *Aylsham* 14 s.; to *Norwich* 12 s.; about *Norwich* 16 s.; thence to *Bracon Ash* 15 s.; *Norwich* to *Yarmouth* 14 s.

This line of country extends through the county of *Norfolk*; the distance is 150 miles, and the average is 11 s. 6 d.

To *Beccles* 12 s.; from thence to *Yoxford* 12 s.; about *Saxmundham* 14 s. A large tract near *Woodbridge*, sheep-walks, 4 s. 6 d. other lands 16 s.; the average I reckon about 10 s.; *Woodbridge* to *Ipswich* 13 s.;
about

about *Bramford* 12 s. 6 d.; to *Hadleigh* 13 s. around that place 15 s.; to *Lavenham* 12 s. to *Stow Market* 10 s. 6 d.; from *Lavenham* to *Hastead* 9 s. to 20 s.; average 14 s.; from *Hadleigh* to *Colchester* 14 s.; from thence to *Witham* 13 s.; to *Chelmsford* 11 s.; thence to *Dunmow* 12 s.; *Dunmow* to *Hockerill* 15 s.; *Dunmow* to *Braintree* 15 s.; ditto to *Thaxted* and *Clare* 15 s.; *Hockerill* to *Ware* 15 s.; about *Youngsberry* 12 s.; thence to *North Mims* 10 s.

This is an extent of 224 miles, and the average rent is 13 s.

From *London* to *Petersham*, 40 s.; thence to and about *Mitcham*, 15 s.; about *Cheam*, 10 s. *Cuddington*, 15 s. to *Carshalton*, 10 s. about *St. Mary's Cray*, 14 s. *Dartford*, &c. 20 s. Here we enter the fine *Kentish* loams on chalk. To *Northfleet*, 20 s. to *Chalk*, 17 s. to *Sittingburn*, 15 s.; about *Feverham* many hop-grounds at 3 l. 10 s.; but a small distance, some at 12 s. average 20 s.; to *Maidstone*, 10 s. to *Canterbury*, 10 s. the *Isle of Sheepy*, 11 s.; *Canterbury* to *Beakburn* much good land at 20 s. and some hop grounds; but much chalky hill at 6 s.; call it 15 s. About *Addisham*, 6 s.;

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to the *Isle of Thanet*, by *Preston*, 18s.; at *St. Nicholas* in the island, 20s.: northward towards *Margate*, 12s.; to *Minster* 17s.; the marsh land in the southern part, 20s.; from *Sandwich* to *Deal*, 17s.; from thence to *Dover* the soil declines much; we may reckon it at 10s.: towards *Hythe*, 15s.; about *Sandgate* the crops are good; we may suppose it 10s.; about *Hythe*, the hills 8s. 6d. the lower grounds 20s. average, 15s.; half way to *Romney*, 15s.; *Romney* marsh, 70,000 acres, at 20s.

Here ends *Kent*, and a line of country, all good, of 219 miles, in which, for the sake of including them, I call the *Isle of Sheeppy* 15 miles, and *Romney* marsh as much: the average rent is 15s. 9d.

About *Rye*, 17s. 6d. to *Hawkhurst*, 12s.; from thence to *Battle*, 16s. to *Burwash*, 10s.; from thence to *Lewis*, various; some pretty rich, but much waste about *Heffel*; I do not reckon the average more than 8s. *Lewes* to *Hook* and *Sheffield-Place*, about the latter, 10s. suppose the whole, 7s. 6d. *Lewes* to *Brightelmstone*, all downs, 4s.; thence to *Steyning*, the same; from *Steyning* to *Arundel*, 13s. 6d. the inclosed, but

the downs into the bargain, I calculate the average at 6s. From *Shoreham* by *Walberton* to *Chichester*, 25 miles, at 20s. At *Bignor Park*, 10s.; thence to *Chichester* lower, as much down: I calculate it at 7s. 6d. About *Chichester*, 40s. to *Havant*, 18s. to *Portsmouth*, much poor chalk: we will call it on an average with the rich lands, 12s.

The *Isle of Wight*, 12s. 6d. From *Southampton* to *Alresford*, 8s. from *Alresford* to *Crux Easton*, 5s. ditto to *Portsmouth*, 10s. ditto to *Basingstoke*, 7s. ditto to *Andover*, 6s. From *Redbridge* to *Gilbury*, and then to *Lymington*, several minutes; but *New Forest* takes up so considerable a part of the country, that it reduces the rent of the rest infinitely; I shall not calculate this line at more than 2s. 6d. From *Lymington* to *Christchurch*, 17s. *Christchurch* to *Winborn*, 20s. *Christchurch* to *Ringwood*, 12s.

Here ends *Hampshire*, and a line of extremely various country, extending 329 miles, including 30 in the *Isle of Wight*: the average is 10s. 9d.

From *Ringwood* to *Critchill*, the good 10s. but much common reduces it to 8s.

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To *Poole*, much good land, but the last four miles waste; from *Poole* to *Charbro'*, for six or seven miles, waste; inclosures there 20s.; this whole tract I shall reckon at 7s. 6d. Many wastes to *Wareham*, and also to *Moreton*; 2s. 6d. I think, is high enough to rate it. About *Moreton*, 12s. to *Dorchester*, two minutes, 20s. and 10s. 6d. all inclosed; the average I shall call 12s. 6d. About *Came*, 11s. to *Ridgway-hill*, 7s. thence to *Weymouth*, 15s. About *Milbourn*, 10s. to *Blandford*, 8s. Around *Milton-Abbey*, 8s. 6d. From *Dorchester* to *Bridport*, across Mr. *Hardy's* farm of 11,000 acres, at about 5s. the last four miles at 40s. To *Mapperton*, 20s. About *Brammerton*, 20s. To *Sherbourn* and *Yeovil*, 20s. To *Dorchester*, 10s. *Bridport* to *Axminster*, 12s.

Here I leave *Dorsetshire*; this is a line of 154 miles, and the average rent is 10s. 9d.

From *Axminster* to *Leigh*, 18s. thence to *Ilminster*, 13s. from *Leigh* to *Taunton*, 16s. *Taunton-Dean* vale, 20s. thence to *Milverton*, 17s. 6d. to *Bridgwater*, 20s. *Bridgwater* to *Axbridge*, 27s. 6d. *King's Sedgmoor*,

Sedgmoor, 2s. 6d. *Quantoc* hills, suppose 6d. at *Glastonbury*, 20s. to 40s. to *Wells*, 25s. from *Bridgwater* thither I shall call 17s. At *Compton*, 25s. To *Bath*, none under 20s. say 22s. 6d. From *Wells* thither, 20s.; about that city for some miles, 30s.

This line extends through *Somersetshire* 160 miles, and the mean rent is 18s. 6d.

From *Bath* to *Melksham*, but one minute, 10s. to 40s. but there being much down, I shall not call it more than 12s. Thence to *Devizes*, 25s. thence to *Marlbro'* at *Bundway*, 16s. 6d. *Bishops Cannons*, 15s. *Overton*, 16s. average, 15s. 10d. but I shall call it no more than 13s. From *Marlbro'* to *Hungerford*, 15s. 6d. This line across *Wiltshire* is 44 miles, and the medium rent, 16s.

From *Hungerford* to *Newbury*, 13s. the *Vale of White Horse*, 20s. *Newbury* to *Reading*, 17s. about *Reading*, 20s. to *Harleyford*, 15s. This tract of *Berkshire* is 62 miles, and the average 16s. 9d.

Harleyford to *Beconsfield*, 7s. 6d. around that place, the arable 7s. the grass 17s. 6d. suppose the medium 14s. From *Uxbridge* to *Barnet*, two minutes, the grass

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25*s.* to 40*s.* and 30*s.* to 3*l.*; and arable 12*s.* 6*d.* The medium, as there is much grafs, I calculate at 25*s.* It is a line of 27 miles at 17*s.*

Recapitulation.

	<i>Miles.</i>	<i>Rent.</i>		
		<i>l.</i>	<i>s.</i>	<i>d.</i>
From <i>North Mims</i> to the vale of <i>Aylesbury</i> , thro' the <i>Chiltern</i> , -	28	0	11	0
Thro' the vale to <i>Blisworth</i> ,	37	1	1	0
From <i>Blisworth</i> to <i>Notting-</i> <i>ham</i> , -	129	0	17	0
From <i>Nottingham</i> to <i>Mans-</i> <i>field</i> , -	26	0	7	6
From thence to <i>Lincoln</i> ,	344	0	13	6
Through the poor parts of <i>Lincolnshire</i> , -	50	0	12	0
To <i>Lynn</i> , through the rich clays of <i>Lincolnshire</i> and and <i>Norfolk</i> , -	149	1	0	0
Through <i>Norfolk</i> , -	150	0	11	6
Thro' <i>Suffolk</i> , <i>Essex</i> , and <i>Herts</i> , - - -	224	0	13	0
From <i>London</i> , through part of <i>Surry</i> and <i>Kent</i> ,	219	0	15	9
Through <i>Suffex</i> and <i>Hamp-</i> <i>shire</i> , -	329	0	10	9
Through <i>Dorsetshire</i> ,	154	0	10	9
Through <i>Somerſetſhire</i> ,	160	0	18	6
Through <i>Wiltſhire</i> , -	44	0	16	0
Through <i>Berkſhire</i> , -	62	0	16	9
Ditto <i>Buckinghamſhire</i> and <i>Middleſex</i> , -	27	0	17	0

I have calculated these proportions, and find the average rent to be just 14s. an acre.

It gives me pleasure to find, that this very extensive tract of country is, upon an average, let at so good a rent. That of the counties travelled in my last Tour was but 11s. 9d. Hence we find, how much richer, and better cultivated, this part of the kingdom is.

	<i>Miles.</i>	<i>Rent.</i>		
		<i>l.</i>	<i>s.</i>	<i>d.</i>
That part of the country travelled in the <i>Six Weeks Tour</i> , of which minutes of <i>rent</i> were taken, was	459	0	12	7
Ditto in <i>Tour through the North of England</i> ,	1451	0	11	9
The part of the present journey that contains <i>rent</i> ,	2067	0	14	0
	<hr style="width: 100%; border: 0.5px solid black;"/>			
	3977			
	<hr style="width: 100%; border: 0.5px solid black;"/>			

In this line through *England*, of near four thousand miles, the general average is 13s.

L E T T E R XLIV.

THE PRODUCTS OF CORN require very little introduction; it is not only a matter of much curiosity to know the average, but also of great public utility to be informed of the variations and the circumstances on which they depend. In the following sheets I throw those of white corn into progressive tables, according to the rent of the land.

Rents to 10s. an acre.

Place.	Rent.		Bushels.				Sundry circumstances		
	s.	d.	Wheat.	Barley.	Oats.	Rye.		Aver.	
Hempstead,	0	10	0	25	40	48	37	Much good husbandry in general.	
Tring,	0	10	0	25	24	48	32		
Hazelbush,	0	6	0	12	24	22	16	18	Open fields.
Glendon,	0	10	0	15	32	16		21	
Quenby,	0	10	0	24	34	64		40	Open fields, rich clay.
Laruton,	0	8	0	18	24	32		24	Much open field and bad husbandry.
Gateford,	0	10	0	22	36	40	24	30	
Bybe,	0	10	0	24	32	40	24	30	

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Places.	Rent.	Bushels.					Sundry circumstances
		Wheat.	Barley.	Oats.	Rye.	Aver.	
Mr. Wharton at Wheatly,	0 10 0	15	24	32	24	23	
Broadsworth,	0 6 0	15	20	24	15	18	
Bootham,	0 10 0	16	24	36	24	25	Execrable husbandry.
Canwick,	0 7 6	23	28	26	20	24	
Sir Cecil Wray,	0 7 0	20	40			30	
About Summer castle,	0 7 0	20	34	24		26	
Maffingham,	0 8 0	24	34			29	Good husbandry, light sand.
Warham,	0 8 6	24	36			30	Ditto.
Cheam,	0 10 0	24	32	40		32	
Carbaiton,	0 10 0	24	32	32		29	
Burwash,	0 10 0	24		32		28	
Framfield,		16		36		26	
Sheffield Place,	0 10 0	24	32	28		28	
Isle of Wight,	0 10 0	20	32	32		28	
Alresford,	0 8 0	16	30	32		26	Thin loam on chalk hills.
Critchill,	0 10 0	22	24	32		26	
Came,	0 5 0	17	20	24		20	
Milbourn,	0 10 0	16	24	24		21	
Milton Abbey,	0 8 6	16	24	27		22	
Beconsfield,	0 9 0	16	24	24		21	
Average,	0 8 10	20	29	32	21	26	

Rents from 10s. to 15s. an acre.

Places.	Rent.	Bushels.					Sundry circumstances.
		Wheat.	Barley.	Oats.	Rye.	Aver.	
Aylesbury,	0 14 0	15	16			15	Very bad husbandry on rich clay, open fields.
Buckinghamsh.	0 15 0	16	16			16	
Blifworth,	0 12 0	20	28	40	24	28	

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Places.	Rent.	Bushels.					Sundry circumstances.
		Wheat.	Barley.	Oats.	Rye.	Aver.	
Raeburn,	0 14 0	23	44	48		38	
Fermark,	0 15 0	24	40			32	
Reiford,	0 12 6	26	40			33	
Rundon,	0 14 0	20	28	40	22	27	
Snattisbam,	0 12 0	24	24	32	28	27	
Burnbam to Wells,	0 14 0	36	36			36	
Sherringham,	0 15 0	26	28			27	
Melton,	0 14 0	28	32			30	
Aylsbam,	0 14 0	26	32	46		34	Very good husbandry.
Bracon Ash,	0 15 0	28	32	40		33	
Mr. Bewor,	0 15 0	36	44			40	
Shottesbam,	0 14 0	20	28			24	
Mr. Fellowes,	0 14 0	28	32			30	
Flegg Hundred,	0 15 0	28	32	40		33	
South of Beccles,	0 12 0	16	20	32		21	
Saxmundham,	0 14 0	22	32	32		28	Good land well cultivated.
Bramford,	0 12 6	26	32	35		31	Good husbandry.
Mr. Aiton,	0 12 6	32	40			36	
Haddigh,	0 15 0	32	34	34		33	
Hastead,	0 14 6	20	24	28		24	
Berham,	0 11 0	24	40	48		37	
Danmow to Hockerill,	0 15 0	28	40	43		38	
Hockerill to Ware,	0 15 0	34	48			41	
Youngsbury,	0 12 0	20	30	32		27	
Morden,	0 12 0	24	32	40		32	
St. Mary Cray,	0 14 0	24	40	44		36	Fine loam on chalk, and good husbandry.
Sittingbourn,	0 15 0	28	40			34	
Beakbourn,	0 14 0	28	28	32		29	
Ile of Thanet,	0 14 0	52	40			36	Rich loam, chiefly drilled and hand-hood.
Near Dover,	0 15 0	24	32			28	
Rye,	0 15 0	24	40	44		36	
Tinence to Haverhill,	0 12 0	24	30			30	

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Places.	Rent.			Bushels.				Sundry circumstances.
				Wheat.	Barley.	Oats.	Rye.	
	l.	s.	d.					
Hawkhurst,	0	12	0	20	30	32	27	
Findon,	0	13	6	24	36		30	
Gilbury,	0	10	6	20	28	32	26	
Morcton,	0	12	0	18	24	24	12	19 Very bad management.
Leigh,	0	12	6	20	25	24	23	
B. Canons,	0	15	0	32	32	32	32	
Donnington,	0	15	0	24	32	40	32	
Harleyford,	0	11	0	24	36	38	32	
Stannore,	0	12	6	24			24	
Averages,	0	13	6	25	32	36	21	30

Rents from 15s. to 20s.

Places.	Rent.			Bushels.				Sundry circumstances.
				Wheat.	Barley.	Oats.	Rye.	
	l.	s.	d.					
Hockson,	0	16	0	24	16		20	
Mr. Booth,	1	0	0	17	56	72	48	Excellent husbandry and much cattle.
Disbley,	0	16	0	28	36	48	37	
Alfreton,	1	0	0	30	35		32	
Chatsworth to Tiddswell,	1	0	0	33	24		28	
Tiddswell,	0	16	0	25	44	56	41	
Chesterfield,	0	17	0	26	36	52	38	
Wombwell,	0	16	0	24	48	40	37	Very fine rich loam.
Leverington,	0	18	0	28	44*		36*	* Barley big.
Walpole,	0	17	0	24	60		42	
Earlham,	0	16	0	20	28	32	26	
Woodbridge,	0	16	0	32	44	40	38	Admirable management.
Mr. Aspin,	1	0	0	40	40		40	
Colchester,	0	16	0	28	48	64	46	Ditto.
Petersham,	1	0	0	24	32	40	24	30
Cuddington,	0	17	0	24	32	40	32	

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Places.	Rent.			Bushels.				Sundry circumstances.
	l.	s.	d.	Wheat.	Barley.	Oats.	Rye.	
Near Dartford,	1	0	0	32	64	52	49	Fine loam on chalk, and excellent husbandry.
Northfleet,	1	0	0	32	48	60	47	Ditto.
Feverham,	1	0	0	32	40	48	40	
Preston,	0	18	0	32	32		32	Fine rich loam, and much drilling and horse-hoeing.
Isle of Thanet,	1	0	0	32	40		36	Ditto chiefly drilled.
Ditto,	0	17	0	28	40	56	41	Ditto.
Sandwich to Deal,	0	17	0	28	32		30	Some drilled, but in general inferior to the island.
Hythe,	1	0	0	24	32		28	
Walberton,	1	0	0	32	32		32	
Mr. Turner,				28	40	48	58	Rich stiff clay.
Havant,	1	0	0	24	36		30	
Isle of Wight,	1	0	0	32	44	48	41	
Ditto,	1	0	0	32	44	64	47	Very fine sandy loam.
Ditto,	1	0	0	32	40	66	46	Ditto.
Charborough,	0	16	0	26	30	36	30	
Mapperton,	0	16	0	16	24	32	24	
Axminster,	0	18	0	20	30	30	27	
Taunton,	1	0	0	20	25		22	Rich clay.
Half-well,	0	18	0	15	18	25	19	Very bad husbandry.
Bridgewater,	1	0	0	20	30		25	
Rundway,	0	16	6	28	28	28	28	
Overton,	0	16	0	28	32		30	
Marl. to Hung.	0	15	6	16	24	32	24	
Vale W. Horje,	1	0	0	40		48	44	
Reading,	1	0	0	26	40	48	38	
Averages,	0	17	10	26	36	46	24	34

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Rents above 20s. an acre.

Place.	Rent.			Busbels.				Sundry circum- stances.	
	l.	s.	d.	Wheat.	Barley.	Oats.	Rye.		Aver.
Doncaster,	2	10	0	30	48	80	34	48	Rich sand,
Swinehead,	1	2	0	28	24	32		28	
Chichester,	1	10	0	32	36	64		44	
Bridport,	2	0	0	30	32	40		34	
Compton,	1	5	0	30	30	40		33	
Averages,	1	13	4	30	34	51	34	37	

Recapitulation.

	Rent.			Busbels.				
	l.	s.	d.	Wheat.	Barley.	Oats.	Rye.	Aver.
Rents to 10s.	0	8	10	20	29	32	21	26
Ditto 10s. to 15s.	0	13	6	25	32	36	21	30
Ditto 15s. to 20s.	0	17	10	26	35	46	24	34
Ditto above 20s.	1	13	4	30	34	51	34	37
General average,	0	14	9	24	32	38	22	30

Upon this table, which is the average of such numerous articles, I must, in the first place, observe, that the rent coming within 9d. of the article rent, alone, unmixed with other circumstances, is a confirmation that our calculations are probably accurate. The general average products are of,
Wheat, 3 quarters,

Barley, 4 ditto,

Oats, 4 quarters 6 bushels,

Rye, 2 quarters 6 bushels,

And the medium of all these, 3 quarters 6 bushels,

They shew that throughout the countries now travelled, both soil and culture are GOOD. The former alone could not have so general an effect; the latter is of great consequence, as appears by the regular gradation of products in proportion to rent, which is remarkably unbroken; in wheat totally; in barley, except one slight variation; oats unbroken; rye the same; and the average of them also.

But I should here remark, that a circumstance is to be remembered which is very important, and raises these products much; it is, that the table includes very numerous minutes from some whole counties, particularly *Norfolk*, *Suffolk*, *Essex*, and *Kent*, where summer fallows are extremely rare; hence these products are the more considerable, from being gained in so many places, without the attendant loss of fallows; this circumstance raises them to be superior to those in the Northern Tour, though,
what

what is very remarkable, wheat and barley, in the average product, is the same in both.

Respecting the proportion between the *rent* and average products of all white corn, the following table will shew it.

<i>Rent.</i>			<i>Prod.</i>	<i>Rent per bushel.</i>		
<i>l.</i>	<i>s.</i>	<i>d.</i>		<i>l.</i>	<i>s.</i>	<i>d.</i>
0	8	10	26	0	0	4
0	13	6	30	0	0	5 $\frac{1}{4}$
0	17	10	34	0	0	6 $\frac{1}{4}$
1	13	4	37	0	0	10 $\frac{3}{4}$
Average,			30	0	0	5 $\frac{1}{2}$

Product, though it rises with rent, is not at all proportioned to it: 17 *s.* 10 *d.* is about the double of 8 *s.* 10 *d.*; the latter producing 26 bushels; the former should yield 52, whereas it is only 34, and the same with all the rest. But the consideration which explains this difficulty is the expence of cultivation; the land that yields the 26 bushels, costs as much in every thing but rent, as that which produces the 37; consequently a small increase of product will make it answer much to the farmer, to give a great apparent increase of rent, because *that is the only increase.*

LETTER XLV.

I Shall, in the next place, beg leave to lay before you the average products of pease and beans, distinguishing the hoed and the unhoed; from the comparison between them, we shall probably be able to draw some conclusions of importance.

Rents to 10s. an acre.

Place.	Rent.			Pease	Pease	Bean	Bean	Sundry cir- cumstances.
	l.	s.	d.	unho.	hoed.	unho.	hoed.	
Hempstead	0	10	0	25				Drill and hoe some.
Tring	0	10	0	20	35	30		
Hazelbeach	0	6	0	12				
Glendon	0	10	0	32		32		
Quenby	0	10	0			24		
Laxton	0	8	0	22		21		
Gateford	0	10	0	22				
Broadworth	0	6	0	14				
Bootham	0	10	0	24				
Canwick	0	7	6	14				
Sir C. Wray	0	7	0	16				
Summer-Castle	0	7	0	16		24		
Warham	0	8	6	20				
Cbeam	0	10	0	24				
Carshalton	0	10	0	20		23		
Sheffield Place	0	10	0	24				
Ile of Wight	0	10	0	23				
Alresford	0	8	0	16				
Beccensfield	0	9	0	20		20		
Averages	0	8	9	20	35	25		

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Rents from 10s. to 15s. per acre.

Place.	Rent.			Pease		Bean		Sundry circumstances.
	l.	s.	d.	unho.	hoed.	unho.	hoed.	
Aylesbury	0	14	0			28		
Buckingham	0	15	0			24		
Blisworth	0	12	0			28		
Radburn	0	14	0	28				
Runcton	0	14	0	20				
Snettisham	0	12	0	16				
Aylsham	0	14	0	28				
Fleg Hundred	0	15	0	20				
Sou. of Beccles	0	12	0			32		
Bracon Ash	0	15	0	24				
Saxmundham	0	14	0		24		36	Many in drills, but all well hand-hoed. Fine sandy soil.
Hadleigh	0	15	0	20		20		
Hastead	0	14	6	20				
Boreham	0	10	6		24		40	
Dunmow to Hockeril	0	15	0	24		32		
Ditto to Ware	0	15	0			28		
Youngsberry	0	12	6	16		20		Very bad managem.
Morden	0	12	0	16				
Sittingburn	0	15	0		28		52	All drilled, and hor. and hand-hoed.
Beaksburn	0	14	0		28		40	All ditto, the beans rich manured.
Ile of Thanet	0	14	0		32		36	Ditto.
Dover	0	15	0				32	Drilled and hor. hoe.
Sandgate							32	
Rye	0	15	0	28			40	The beans bro. cast, but twice hand-ho.
To Harokhurst	0	12	0				36	
Gilbury	0	10	6	20				
Moreton	0	12	0	16				
Donnington	0	15	0		32		36	Drilled and hor. ho.
Harleyford	0	11	0		28			Ditto.
Stanmore	0	12	6				40	In rows.
Averages	0	13	10	21	28	26	38	

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Rents from 15s. to 20s. an acre.

Place.	Rent.			Pease		Bean		Sundry circumstances.
	l.	s.	d.	unho.	hoed.	unho.	hoed.	
Hockton	0	16	0			24		
Mr. Booth	1	0	0		12	40		Drills and hoes the pease.
Disbley	0	16	0			28		
Chesterfield	0	17	0	20				
Wombwell	0	16	0	24		32		Fine loam.
Leverington	0	18	0			24	32	
Walpole	0	17	0				40	Drilled and hoed.
Earlham	0	16	0	24				
Woodbridge	0	16	0		28		50	Many drilled, & all kept as clean as a garden.
Colchester	0	16	0		32		52	Generally in drills, all kept garden clean.
Petersham	1	0	0			32		
Mr. Arbutnot	0	16	0				28	Drilled and ho. hoed
Cuddington	0	17	0	16		20		
Dartford	1	0	0		40		40	All drilled and hand and horse-hoed.
Northfleet	1	0	0		44		48	Ditto, ditto
Faversham	1	0	0		28		44	Ditto
Preston	0	18	0				40	Ditto
Isle of Thanet	1	0	0				36	Ditto
Ditto	0	17	0		32		36	Ditto
Hythe	1	0	0				40	
Mr. Turner							40	Drilled & hand hoe.
Isle of Wight	1	0	0			40		Broad-cast dunged.
Ditto	1	0	0	24				
Mapperton	0	16	0	12		24		
Taunton	1	0	0	20		20		Set beans promiscu.
Mr. Anderdon	1	0	0		10		11	Drilled & hand ho.
Mr. Coombs	1	0	0		30			Ditto.
Halfwell				14		20		
Bridgewater	1	0	0	25		30		
Vale W. Horse	1	0	0		40		40	
Reading	1	0	0		28			Drilled & horse ho.
Averages	0	18	4	19	29	27	38	

Rents above 20s. an acre.

Place.	Rent.			Pease		Bean		Sundry cir- cumstances.
	l.	s.	d.	unho.	hoed.	unho.	hoed.	
<i>Swinehead</i>	1	2	0			24		
<i>Chichester</i>	1	10	0	28				
<i>Compton</i>	1	5	0	16				

Recapitulation.

	Rent.			Pease		Bean	
	l.	s.	d.	unho.	hoed.	unho.	hoed.
Rents to 10s. an acre	0	8	9	20	35	25	
Ditto from 10s. to 15s.	0	13	10	21	28	26	38
Ditto from 15s. to 20s.	0	18	4	19	29	27	38
General average,	0	14	3	20	29	26	38

	Rent.			Pease		Bean		Busbels.
	l.	s.	d.	unho.	hoed.	unho.	hoed.	
Pease, hoed,	-	-	-	-	-	-	-	29
Ditto unhoed,	-	-	-	-	-	-	-	20
Superiority,	-	-	-	-	-	-	-	9
Beans, hoed,	-	-	-	-	-	-	-	38
Ditto unhoed,	-	-	-	-	-	-	-	26
Superiority,	-	-	-	-	-	-	-	12

It is impossible too repeatedly to inforce the necessity of hoeing pease and beans; every review we take of the husbandry of the kingdom abounds with fresh proof of the real importance of this culture: is it not astonishing, that so many tracts of

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country should remain in so barbarous a state, as to persist in the contrary mode of slovenliness?

Suppose the price 3s. a bushel, the superiority *per* acre, is 1*l.* 7s.; and in beans 1*l.* 16s. though the extra expence of hoeing in most cases is saved in the seed: but suppose it came to 7s. an acre, there is 1*l.* *per* acre saving on the pease; and 1*l.* 9s. on the beans: is not this a most striking contrast!

But by means of keeping them clean, they in one case are a fallow, followed by wheat or barley; in the other a *crop* succeeded by a fallow. This difference must be decisive to the least attentive reader: if it was calculated through a course, the importance of it would appear much greater than may at first be conceived. As I enlarged particularly on this point in my *Northern Tour* (from the minutes of which the same observations were deduced) it is the less necessary to be particular here.

L E T T E R XLVI.

TH E quantities of SEED used for the production of both corn and pulse, are an essential article in their culture. This is an object very important in two respects; first, the general application of the whole crop; and secondly, to discover, if we can, the portions that are most advantageous. There is no point in agriculture about which opinions vary more, nor any in which a greater difference is found in practice: when this is the case, it is always useful to discuss the variations—to attempt to discover their reason—and the quantities most beneficial, either absolutely in themselves, or relatively to soil; this I shall attempt in the following tables.

Place.	Rent.			Wheat.		Rye.		Barl.		Oats.		Pease.		Beans.	
	l.	s.	d.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.
1. Hempstead,	0	10	0	3	25			4	40	4	48	3	25		
2. Tring,	0	10	0	2 $\frac{1}{2}$	25			4	24	3 $\frac{3}{4}$	48	4	20	3	30
3. Blijworth,	0	12	0	2 $\frac{1}{2}$	20	2	24	5	28	5 $\frac{1}{2}$	40			5	28
4. Hazelbeech,	0	6	0	2 $\frac{3}{4}$	12	3	16	2	24	6	22	6	12		

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Place.	Rent.			Wheat.		Rye.		Barl.		Oats.		Pease.		Beans.	
	l.	s.	d.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.
5. Glendon,	0	10	0	2 $\frac{1}{2}$	15	4	32	5	16	5	32	4 $\frac{1}{2}$	32		32
6. Mr. Booth,	1	0	0	2	17	2 $\frac{1}{2}$	56	3 $\frac{1}{2}$	72			4	40		40
7. Quenby,	0	10	0	2	24	4	34	7	64			5	24		24
8. Dishley,	0	16	0	2	28	4	36	5	48						
9. Radburn,	0	14	0	2	23	4	44	4 $\frac{1}{2}$	48						
10. Tiddjwell,	0	16	0	3	25	4	44	7	56						
11. Gbest rfield,	0	17	0	2 $\frac{1}{2}$	26	4	36	4 $\frac{3}{4}$	52	3 $\frac{3}{4}$	20				
12. Lawton,	0	8	0	2 $\frac{1}{2}$	18	3	24	4	32	2 $\frac{1}{2}$	22	4	21		21
13. Gatsford,	0	10	0	2 $\frac{1}{2}$	22	2	24	3	36	4	40	2 $\frac{1}{2}$	22		
14. Blyth,	0	10	0	3	24	3	24	3	32	3	40				
15. Wombwell,	0	16	0	2 $\frac{3}{4}$	24	3 $\frac{1}{2}$	48	5	40	3	24	4	32		32
16. Bootham,	0	10	0		2	24	3	24	4	36	3	24			
17. Canwick,	0	7	6	2 $\frac{1}{2}$	23	2	20	4	28	4	26	3	14		
18. Leverington,	0	13	0	2	28	3	44					4	24		24
19. Runcion,	0	14	0	3	20	1 $\frac{3}{4}$	22	3	28	4	40	4	20		
20. Snettisham,	0	12	0	3	24	3	28	2 $\frac{3}{4}$	24	4	32				
21. Warbam,	0	8	6	3 $\frac{1}{4}$	24	3	36				3	20			
22. Aylsham,	0	14	0	2 $\frac{1}{2}$	26	4	32	4 $\frac{3}{4}$	46	4	28				
23. Earham,	0	16	0	3	20	3	28	4	32	4	24				
24. Bracon Afb,	0	15	0	2 $\frac{1}{2}$	28	3	32	4	40	3	24				
25. Flegg,	0	15	0	3	28	3	32			3	20				
26. Bramford,	0	12	6	2	26	3	32	4	36						
27. Hashead,	0	14	6	2	20	4	24	4	28	2	20				
28. Colchester,	0	16	0	2 $\frac{1}{2}$	28	4	48	5	64	2*	32	2*	32		32
29. Youngsberry,	0	12	0	2 $\frac{1}{4}$	20	4	30	4	32	4	16				
30. Mr. Arbut- not,	0	12	0	3 $\frac{1}{2}$	P* 23									2*	27
31. Beakburn,	0	14	0	2 $\frac{3}{4}$	28	3	28	4	32	3*	28				
31. * Thant,	0	17	0	2 $\frac{1}{2}$	28	2 $\frac{1}{2}$ *	40	2 $\frac{1}{2}$ *	56	4*	32	2 $\frac{3}{4}$ *	36		36
32. Hawkburst,	0	12	0	3	20	4	36	5	32						
33. Sheffield	0	10	0	3	24	5	32	5 $\frac{1}{2}$	28	4	24				
Place,															
34. Walberton,	1	0	0	3	32	5 $\frac{1}{2}$	32								
35. Mr. Turner,	0	10	0	2	28			4	48			4*	40		40
36. Isle Wight,	1	0	0	2 $\frac{1}{4}$	32	4	44					2 $\frac{1}{2}$	45		45
37. Ditto,	0	10	0	2 $\frac{1}{2}$	20	4	32	4 $\frac{1}{2}$	32	3 $\frac{1}{2}$	28				
38. Alresford,	0	8	0	3 $\frac{1}{4}$	16	4 $\frac{1}{2}$	30	5 $\frac{1}{2}$	32	4	16				
39. Gilbury,	0	10	6	2 $\frac{1}{2}$	20	4	28	4 $\frac{1}{2}$	32	4	20				
40. Critchill,	0	10	0	3 $\frac{1}{2}$	22	5	24	6	32						
41. Moreton,	0	12	0	3	18	2	12	4	24	4	16				
42. Camc,	0	5	0	3	17	4 $\frac{1}{2}$	20	5	24						

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Place.	Rent.			Wheat.		Rye.		Barl.		Oats.		Pease.		Beans.	
	l.	s.	d.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.
Taunton,	1	0	0	2 $\frac{1}{4}$	20			3 $\frac{3}{4}$	25			3 $\frac{1}{2}$ *	20	4 $\frac{1}{4}$	20
Donnington,	0	15	0	2 $\frac{1}{4}$	24			3	32	4	40	4*	32	3	36
Harleyford,	0	11	0	3	24			3 $\frac{1}{2}$	36	4	38	3*	28		
Beconsfield,	0	9	0	2 $\frac{1}{4}$	16			3 $\frac{1}{2}$	24	3	24	3 $\frac{1}{2}$	20	4	20
Averages,	0	13	0	2 $\frac{1}{2}$	23	2 $\frac{1}{4}$	21	3 $\frac{1}{2}$	32	4 $\frac{1}{4}$	38	3 $\frac{1}{2}$	23	3 $\frac{1}{2}$	31

The numbers marked * are drilled.

Having thus drawn the general averages, I shall in the next place compare the products with the respective quantities of seed, beginning with

W H E A T.

Products from two bushels of seed.

Place.	Crop.	Place.	Crop.
No. 6. -	17	No. 18. -	28
7. -	24	26. -	26
8. -	28	27. -	20
9. -	23	35. -	28

Average product 24 bushels.

From 2 $\frac{1}{4}$ and 2 $\frac{1}{2}$ bushels of seed.

Place.	Crop.	Place.	Crop.
No. 2. -	25	No. 28. -	28
3. -	20	29. -	20
5. -	15	31. -	28
11. -	26	36. -	32
12. -	18	37. -	20
13. -	22	43. -	20
17. -	23	44. -	24
22. -	26	46. -	16
24. -	28		

Average product 23 bushels.

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From 2 $\frac{3}{4}$ and 3 bushels of seed.

<i>Place.</i>	<i>Crop.</i>	<i>Place.</i>	<i>Crop.</i>
No. 1.	- 25	No. 31.	- 28
4.	- 12	32.	- 20
10.	- 25	33.	- 24
14.	- 24	34.	- 32
15.	- 24	39.	- 20
19.	- 20	41.	- 18
20.	- 24	42.	- 17
23.	- 20	45.	- 24
25.	- 28		

Average product 22 bushels.

From 3 $\frac{1}{4}$ and 3 $\frac{1}{2}$ bushels of seed.

<i>Place.</i>	<i>Crop.</i>	<i>Place.</i>	<i>Crop.</i>
No. 21.	- 24	No. 38.	- 16
30.	- 23	40.	- 22

Average product 21 bushels.

From 2,	-	-	24
2 $\frac{1}{4}$ and 2 $\frac{1}{2}$,	-	-	23
2 $\frac{3}{4}$ and 3,	-	-	22
3 $\frac{1}{4}$ and 3 $\frac{1}{2}$,	-	-	21

A more unbroken degradation could not have happened; and though there is not a proof, that the cause is the quantity of seed, yet there is much reason to suppose small portions a part of good husbandry, and attendant on rich soils. When the land is rich, and the husbandry good, it is evidently proved, that two bushels of

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wheat