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GENERAL VIEW
OF THE
AGRICULTURE
OF THE
COUNTY of SOMERSET,

BY
JOHN BILLINGSLEY, Esq.

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SIX SHILLINGS.



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COUNTY OF SOMERSET

A. JOHN BACCHAMANT

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GENERAL VIEW
OF THE
AGRICULTURE
OF THE
COUNTY of SOMERSET,
WITH
OBSERVATIONS
ON
THE MEANS OF ITS IMPROVEMENT.

DRAWN UP IN THE YEAR 1795,
FOR THE CONSIDERATION OF THE BOARD OF AGRICULTURE
AND INTERNAL IMPROVEMENT.

BY
JOHN BILLINGSLEY, Esq;
OF ASHWICK-GROVE, near SHEPTON-MALLET.

AND NOW RE-PRINTED

With considerable ADDITIONS and AMENDMENTS,
Accompanied with the REMARKS of some respectable GENTLEMEN
and FARMERS in the COUNTY.

—•••••
SECOND EDITION.
—•••••

In urbe luxuria creatur: Ex luxuria existat avaritia necesse est: Ex avaritia erumpit audacia; Inde omnia scelera ac maleficia gignuntur. Vita autem hæc rustica quam tu agrestem vocas, parsimoniae, diligentiae, justitiae, magistra est.

Tullii Orat. pro Sext. Roscio.

The City creates luxury; from luxury necessarily proceeds rapaciousness; and from rapaciousness breaks forth insolence: Thence are engendered all villainy and wicked deeds: But this country life, which you call clownish, is the regulator of aconomy, industry, and justice.

BATH,
PRINTED BY R. CRUTTWELL, FOR THE AUTHOR;
AND SOLD BY
C. DILLY, POULTRY, LONDON.
M DCC XCVIII.



1870

GENERAL VIEW
OF THE
AGRICULTURE
OF THE
COUNTY OF MONMOUTH

BY J. H. WILSON

THE COUNTY OF MONMOUTH

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THE COUNTY OF MONMOUTH



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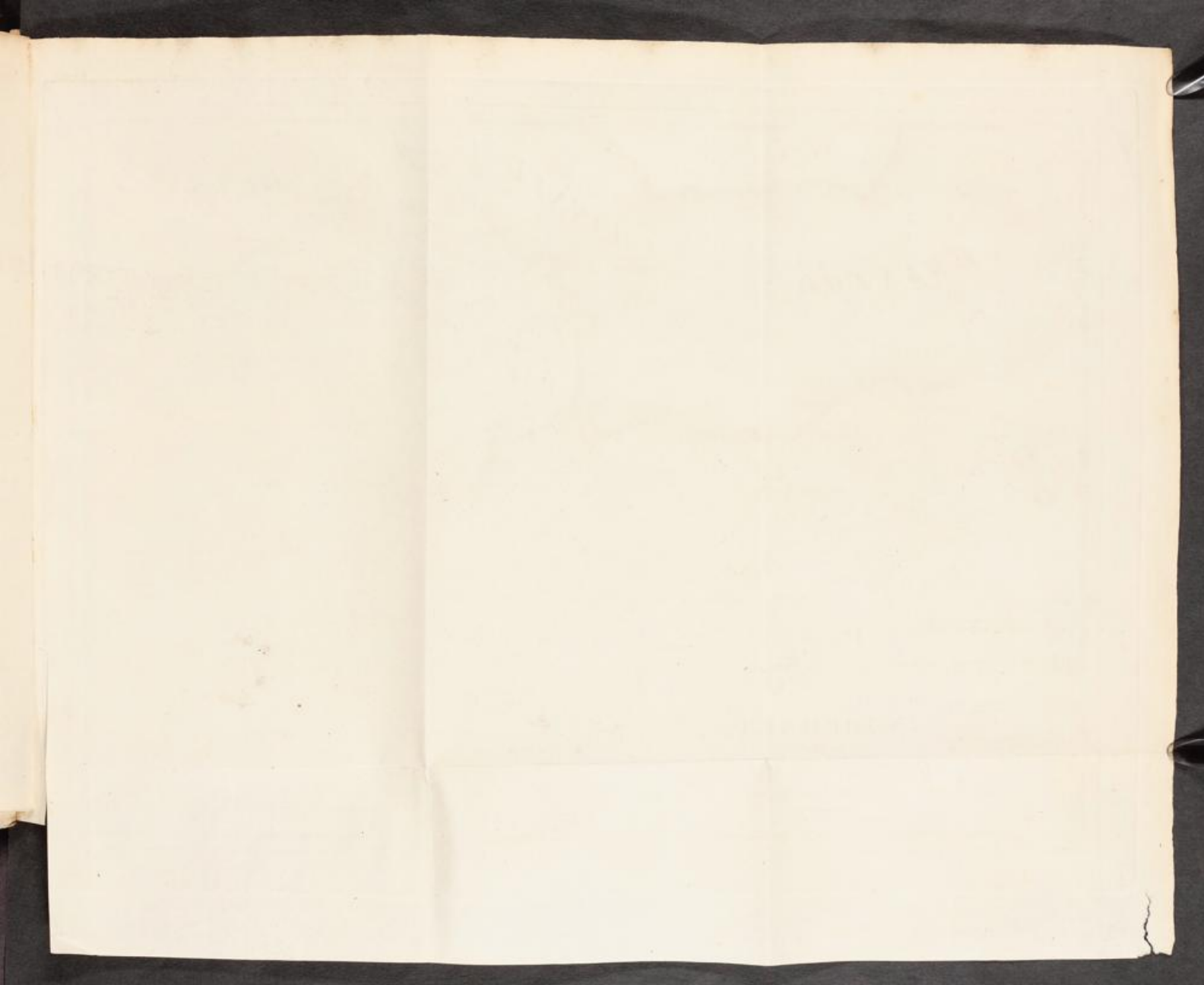
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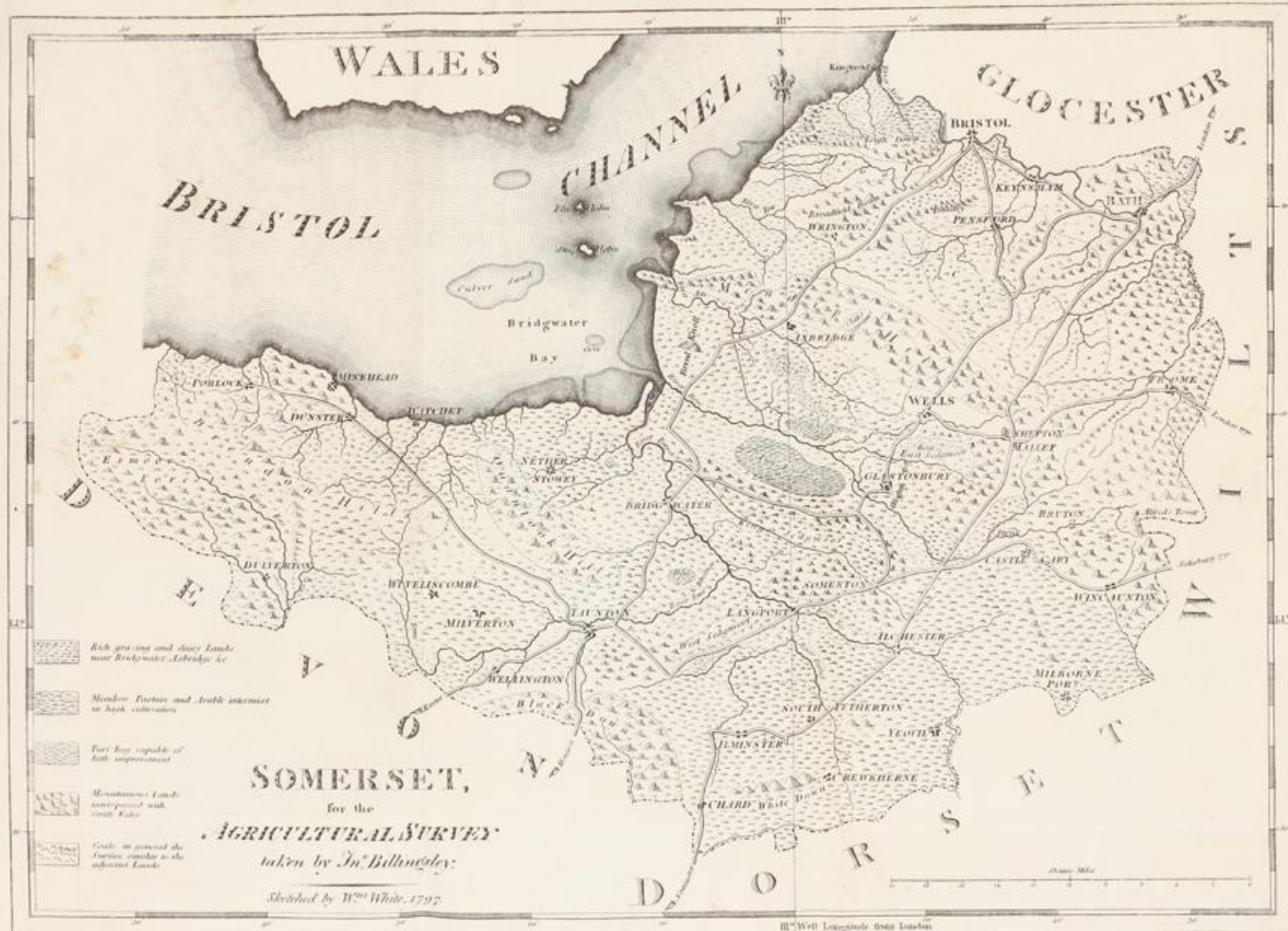
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Representation of Mr. Weldon's Caiffon Lock

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PLAN

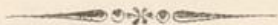
FOR RE-PRINTING THE

AGRICULTURAL SURVEYS.

BY THE

PRESIDENT

OF THE BOARD OF AGRICULTURE.



A BOARD established for the purpose of making every essential enquiry, into the Agricultural State, and the means of promoting the internal improvement of a powerful Empire, will necessarily have it in view, to examine the sources of publick prosperity, in regard to various important particulars. Perhaps the following is the most natural order for carrying on such important investigations; namely, to ascertain,

1. The riches to be obtained from the surface of the national territory.
2. The mineral or subterraneous treasures of which the country is possessed.
3. The wealth to be derived from its streams, rivers, canals, inland navigations, coasts, and fisheries. And,
4. The means of promoting the improvement of the people in regard to their health, industry, and morals, founded on a *statistical* survey, or a minute and careful enquiry into the actual state of every parochial district in the kingdom, and the circumstances of its inhabitants.

B

Under

Under one or other of these heads, every point of real importance, that can tend to promote the general happiness of a great nation, seems to be included.

Investigations of so extensive and so complicated a nature must require, it is evident, a considerable space of time before they can be completed. Differing indeed in many respects from each other, it is better perhaps that they should be undertaken at different periods, and separately considered. Under that impression, the Board of Agriculture has hitherto directed its attention to the first point only, namely, the cultivation of the surface, and the resources to be derived from it.

That the facts essential for such an investigation might be collected with more celerity and advantage, a number of intelligent and respectable individuals were appointed, to furnish the Board with accounts of the state of husbandry, and the means of improving the different districts of the kingdom. The returns they sent were printed, and circulated by every means the Board of Agriculture could devise, in the districts to which they respectively related; and in consequence of that circulation, a great mass of additional valuable information has been obtained. For the purpose of communicating that information to the publick in general, but more especially to those counties the most interested therein, the Board has resolved to reprint the Survey of each County, as soon as it seemed to be fit for publication; and among several equally advanced, the counties of Norfolk and Lancaster were pitched upon for the commencement of the proposed publication; it being thought most advisable to begin with one county on the Eastern, and another on the Western coast of the Island. When all these Surveys shall have been thus re-printed, it will be attended with little difficulty to draw up an abstract of the whole (which will not probably exceed

exceed two or three volumes quarto) to be laid before his Majesty, and both Houses of Parliament; and afterwards a general Report on the present state of the country, and the means of its improvement, may be systematically arranged, according to the various subjects connected with agriculture. Thus every individual in the kingdom may have,

1. An account of the husbandry of his own particular county; or,
2. A general view of the agricultural state of the kingdom at large, according to the counties, or districts, into which it is divided; or,
3. An arranged system of information on agricultural subjects, whether accumulated by the Board since its establishment, or previously known;

And thus information respecting the state of the kingdom, and Agricultural knowledge in general, will be attainable with every possible advantage.

In re-printing these Reports, it was judged necessary, that they should be drawn up according to one uniform model; and after fully considering the subject, the following form was pitched upon, as one that would include in it all the particulars which it was necessary to notice in an Agricultural Survey. As the other Reports will be re-printed in the same manner, the reader will thus be enabled to find out at once, where any point is treated of, to which he may wish to direct his attention.

PLAN OF THE RE-PRINTED REPORTS.

Preliminary Observations.

CHAP.

I. Geographical State and Circumstances.

SECT. 1.—Situation and Extent.

2.—Divisions.

3.—Climate.

4.—Soil and Surface.

5.—Minerals.

6.—Water.

II. State of Property.

SECT. 1.—Estates, and their Management.

2.—Tenures.

III. Buildings.

SECT. 1.—Houses of Proprietors.

2.—Farm Houses and Offices; and Repairs.

3.—Cottages.

IV. Mode of Occupation.

SECT. 1.—Size of Farms.—Character of the Farmers.

2.—Rent—in Money—in Kind—in Personal Services.

3.—Tythes.

4.—Poor-Rates.

5.—Leases.

6.—Expence and Profit.

V. Implements.

VI. Inclosing—Fences—Gates.

VII. Arable Land.

SECT. 1.—Tillage.

2.—Fallowing.

CHAP.

VII. SECT. 3.—Rotation of Crops.

4.—Crops commonly cultivated; their Seed,
Culture, Produce, &c.*

5.—Crops not commonly cultivated.

VIII. Grafs.

SECT. 1.—Natural Meadows and Pastures.

2.—Artificial Grasses.

3.—Hay Harvest.

4.—Feeding.

IX. Gardens and Orchards.

X. Woods and Plantations.

XI. Wastes.

XII. Improvements.

SECT. 1.—Draining.

2.—Paring and Burning.

3.—Manuring.

4.—Weeding.

5.—Watering.

* Where the quantity is considerable, the information respecting the crops commonly cultivated may be arranged under the following heads:

1. Preparation { tillage, manure. }	6. Culture whilst growing { hoe, weeding, feeding. }
2. Sort.	7. Harvest.
3. Steeping.	8. Threshing.
4. Seed (quantity sown.)	9. Produce.
5. Time of sowing.	10. Manufacture of bread.

In general the same heads will suit the following grains:

Barley. Oats. Beans. Rye. Pease. Buck-wheat.

Vetches - - - Application.

Cole-feed - { Feeding,
Seed. }

Turnips - - { Drawn - - - - -
Fed - - - - -
Kept on grafs - - -
— in houses - - - }

CHAP.

XIII. Live Stock.

SECT. 1.—Cattle.

2.—Sheep.

3.—Horses, and their Use in Husbandry,
compared to Oxen.

4.—Hogs.

5.—Rabbits.

6.—Poultry.

7.—Pigeons.

8.—Bees.

XIV. Rural Economy.

SECT. 1.—Labour — Servants — Labourers—
Hours of Labour.

2.—Provisions.

3.—Fuel.

XV. Political Economy, as connected with
or affecting Agriculture.

SECT. 1.—Roads.

2.—Canals.

3.—Fairs.

4.—Weekly Markets.

5.—Commerce.

6.—Manufactures.

7.—Poor.

8.—Population.

XVI. Obstacles to Improvement; including ge-
neral Observations on Agricultural Legislation and Police.

XVII. Miscellaneous Observations.

SECT. 1.—Agricultural Societies.

2.—Weights and Measures.

Conclusion.—Means of Improvement, and the Measures
calculated for that Purpose.

Appendix.

PERFECTION in such inquiries is not in the power of any body of men to obtain at once, whatever may be the extent of their views, or the vigour of their exertions. If Lewis XIV. eager to have his kingdom known, and possessed of boundless power to effect it, failed so much in the attempt, that of all the provinces in his kingdom, only one was so described as to secure the approbation of posterity;* it will not be thought strange that a Board, possessed of means so extremely limited, should find it difficult to reach even that degree of perfection which, perhaps, might have

* See Voltaire's Age of Lewis XIV. vol. ii. p. 127, 128, edit. 1752.

The following extract from that work will explain the circumstance above alluded to.

“ Lewis had no Colbert, nor Louvois, when about the year 1698, for the instruction of the Duke of Burgundy, he ordered each of the intendants to draw up a particular description of his province. By this means an exact account of the kingdom might have been obtained, and a just enumeration of the inhabitants. It was an useful work, though all the intendants had not the capacity and attention of Monsieur de Lamoignon de Baviile. Had what the king directed been as well executed in regard to every province, as it was by this magistrate in the account of Languedoc, the collection would have been one of the most valuable monuments of the age. Some of them are well done; but the plan was irregular and imperfect, because all the intendants were not restrained to one and the same. It were to be wished, that each of them had given, in columns, the number of inhabitants in each election; the nobles, the citizens, the labourers, the artisans, the mechanics, the cattle of every kind; the good, the indifferent, and the bad lands; all the clergy, regular and secular; their revenues, those of the towns, and those of the communities.

“ All these heads, in most of their accounts, are confused and imperfect; and it is frequently necessary to search with great care and pains to find what is wanted. The design was excellent, and would have been of the greatest use, had it been executed with judgment and uniformity.”

been

been attainable with more extensive powers. The candid Reader cannot expect in these Reports more than a certain portion of useful information, so arranged as to render them a basis for further and more detailed enquiries. The attention of the intelligent Cultivators of the kingdom, however, will doubtless be excited, and the minds of men in general gradually brought to consider favourably of an undertaking, which will enable all to contribute to the national stores of knowledge, upon topicks so truly interesting as those which concern the Agricultural interests of their country; interests, which on just principles never can be improved, until the present state of the kingdom be fully known, and the means of its future improvement ascertained with minuteness and accuracy.



PRELIMINARY OBSERVATIONS
TO THE
SOMERSETSHIRE RE-PRINTED REPORT.

THE following Remarks on the present state of Agriculture in the county of Somerset having been made without an actual survey, those readers who are conversant with the subject will be able, no doubt, to point out many *defects, errors, and omissions.*

The Writer, however, presumes, that though he may not have specifically and expressly touched on all the practices and improvements of the best farmers, yet that no kind or class of these matters has been absolutely overlooked.

He does not profess to have given a compleat detail of the various branches of rural management, but to have discussed the most *important* articles belonging thereto; and he has done his utmost to treat the subject in such a manner, and to express his meaning in such a language, as might be best adapted to the understanding and comprehension of common farmers.

Should the subject of *inclosing, &c. the Waste Lands*, be thought by some to occupy too much room, the writer intreats them to weigh in their own minds, whether any thing, so nearly related to publick as well as individual good, can be too diffusely handled, or too strongly recommended.

To

To the following Gentlemen the writer is indebted for valuable information, and he begs leave to express his warmest acknowledgements for the same:

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Mr. PAGET, of Cranmoor.

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Others who promised their assistance, and who, from practical knowledge, were competent to the task, withheld their communications, from an *ill-founded* apprehension, that the establishment of a Board of Agriculture was preparatory to additional taxation under some form or other.

This the writer has reason to mention with regret.



AGRICULTURAL SURVEY
OF
SOMERSETSHIRE.

CHAPTER I.

GEOGRAPHICAL STATE AND
CIRCUMSTANCES.

SECT. I.—*Situation and Extent.*

SOMERSETSHIRE is a maritime county, in the South-west part of England, having the Bristol Channel on the West—Gloucestershire, and the city and county of Bristol, on the North—Wiltshire on the East—and Devonshire on the South and South-West.

Its form is oblong, being in length from North-east to South-west 80 miles—in breadth from East to West about 36 miles—and in circumference about 200 miles.

The reporter cannot with absolute precision state the total amount of acres, or the number of inhabitants, in this county; but he conceives the former to be about one million of acres, and the latter about three hundred thousand. The average value per acre of the inclosed and cultivated land is not less now than *twenty-five* shillings per annum; and at the Revolution the total annual value was estimated at

375,000*l.*

375,000l. The different appropriations of this surface of land may be arranged in the following way:

	Acres.
Towns and villages	3000
Publick and private roads	15,000
Rivers, lakes, ponds, &c.	2,500
Woods and plantations	20,000
Meadow and pasture land inclosed	584,500
Marsh and fen-land uninclosed	30,000
Arable and convertible land inclosed	260,000
Common fields	20,000
Uncultivated wastes	65,000
	<u>*1,000,000</u>

The sea-coast is very irregular, in some places projecting into lofty and rocky promontories, and in others receding into fine bays, with flat and level shores. From Stert point northward, the coast is flat, and composed of vast sand-banks repelling the inundation of the sea, which, in ancient times, washed over these shoals, and flowed up into the country, covering with its waters that extensive territory now called *Brent-Marsh*. The sea, after its general retirement, paid frequent visits to these parts; and it was found necessary, to the security of the country, to establish a

* Since this account was taken, fundry acts of parliament have been passed, and are now pending, for the inclosing, draining, and dividing of more than 18,000 acres of marsh and fen land, and 20,000 acres of common fields and uncultivated wastes. Fifteen bills of inclosure have been brought into parliament this session (1797) for this county only, whilst, in the adjoining county of Devon, not a single application has been made in this century. This is the more extraordinary, as there are immense tracts lying waste in the last-mentioned county.

Commission of Sewers, the members of which should examine and inspect the sea banks, ditches, gutters, and sewers, connected with the sea, and order the requisite cleansings and reparations. The first commission of this kind upon record, was in 1304; and the like offices are extended to this day.

SECT. 2.—*Division.*

Somersetshire, in respect to its jurisdiction, is divided into two parts, *eastern* and *western*. The first containing 19 hundreds, the latter 21 hundreds. It has besides 7 liberties, 2 cities, 7 boroughs, 29 market-towns, 1 bishoprick, 3 arch-deaconries, 13 deaneries, and 482 parishes.†

SECT. 3.—*Climate.*

In such an extent of ground, it may naturally be supposed, that the climate is various. Near the sea-coast winter is scarcely felt; and from Minehead and Dulverton on the west, to Milborne-Port and Wincanton on the east, the climate (Quantock, Branden, and Dunkry hills excepted) is mild and temperate. As you approach the northern district, and ascend Polden hill, it changes and becomes more cold and boisterous; and when you proceed farther northward, and gain the summit of Mendip hills, you feel yourself, comparatively, in Lapland. The perpendicular altitude of Mendip hills, compared with the town of Taunton, is supposed to be at least 1100 feet.

Seed time and harvest greatly vary in different parts of the county: the mountainous parts being nearly a month later than the vales; for which reason, it is found right, on exposed and elevated situations, such as Mendip, Quantock,

† Collinson and Rack's History of Somersetshire.

and Brandon hills, to sow a fortnight earlier in the autumn, and a fortnight later in the spring, than is generally recommended in books of husbandry or gardening.

SECT. 4.—*Soil and Surface.*

For fertility of soil, and general produce, this county stands eminently high in reputation. The plains are remarkable for their luxuriant herbage, which furnishes not only a sufficiency for its own consumption, but also a considerable surplus for other markets: London, Bristol, Salisbury, and other parts of the kingdom, are annually supplied with fat *oxen*, *sheep*, and *hogs*, together with *cyder*, *cheese*, *butter*, and many other articles, in great abundance. Nor are the hills by any means deficient in their arable productions; yet it must be admitted, that its vicinity to the Bristol Channel, which fills the air with watery vapours unfavourable to the ripening of corn, particularly in the western districts, induces a preference in favour of *grazing* and *dairy* husbandry: and in consequence thereof, vast quantities of grain are annually purchased from the adjacent counties of Wilts and Dorset, to the amount of at least one hundred thousand quarters—by which, the county would be drained of its money, were it not for the coal, cattle, &c. which are sent in return.

MOUNTAINS.

The surface of the inland parts is varied by lofty hills, rich level plains, and bold aspiring woods. The most noted hills are, *Quantock*, *Brandon* and *Dunkry*, *Mendip*, *Poulden*, *Broadfield* and *Leigh-down*, *Lansdown*, *White-down*, and *Black-down*.

The soil of these mountains may be thus stated; *Quantock*, &c. (situated between the town of Taunton and the sea)
a thin

a thin variable soil, covering a loose shelly rock, interspersed with occasional lime-stone. *Poulden-hill*, (between Bridgwater and Glastonbury) a strong surface, covering a bed of clay or marl. *Mendip-hills*, (between the city of Wells and Bristol.) *Broadfield* and *Leigh-down*, (near Bristol) a gravelly loam on a lime-stone rock. *Lansdown*, (near Bath) a free-stone grit. *White-down*, (near Chard) variable. *Black-down*, (on the confines of Devon) a thin surface of black earth on a bed of sand or gravel. Almost every species of soil (chalk excepted, of which there is only a small portion in the eastern division) may be found in different parts of the county, and of a quality highly fertile and productive.

FORESTS.

Its antient forests are, *Selwood*, near Frome; *Mendip*, between Frome and the Bristol Channel; *Exmoor*, between the port of Watchet and the north-west part of Devon; *Neroche*, near Ilminster; and *North-Petherton*,* near Bridgwater.

MOORS.

The principal Moors are,
King-Sedgmoor, near Bridgwater.
East-Sedgmoor, between Wells and Glastonbury.
West-Sedgmoor, between Taunton and Langport.
North-moor and *Stanmoor*, near the isle of Athelney.
Common-moor, near Langport.
West-moor, *Curry* and *Hay-moor*, near North-Curry.
Kings-moor, between Ilchester and Somerton.
Ilemoor, on the river Ivel.

* The parish of North-Petherton, at the present æra, consists of as good arable and pasture land as any in the county; and may, I believe, be estimated at the average annual value of 40s. per acre. J.B.

Brent-marsh, on the river Brue and Ax.

Weston-moor, near Uphill.

Banwell and Smeath moors, near Churchill.

Kenn-moor, near Yatton.

Nailsea-moor, north of Kenn.

Clapton-moor, between Clapton and Wirton.

Of these many have been inclosed, drained, and improved, in the course of the last twenty years, as will be noticed hereafter.

SECT. 5.—*Minerals, &c.*

This county produces *lead, copper, iron, lapis calaminaris, manganese, coal, lime-stone, paving-stone, tiling-stone, free-stone, fullers'-earth, marl, and ochre.*

SECT. 6.—*Water.*

The principal rivers are, the Avon, Ax, Brue, Parret, Yow, Cale, Chew, Tone, Frome, Ivel, Ex, and Barl.

Of these, four only are navigable, viz. the Avon, from Bath to Bristol, 16 miles; the Brue, from Bristol Channel to Highbridge, 2 miles; the Parret, from Stert-Point to Langport, about 20 miles; and the Tone, from Taunton to Boroughbridge, 8 miles.

For the sake of perspicuity I shall divide the county into three districts:—the first comprehending the tract of land included between the ports of Uphill and Kingroad on the west, and the towns of Bath and Frome on the east. This I shall call the *north-east* district.

The next I shall call the *middle* division; and is that portion of land which is bounded by the Mendip hills on the north, Bridgwater-bay on the west, and the town of Chard on the south.

The *south-west* division will occupy the remainder.

NORTH-

NORTH-EAST DISTRICT.

SECT. I. *Climate, Soil, and Surface.*

The surface of this district being very irregular, and intermixed with lofty hills and rich fertile plains, the climate is consequently exceedingly varied. On the western side, including the hundreds of Winter-Stoke and Portbury, the soil is, for the most part, a deep and rich mixture of clay and sand; being originally a deposit by the sea, which, in antient times, flowed up a considerable way into that part of the country. These Moor-lands, as they are called, are at the present time subject to frequent inundation; and sometimes, in rainy seasons, are covered with water for four or five successive months. The luxuriant herbage produced by these lands, when cleared from stagnant water, is such as to induce, in the mind of a man fond of national improvement, an ardent wish to see them completely drained.

This, I think, might be effected in the following way: Let a sluice or dam be built at the outlet of the river Yeo or Yow, the apron of which should be placed near low-water mark. It is not necessary to describe these sluices, or outlets, as they are common to most counties bordering on the sea. Suffice it to say, that these buildings are furnished with folding doors, which shut at the influx of the tide, and open on its retreat. From a sluice thus erected, let the bed of the river be lowered to an inclined plane of one foot in a mile. This is sufficient to produce a current, and it will prevent any great deposit of sediment. Let the bottom be contracted in its breadth, so that the water in time of floods may run with sufficient rapidity to cleanse it of mud. In regard to the dimensions and expence of such a main drain, the reader shall be informed when we come to treat of Sedgemoor.

c

In

In the parishes of Congresbury, Yatton, Banwell, Wincombe, Churchill, and Puxton, there are not less than three thousand acres subject to frequent inundation. All these lands discharge the greatest part of their waters into the river Yeo, and are under the inspection of the Commissioners of Water-Sewers; but the powers vested in these commissioners by Parliament are not sufficient to enable them to divert the course of the river, or to effect a radical cure.

The tide flows nearly seven miles up the river Yeo; and at six miles from the mouth of the river the spring-tides flow five feet above the level of the adjacent lands.

This would be effectually prevented by the dam before mentioned; and by cutting proper lateral drains, the whole district might be advanced in value 10s. or 15s. per acre: and all this might be done at an expence which two years profit would reimburse. Nothing is necessary but effectual draining to make it as good land as any in the county. It requires no dung, or any extraneous manure, but may be kept in good heart by the contents of the ditches.

To the northward of this district lie the parishes of Kenn, Kingston-Seymour, Clevedon, Nailsea, Chelvey, and Claverham, possessing near four thousand acres, alike subject to inundation.

These parishes are secured from the sea by a wall built with stone and lime, and elevated ten feet above the level of the land within. High tides sometimes overflow this wall, and when a strong westerly wind prevails, at the equinoxes, the wall is frequently broken down by the impetuosity of the waves, and large portions of the land are covered.

Should this happen at the autumnal equinox, little injury is done; but if at the vernal, it kills the best grass, and the crop of the ensuing summer is worth but little. These lands discharge their waters by two rivers, called the Little Yeos.

At

At the mouth of these rivers are sluices, such as before described, which prevent inundation *from the sea*; but being not made deep enough at their outlet, and the rivers, by which the waters are conveyed, not being properly bottomed, the country is subject to frequent *land-floods*. This level is susceptible of the same improvement, by a complete drainage, as the former. At the south-west of this division lie the parishes of Churchill, Hutton, Banwell, Locking, Weston-super-Mare, and Uphill. These lands are for the most part occupied by dairy or grazing farmers, and are subject to frequent overflowings of the river, which runs through a dam or sluice at Uphill. It is presumed, that if the bed of the river at Uphill, and the sluice through which the water is discharged, were deepened three feet, the evil would in a great degree be removed.

Proceeding northward from hence you ascend Leigh-down. This is a tract of elevated land, extending from Clevedon to the Hot-Wells, near Bristol. It is principally fed with sheep, and consists of nearly three thousand acres. A large portion of this down will not admit of cultivation, the lime-stone rock being within two or three inches of the surface. It is probable that this land will pay more as pasture than any other way. But the chief inconvenience arises from the unlimited right of stocking, by which it is burthened with double the number it ought to have; the breed of neat cattle is greatly injured; and, in respect to sheep, the quantity of wool lessened. To illustrate this observation, respecting over-stocking, I shall state a case in point. A farmer of this district, some years since, put twenty-five head of steers and heifers into a piece of commonable land: the spring being unfavourable to the purchase of cattle, and a considerable fatality having prevailed the preceding winter, the common was *moderately* stocked; in consequence of

which a profit of two pounds per head was made between the months of April and November. Encouraged by this success, and flattering himself with the prospect of similar profit, he purchased the next year one hundred head; but others following his example, he, to his great mortification, found that, instead of profit, he suffered a loss of nearly one hundred pounds.

From these premises, may it not be fairly inferred, that the *inclosing* and *dividing* of commons, even in cases where the plough cannot prudently be introduced, are beneficial both to the individual and the public; as the owner can then apportion his stock to the quantity and quality of his land, and can have them at all times under his eye? But of this subject more by and by.

SECT. 5. *Minerals, &c.*

The Mendip hills are famous for their mines, particularly of lead and lapis calaminaris. The former are nearly exhausted, or at least the deep working is so incumbered with water, that little can be done, and in all probability millions in value may remain concealed in the bowels of this mountain, 'till spirit enough be found in the country to perforate it by cutting a level, or audit, through its base, namely, from Compton-Martin to Wookey-Hole.*

* A plan similar to this has been talked of in a general way for several years past, but no regular system has been formed. It might eventually prove highly productive to the adventurers; and, whether taken in a provincial or national view, be of great utility. The risk is certainly small, the advantage possibly great. But there are many concomitant circumstances which call for mature deliberation and able digestion; such as the consent of the proprietors of land, the authority of Parliament, compensation to the owners of pitches already made agreeable to the laws of the forest, the incorporation of a company, the appointment of a treasurer, clerk, manager, committee, &c. It will also, most probably, be expected by the proprietors of land, that
more

The distance is about five miles, and the depth from the surface about one hundred and fifty yards; such a tunnel would not only convey off all water, but the driving it, or the sinking of the shaft or perpendicular pits, might lead to a discovery of veins of lead hitherto unexplored, and perhaps as valuable as that now at West-Chewton, which, tradition says, yielded 100,000*l.* within the space of an acre. What the expence of such an adventure might be, I cannot exactly ascertain; but, for argument sake, let us suppose it to be 100,000*l.*—A thousand subscribers, at 100*l.* each, would suffice; and as no great number of men can, for want of room, be employed at the same time, I would propose that the principal money be vested in government securities, and the *interest* only expended; this would keep in constant pay more than one hundred workmen, and in all probability, before 10,000*l.* were expended, discoveries would be made highly beneficial to the adventurers, and to the publick; and, even under the worst supposition, the only loss would be that of the interest of 100*l.* to each individual.

In times past many thousands a year have been annually paid to the fee of Wells for the lord's share (that is, one tenth) of the lead dug on the forest within the parish of Wells only; and is it not more than probable, that lead, like coal, may be most valuable in the deep? On Broadfield-down there are also veins of lead; and in the parishes of Rowberrow, Shipham, and Winscomb, there are valuable mines of lapis calaminaris. This mineral is sometimes found within a

more than one level be driven, that all might have an equal chance of benefit. Such expectation appears reasonable, and from the small number of workmen that can possibly be employed on a level at the same time, the interest of the capital will be fully sufficient for carrying on, not only the principal one, but also two or more others, from different points, to those parts where, from the antient working, there is good cause for expecting to meet with ore. R. PAGET.

yard of the surface, and seldom worked deeper than thirty fathoms. Between four and five hundred miners are constantly employed in this business, and the average price is about five pounds per ton. In the parishes of Compton-Martin and East-Harptrey are also many mines of a similar nature, and a considerable number of men are constantly employed therein.*

The general method of discovering the situation and direction of these seams of ore (which lie at various depths, from five to twenty fathoms, in a chasm between two benches of solid rock) is, by the help of the *divining-rod*, vulgarly called *josing*; and a variety of strong testimonies are adduced in support of this doctrine. Most rational people, however, give but little credit to it, and consider the whole as a *trick*. Should the fact be allowed, it is difficult to account for it; and the influence of the mines on the hasel-rod seems to partake so much of the marvellous, as almost entirely to exclude the operation of known and natural agents. So confident, however, are the common miners of its efficacy, that they scarce ever sink a shaft but by its direction; and those who are dexterous in the use of it, will mark on the surface the course and breadth of the vein; and after that, with the

* There are marks and indications of calamine from these parishes in the west, through the whole tract of Mendip to Mells at the eastern extremity. At Merchant's-hill, in the parish of Binegar, several tons were raised some years ago. It was of very good quality, and more would have been landed, had not the influx of the water put a stop to the works. At the same time a large quantity was raised at Mells, remarkably pure, free from heterogeneous mixture, and of excellent quality. It did not there descend, in regular courses, between the lime-stone rocks, but was found in large masses or hulks, lying horizontally, at about four or five feet from the surface, on a thin scale of free-stone which covered the rock; and it is highly probable that much more remains to be discovered. R. P.

assistance

assistance of the rod, will follow the same course twenty times following *blindfolded*.

At the request of many gentlemen I have annexed

The LAWS and ORDERS of the MENDIP MINERS,
commonly called LORD CHOKE'S LAWS.

Be it known, that this is a true copy of the inrolled, in the king's exchequer, in the time of king Edward the IVth of a debate that was in the county of Somerset, between the Lord Benfield, and the Tenants of Chewton, and the Prior of Green-Oare: the said prior complaining unto the king of great injuries and wrongs that he had upon Mendip; being the king's forest, the said king Edward commanded the lord Chock, the lord chief justice of England, to go down into the county of Somerset, to Mendipp, and sit in concord and peace in the said county concerning Mendipp, upon pain of high displeasure. The said lord Chock sat upon Mendipp on a place of my lords of Bath, called the *Forge*; where (as he commanded all the commoners to appear, and especially the four lords royals of Mendipp; that is to say, the bishop of Bath, my lord of Glaston, my lord Benfield, the earl of Chewton, and my lord of Richmond, with all the appearance, to the number of ten thousand people) a proclamation was made, to enquire of all the company how they would be ordered; then they, with one consent, made answer, that they would be ordered and tryed by the four lords of the royalties; and then the four lords royal were agreed, that the comminers of Mendip should turn out their cattle at their out-lets, as much the summer as they be able to winter; without hounding or pounding, upon whose grounds soever they went to take their course and recourse. To which the said four lords royal did put their seals; and were also agreed, that whosoever should break the said bonds should

should forfeit to the king a thousand marks, and all the comminers their bodys and goods to be at the king's pleasure or command that doth either hound or pound.

The old ancient occupation of miners in and upon Mendipp, being the king's forest of Mendipp, within the county of Somerset, being one of the four staples of England, which have been exercised, used, and continued, through the said forest of Mendipp, from the time whereof no man living hath not memory, as hereafter doth particularly ensue the order.

1. *First*, That if any man, whatsoever he be, that doth intend to venture his life to be a workman in the said occupation, he must first of all crave licence of the lord of the soyle where he doth purpose to work, and in his absence, of his officers, as the lead-reave or bailiffe, and the lord, neither his officers can deny him.

2. *Item*. That after the first licence had the workman shall never need to ask leave again, but to be at his free will to pitch within the forest, and to brake the ground where and in what place it shall please him, to his behalf and profit, using himself trustily and truly.

3. *Item*. If any man that doth begin to pitch or groof shall heave his hackes through two ways after the rake. Note, that he that doth throw the hacke must stand to the girdle or waist in the same groof, and then no man shall or may work within his hackes throwe, provided always that no man shall or can keep but his wet and dry groof and his mark.

4. *Item*. That when a workman have landed his oar, he may carry the same to cleansing or blowing to what minery it shall please him, for the speedy making out of the same, so that he doth truly pay the lord of the soyle where it was landed his due, which is the tenth part thereof.

5. *Item*.

5. *Item.* That if any lord or officer hath once given licence to any man to build, or set up any hearth or washing-house, to wash, cleanse, or blow oar, he that once hath leave shall keep it for ever, or give it to whom he will, so that he doth justly pay his lott lead, which is the tenth pound, which shall be blown at the hearth or hearths; and also that he doth keep it tennantable, as the custom doth require.

6. *Item.* That if any man of that occupation doth pick or steal any lead or oare to the value of thirteen-pence half-penny, the lord, or his officer, may arrest all his lead-works, house, and hearth, with all his groofs and works, and keep them as safely to his own use; and shall take the person that hath so offended, and bring him where his house is, or his work, and all his tools or instruments to the occupation belongs as he useth, and put him into the said house, and set fire on all together about him, and banish him from that occupation before the miners for ever.

7. *Item.* If that person doth pick or steal there any more, he shall be tryed by the law, for this law and custom hath no more to do with him.

8. *Item.* That every lord of the soyle ought to keep two miner-courts by the year, and to swear twelve men of the same occupation for the redrefs of misdemeanors touching the mineries.

9. *Item.* That the lord or lords may make and grant manner of arrests, viz. First, for strife between man and man, for their works under the ground or earth. Secondly, for his own dutys for lead or oare, wheresoever he findeth it upon the same forest.

10. *Item.* That if any man, by means of misfortune, take his death, as by falling of the earth upon him, by drawing or stifeling, or otherwise, as in time past many have been,
the

the workmen of the same occupation are bound to fetch him out of the earth, and to bring him to christian burial at their own costs and charges, although he be forty fathome under the earth, as heretofore hath been done, and the coroner, or any officer at large, shall not have to do with him in any respect.

COAL.

This district abounds with coal, and with respect to this article is reducible to the separate divisions of Northern and Southern. The former, including the parishes of High-Littleton, Timsbury, Paulton, (with Clutton and Sutton adjoining to the west, and Camerton and Dunkerton to the east of the district) Radstock, and the northern part of Midsummer-Norton. The latter, the southern part of Midsummer-Norton, Stratton on the Foss, (Halcombe and Ashwick adjoining the district) Kilmerfdon, Babington, and Mells.

These, meaning the *latter*, are what were heretofore known by the name of Mendip collieries, and probably they were once within the verge of that extensive forest, though now in the midst of old inclosures. They being still frequently described in ordinary books of topography by the same name, (now obsolete in the neighbourhood) this remark was thought necessary for the purpose of identification.

In the Northern collieries the strata of coal form an inclination of the *plane* of about nine inches in the yard: these are in number nineteen. In thickness variable, from ten inches to upwards of three feet. If less than fifteen inches, they are seldom worked. Coal is now working generally from seventy to eighty fathoms in depth: in a few places deeper; and by a late introduction of machinery to raise it
by

by the steam-engine, a much greater depth of working will be obtained.*

Profits of working in the aggregate, by no means equal to the extent and risque of the adventure; to a few works considerable; to the majority very moderate.

The coal is of prime quality; pure and durable in burning; firm, large, and of a strong grain; which ensures its conveyance to almost any distance, without injury to its appearance or quality, which cannot be exceeded in any part of the kingdom. Bath is the principal market of consumption; to which may be added, the western parts of Wiltshire, and the next adjacent parts of Somersetshire. The quantity now raised is from fifteen hundred to two thousand tons weekly. A much greater can be supplied, should an increased demand require it. Boys and men, to the number of fifteen hundred, are employed in working it, with wages sufficiently adequate to procure them a comfortable subsistence.

An application is intended to be made to parliament at the ensuing session, for leave to cut two branches of a canal for the accommodation of the collieries of this northern district, to communicate with the rivers Avon and Kennett.† Should the bill pass, a considerable extension of sale may be reasonably inferred. The permanence of the works is

* As it may be a matter of consequence to all such coal-works whose situation in regard to water will admit of it, it ought to be noticed, that at Welton, a work in the northern part of Midsummer-Norton, the coal has lately been drawn up by a water-wheel on a new construction; the machinery appendant to which is so contrived as to answer the purpose in the most perfect and cheap manner; the use of horses, as in the old way, being entirely superseded; and the consumption of fuel, as in the new way by the steam-engine, altogether saved. R. P.

† This act has been obtained; and the canal is now (Jan. 1797) nearly half finished.

amply secured by various contrivances, in preventing the admission of the springs into the deep working.

The number of works twenty-six. The owners of the freehold from whence the coal is raised generally receive an eighth of the gross receipt of sale; but, to encourage the proprietors to greater depths of working, have occasionally complied with a proportionable reduction of this quota, on account of the increased expences in working; whereby they have derived a profit from coal, which otherwise would have been irrecoverably lost. Some, through ignorance and stubbornness, have withheld this concession, and thereby incurred the loss.

Average price of coal five-pence per bushel at the pit, (nine gallons measure.)

The Southern district is on a more limited scale of working. The strata of coal form an inclination of the plane from eighteen to thirty inches in the yard; in some the plane is annihilated, and they descend in a perpendicular direction. There are in number twenty-five; in thickness from six inches to seven feet; seldom worked under eighteen inches; in depth from thirty to sixty fathoms at the present working. By the steam-engines, which are now erecting in this district, a much greater depth will be attained. Profits in the aggregate of working very trifling, if any, owing to the consumption of timber, and the expence of drawing water. The coal of various quality; some nearly equal to that of the northern district; but the greatest part less firm, of shorter grain, and less calculated for distant carriage; but free to burn, wholly divested of sulphureous stench, and durable. The small coal excellent for the forge, and when reduced to a cinder, called *coke*, by a process of very ancient usage, it furnishes a fuel for drying malt, which, from its purity and total exemption from smoke, cannot be excelled,
if

if equalled. The south-western parts of Wiltshire, the northern of Dorset, and the east and southern parts of Somerset, are the markets for consumption.

The quantity now raised is from eight hundred to a thousand tons weekly, which, in the course of a few years, might be extended to two thousand tons, if sale could be found. Boys and men employed at present amount to from five to six hundred. An improved method of working has been lately adopted in some parts of this district, by which the springs are prevented from inundating the deep working; whereby its extent and duration will be considerably promoted.

A canal to the works in this district, which might be cut at an easy expence, has been for some time in contemplation;* and which not only would benefit the proprietors of the works, by extending the consumption, but also reduce the price to the more distant consumers more than half.

The average price of coal in this district is three-pence three-farthings per bushel.

Should the works in the Northern district be stopped, the probable increase of the poor-rates would be 2000*l.* per annum. In the Southern (much more burthened with poor) to seven or eight shillings in the pound.

At Clapton also, a village lying to the north-west of Leigh-Down, there is a coal-work which possesses the advantage of a land-level of forty-four fathoms. At this pit are landed about 240 bushels daily. The best coal is sold at three-pence halfpenny per bushel, and the small is shipped at Portishead-point for Wales, where it is used for burning lime.

* This is now (Jan. 1797) in execution, and the tonnage, &c. of coal to Frome (nine miles) will not exceed 2*s.* per ton.

South-east of Leigh-Down is a vale of rich grass land, extending from Bedminster at the north-east, to Brockley and Nailsea at the south-west.

Under this level are supposed to be inexhaustible veins of coal. At present they land 2500 bushels a day. The best coal is sold at three-pence halfpenny, the middle sort at three-pence, and the small at two-pence, per bushel. One of the works is under contract to serve the glass-houses, some time since erected in the parish of Nailsea, at one penny farthing per bushel.

These glass-houses consume about 2000 bushels weekly. The deepest work is forty-two fathoms. The principal vein is five feet thick; sometimes more. The coal takes a south *pitch*, or inclination, never exceeding two feet in a fathom. Little timber is used; but they are much incommoded with water; for the rock which lies above the coal so abounds with fissures, that it is difficult to prevent the *land water* from pervading the bottom of the works.

When the top veins are exhausted, and the proprietors compelled to go deeper, it is a matter of doubt whether any power of a steam-engine may be competent to the task of keeping them dry.

Many people are under alarming apprehensions lest the coal-mines may be exhausted by the extra demand produced by the extension of sale established by the canals;—but such disquieting ideas will vanish, when they are told that more than treble the present quantity could be raised from the pits already in use, did the demand require it; and the increased quantity might be supplied for several hundred years.

CHAPTER II.

STATE OF PROPERTY.

Estates and Tenures.

THERE are in this district many large proprietors from 2000l. to 6000l. per annum; but still the greatest part is possessed by the middle class, holding from 50l. to 500l. per annum. Part is leased out on lives; part is in demesne, and let out for short terms; and no small quantity is the fee of the occupiers, constituting a most respectable yeomanry.

To those who are sensible of the importance of agriculture to society, a contemplation of the causes which have principally contributed to its advancement in this county cannot but be highly interesting. And foremost, we may safely rank, the *alienation of property*, whereby lands, heretofore neglected and comparatively barren, have been advanced from such their unproductive state to a condition highly fertile and productive. Next, the increased population and extension of manufactures; together with the enlargement of the city of Bath.

Certain lands now held by their ancient tenures, and consequently but little improved, present a lively portraiture of the former disgraceful state of the county, when contrasted with its present state of comparative perfection.

CHAPTER III.

BUILDINGS.

THERE are many splendid gentlemen's seats, ornamented with extensive plantations, in this district; and the farm-houses and cottages are for the most part commodious and comfortable—but on all the dairy farms, a shameful inattention prevails, in respect to out-houses and sheds for their stock to retire to in the winter months. Cattle are almost universally served with their provender in the field; and many a dairy farmer, with twenty cows, scarcely makes, in the whole winter, a quantity of dung sufficient to manure *one acre* of land. Corn being generally stacked, the barns are small, and principally *thatched* with wheat-straw unbroken by the flail, which gives to the roof a very neat appearance, and renders the building perfectly secure from rain. It has been of late too much the practice for parish-officers to prostrate cottages, and to lessen as much as possible the number of inhabitants in their respective parishes; this absurd and narrow-minded system has received vigour and extension from the prevailing custom of making the tenant pay the poors levy. It is, however, a practice which cannot be too strongly reprobated; and the ill effects of it have been so masterly depicted by Mr. *Kent* and other authors, that I shall not fatigue the reader with a repetition of their arguments. On all the new inclosures (which for the most part are situated at a distance from the inhabited villages) the erection of cottages appears *indispensible*, as without them, the waste of time in going forward and backward to and from work amounts to nearly a quarter part of the day.

It might also be added, that many of the cottages now in use are on too small a scale. Few of them have more than
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one room above stairs. This is not only uncomfortable, but inconsistent with that decency and modesty, with the importance of which children cannot be too early or too strongly impressed.

The rent of these cottages varies from thirty shillings to fifty shillings per year, including a small portion of garden-ground.*

* It is but of little permanent utility to the cottagers to give them garden-ground, unless you supply them annually with a certain portion of manure. J. B.



CHAPTER IV.

MODE OF OCCUPATION.

SECT. I.—*Size of Farms. Character of Farmers.*

THE Farms in this district are not large, seldom exceeding 200l. per year, and accompanied with a small proportion of arable. Some of the dairy farms are so small, as not to exceed 60l. or 70l. per year; and many instances can be produced of such little farmers breeding up a large family in a very respectable way. In such instances, it is generally found that the wife undertakes the whole management of the cows, and the husband goes to daily labour. There are few trades in which a small capital can be employed to greater advantage than this. As to the general character of farmers, truth compels to say (and I mention it with regret) that there is a great want of justice, candour, and liberality, in their conduct towards their landlords, and in their general system of management. If not closely watched, they will impoverish their estates by selling the little straw they grow to the adjacent towns; and though dung of the best kind may be bought, both in Bristol and Bath, for 3s. or 4s. a waggon load, they scarcely ever take any back to their farms.

They are also much bigotted to old customs; and I hope I am not uncharitably severe, if I add, that they are too justly chargeable with a disregard of truth. This is the forerunner of all vice, and to the prevailing custom of telling lies at fairs, may be attributed the loose morality of farmers in this most essential part of human responsibility.

It must be acknowledged that there are many exceptions to this general observation.

SECT.

SECT. 2.

Rent is universally paid in money; and it is generally customary to receive the Michaelmas rent at Lady-day, and the Lady-day's rent at Michaelmas. No personal service is exacted.

SECT. 3.—*Tithes.*

I must beg leave to wave a discussion of this difficult though important subject. Suffice it to say, that if they are a grievance, (which I believe few will dispute) it is a grievance established by the laws of the land, and no violent or harsh methods of relief can be justified. In respect to their influence on the agriculture of *this district*, I see but little to complain of: both the clergy and the lay-impropriator have been so moderate in their demands, and in general have agreed to so reasonable a composition, that the progress of improvement has received but little check on this account.

There is one method by which I think tithes might be fairly and honourably got rid of, and that is by *purchase*. The unappropriated tithe-holder could have no just reason for complaint if he were paid a fair value for his property; and the clergy might *at this time*, from a fund established under the direction and controul of the legislature, and guaranteed by government, enjoy such an increase of annual income as would be a sufficient compensation for any supposed advance in the different articles of human support, convenience, or comfort.

SECT. 4.—*Poor-Rates.*

In respect to the county of Somerset, the poor's levy is a more alarming grievance than tithes.

Many parishes, which within twenty years past paid no more than 50*l.* per annum to the poor, now pay 200*l.* and unless some plan of prevention be adopted, the evil is not likely to abate. This increase of the poor's rate has been *general*, and may be attributed partly to an increased population, and partly to a growing dissoluteness in the manners of the poor, which ever accompanies national improvement. Active exertions in this way cannot fail to produce a scarcity of labour; and to this, as naturally follows, an advance of wages; but the misfortune is, that such an advance is not accompanied with a growing disposition in the workman to maintain, in a more comfortable way, his wife and family, or to lay by against a time of need. No; if he can earn eight or nine shillings in *four* days of the week, the remaining *two* days are devoted to pleasure, or luxury, and the wife and children are in a worse situation than when more moderate wages compelled him to constant work.

I have known many instances, where the wages of a collier and his family, not exceeding five persons, have been twenty-five shillings per week, and their improvidence has been such, that one week's illness has brought them to the parish for assistance.

I can also look back to the time, when a commendable degree of pride operated on the minds of the lower class, and withheld them from applications to the parish for relief, unless in great distress.

This pride, I am sorry to say, is totally lost, and the boon is now administered by the parish-officer, with *caution* and *reluctance*; and received by the poor, with *dissatisfaction* and *ingratitude*. From what I have said, let it not be inferred, that I wish to depress the poor, or to debar them of that comfort, which their usefulness in society intitles them to enjoy. No sight can be more pleasing to me, than to see

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an industrious cottager, returning from his daily labour, with a chearful countenance, and viewing his wife and children with complacency and delight; and I would contribute to their happiness as much as in me lies, by humbly recommending to our legislators a serious perusal of a pamphlet, published some years ago, entitled, *Twenty minutes Advice on the Poor Laws*. By the plan there suggested, I verily think the situation of the industrious poor might be meliorated, and the idle and dissolute be made to contribute towards their support.* All those who are conversant with the state of the lower class of society, must know that the period of life in which a workman most suffers, is when he has five or six small children. Then it is that the support of the whole family depends on the father's labour, and his utmost exertions is scarcely sufficient to procure them bread; should sickness befall him, he must contract debts; and should this repeatedly happen, before he has extricated himself, his spirits are broken, and the love of freedom and independence no longer exists. A degree of torpor and inactivity succeeds, from which he scarcely ever emerges. To the man in this situation, I would, if possible, administer relief; and the best method I can suggest is, that of encouraging, by the authority of parliament, *Friendly Societies*, under the regulation of which, the *batchelor* might be made

* The practice of farming out the poor seems to require correction. It is no less disgraceful to the feelings of humanity than repugnant to the purest policy. To preserve virtue, its native dignity should be countenanced in every order of society, and particularly in that class whose industry supplies succour, and whose content promotes peace throughout the nation. But how can this be effected by rendering them dependent for subsistence upon one, who is appointed their provider, only because his terms for their support are less burthensome to the parish, than those of his competitors for this office? G. F.

to contribute to the support of the *married*; this would in some degree check that disposition to celibacy, which is but too apparent among the lower orders of mankind; and would add to the comfort of wedlock, and to the population of the realm.

A progressive, and too liberal increase of wages for daily labour, will lessen the *quantum* furnished, and will only tend to increase the dissolute manners of the poor; whereas, the plan suggested by the author of the before-mentioned tract would, *I humbly think*, be attended with the happiest consequences, both in an individual and a national sense; and I hope the time is not far distant, when this institution, or something similar thereunto, may commence, and the poor be extricated from their present dependance on the scanty bounty of a parish-officer; and entitled to claim a support from a fund to which they have contributed, and to part of which they will have a legal and incontrovertible right.

The following are the leading features of Mr. PEW's plan for the maintenance of the poor, as contained in *Twenty Minutes Advice*, before referred to, by which it is supposed that two millions per annum may be saved to the landed interest, and the poor better maintained than they now are:

Clause 1st. That a proper officer be appointed for such an extent of district as he may be supposed conveniently to superintend, to take a list of the names and places of abode of all males above the age of eighteen, and of all females above the age of seventeen years, in the same manner as the list is made out for the militia.

2d. That every such male pay two-pence per week, and every such female three-farthings or one penny per week, into the hands of the above officer, for the purposes hereafter to be specified.

3d. The

3d. The above officer shall be empowered to furnish employment for all such as are willing to work, and who cannot find it for themselves.

Whether this officer should be chosen annually, in rotation, after the manner of an overseer, or whether he should be a permanent officer, upon an adequate salary, will be a matter of future consideration; but if the latter, he should be paid by the community, and not out of the fund.

4th. All the poor being thus sure of employment, the master or mistress for whom they work should be justified in retaining these sums respectively out of their wages; and whether they do so or not, they should (in default of the individual) be answerable to the officer for its payment: all masters and mistresses of families should in like manner be answerable for their servants; and all keepers of lodging-houses, &c. for their inmates.

5th. These sums should be carried weekly to the general treasurer of the *division*, who should give sufficient security for the same.

6th. Out of this fund, every male, who is really incapable of labour, should (by virtue of a certificate from the above officer) have a *right to demand* from the treasurer five shillings per week for the first six months, should his illness last so long; and four shillings per week after that period, until he again become capable of labour.

Every female should have a *right to demand* two shillings and six-pence per week for the first six months, and afterwards two shillings per week until she was again able to work; she should also be entitled to four weeks full pay at every lying-in.

Every male above the age of sixty-five years, whether capable of labour or not, should be entitled to four shillings per week during life. Every female should, after the same

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age, be entitled to receive two shillings per week during life.

7th. Any person having three children under nine years of age, should be entitled to one shilling and six-pence per week, until the eldest should have attained the age of nine years; and if he has more than three under that age, he should be entitled to one shilling and six-pence per week for each above that number; and if any one or more of his children should happen to be idiotick, insane, or otherwise so far disabled, either in body or mind, as to be utterly incapable of labour, each of them should still be considered as under the age of nine years, and paid for accordingly.

If a mother should be left a widow, with three children under nine years of age, she should be entitled to receive five shillings; if with two children, three shillings; and if with one child, one shilling and six-pence per week; if with more than three, under that age, one shilling per week for each above that number: it being admitted that all her time is taken up by three, and allowance made for it, but that she is capable of looking after and taking care of a greater number. The wives of men serving in the militia, and in the army or navy, should, during the absence of their husbands, be considered and provided for in all respects as widows.

If a child should be left an orphan, under nine years of age, two shillings per week shall be allowed from the fund for its maintenance; if more than one of the same family, one shilling and six-pence per week for each above that number. As there is probably no less friendship amongst the lower than amongst the higher orders of society, it would generally happen that some friend or relation of the deceased would gladly take charge of the children, provided they could do so without essential loss to themselves: this regulation would effectually prevent that loss; and to compensate, in some degree, for the want of parental affection, six-pence

pence per week more is allowed for the maintenance of an orphan, or a family of orphans, than for a child, or family of children, who still retain their mother. If, however, any beings should be so *uncommonly unfortunate* as not to be thus *adopted*, the officer above-mentioned should be obliged to provide a receptacle for them, which he will always be able to do for the sum or sums above-mentioned.

8th. All children above nine years of age, if in health, should, if they have no parents, or their parents are not able to provide for them, be put out after the manner of parish apprentices.

9th. All persons neglecting or refusing to pay their contribution, should be committed to hard labour, in the house of correction, for the space of —.

10th. If the fund should at any time fall short of the necessary demands upon it, the deficiency should be made up by a *parish-rate*, collected in the same manner as at present, but without any sense of obligation on the part of the *multitude*, (for there would be *no poor*) who should in all cases receive their relief *in the nature of a demand*.

11th. If the fund (as most probably would happen) should increase beyond the necessary demands upon it, the surplus should on no account be diverted to any other purpose than the benefit of the subscribers. But when the price of grain exceeded that which brings it easily within the reach of the multitude, (suppose 6s. or 6s. 6d. the Winchester bushel) every person who had three children, or more, under nine years of age, should have a right to *demand* such a sum as, in proportion to the number of his family, would reduce the various necessary articles of life (taking wheat as a standard) to a moderate price; and, indeed, I think, in all cases when the price of grain exceeds that proportion at which the *industrious labourer* can afford to come to market, *sound policy*,

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as well as *common humanity*, requires that all large families should be intitled to receive such a sum as above specified, *although it should be necessary to collect a rate for the purpose.*

SECT. 5.—*Leases.*

Many estates in this district are held by leases for three lives, with quit-rents and herriots, but the greatest part is held for term of years, viz. fourteen, seven, and three years; and some from year to year.

Some gentlemen, from the best of motives, have been long in the habit of letting their estates at the old rents, though the price of the articles of produce has, in the course of thirty years, advanced one third at least.

How far such acts of kindness may be considered as just to a man's family, or conducive to the publick weal, I much doubt. From the experience which I have had in the agricultural world, I have invariably found lands so occupied in a much worse state than those of neighbouring farmers moderately advanced.

An equitable partition of the advantages resulting from an increase of trade and population cannot by any reasonable tenant be objected to. The one system produces care and exertion, and the other indolence and sloth.

The following are some of the common

CLAUSES IN LEASES.

1st. Not to convert into tillage any pasture or meadow land without leave: nor to have more than one half the estate in tillage at one time; and of that half, *one third* at least either to *fallow*, or what is commonly called a fallow-crop, viz. turnips, &c.

2^{dly}. To feed and mow the grafs alternately.

3^{dly}. Not to pare or burn any land without leave.

4^{thly}. Not

4^{thly}. Not to plant potatoes for *sale* without leave.

5^{thly}. To spend all the hay and straw on the premises, and to leave all the dung and straw to the succeeding tenant, without any acknowledgment.

6^{thly}. Not to let any parcel of the land to any under-tenant without leave.

7^{thly}. To keep the messuage, dwelling-house, barns, stables, &c. in good repair, on being allowed rough timber and the labour of the thatcher.

8^{thly}. To pay all taxes and assessments, land-tax excepted.

9^{thly}. Not to cut down or lop timber trees, or lop pollards, without leave.

10^{thly}. To permit the lord, or his assigns, to search for mines, and to hunt or shoot on the premises.

11^{thly}. If pasture land be converted into tillage, the same shall, the first or second year, be manured with not less than one hundred bushels of lime per acre; and after such manuring to have two crops of corn only, and with the second crop to be sown down in a husbandry-like manner with artificial grasses.

12^{thly}. At the conclusion of the lease to leave a sufficient quantity of tillage to the succeeding tenant, well fallowed, in a husband-like manner, by proper ploughing, for which the in-coming tenant shall pay a proper acknowledgment.

13^{thly}. To keep all the fences, gates, stiles, &c. in good repair, and to leave them so at the end of the term.

14^{thly}. To prosecute, if called upon by the landlord, all persons trespassing on the estate, by hunting, shooting, fishing, &c. compensation being made to him by the landlord for all expences incurred by such prosecution; to which are added other common covenants.

SECT. 6.—*Expences and Profit of sixty Acres of Grass Land.*

DAIRY-FARM,—TWENTY COWS.

DEBTOR.		£.	s.	d.
To rent of sixty acres, at 30s. per acre	—	90	0	0
To tithe and taxes	—	20	0	0
To the labour of the family serving cattle, utensils, salt, and all other articles, 30s. per cow	—	30	0	0
To hay-making, &c. twenty acres	—	10	0	0
*To manure	—	10	0	0
To repair fences	—	2	0	0
To accidents with cows	—	10	0	0
To interest of capital	—	10	0	0
		<u>£182</u>	<u>0</u>	<u>0</u>

CREDITOR,				
By 70 Cwt. of cheese, at 2l. 10s. per Cwt.		175	0	0
By butter	—	20	0	0
By calves	—	20	0	0
†By hogs	—	30	0	0
		<u>Creditor</u>	<u>245</u>	<u>0</u>
		<u>Debtor</u>	<u>182</u>	<u>0</u>
		Profit	£63	0

* This charge rarely occurs.

† Though it is not generally practised, a *breeding* stock of hogs must be considered as more profitable on a cow-farm than a *fattening* stock. The whey and skimmed-milk constitute a food well adapted to the rearing of a thriving stock; and the writer has known many instances of a farmer's selling, at six months old, a litter of pigs for more than thirty pounds; and this was done from the whey, &c. of ten cows, and without the assistance of corn, any farther than the run of the farm-yard, and when pig-meat was only 7s. 6d. per score.

The expences and profits of a *corn* farm, or a farm in *mixed husbandry*, are so variable, that it would be difficult to fix a standard. The old idea of the produce amounting to *three rents* would not do *now*, for the expences of living, of taxes, of wages, &c. are of late years so much increased, that the value of the produce must be augmented in proportion.

One remark, however, may be made, namely, that it is universally admitted by all stewards, that *dairy* farmers pay their rent more punctually than *corn* farmers.



CHAPTER V.

IMPLEMENTS.

THE waggons in general use are small, compact, and well made: narrow-wheeled weighing from 15 cwt. to 20 cwt.; the six-inch wheels from 25 cwt. to 30 cwt.; the latter drawn with six horses, in pairs.

Some years ago waggons of this description were made 5 or 6 cwt. heavier than they are now. The reduction of the weight, particularly to those who are common carriers, is highly advantageous, being not less than fifty pounds per year gained by each team constantly employed on the road; and if made with good materials, a light waggon will last as long as a heavy one.

Price of a narrow-wheeled waggon twenty-six pounds: Six-inch wheel thirty-six pounds; axle-tree most commonly of wood. The carts generally used for the purposes of husbandry run on broad wheels, and hold about four quarters, or thirty-two bushels, Winchester; price about nine guineas: but for road use, light carts, drawn by one horse, are coming into fashion, and are found the most advantageous. Price about four guineas.

The ploughs commonly used are strong single ones; sometimes with one small wheel, sometimes with a foot only. The great length of the mould-board occasions too much friction, and it cannot be deemed a good implement; but prejudice is strongly in its favour, notwithstanding considerable pains have been taken to shew the superiority of other ploughs.

There are many winnowing machines in use, but not a threshing machine in the whole county. The harrows are
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no waye singular in their construction, they are, by good farmers, linked three together, and drawn by three horses nearly abreast, each horse drawing a single harrow.* If any particular tool be deserving of notice, it is the *spade*, which is much narrower and longer than those used in other counties. Its length is seldom less than eighteen inches, and its breadth about six inches, the back part being gently curved to prevent adhesion to the soil.

* The method of harrowing practised by the farmers in South Devon cannot be too strongly recommended.

This operation they perform with two harrows, and two horses abreast, a lad being mounted on the near horse. The horses are kept to a *full trot*, by which one turn of the harrow pulverizes the soil as much as three or four in the common sauntering method.



CHAPTER VI.

INCLOSING FENCES, &c.

THE fences are quick-hedges, with trees at unequal distances. And where stones are easily got, and lie in a flat bed, stone walls, without cement, are built, two feet wide at the bottom, eighteen inches at the top, and five feet high; the total cost of which wall is about one shilling per yard, running measure.

I shall bring forward a comparative view of these walls, with quick-hedges, in treating of the inclosures on Mendip hills, to which I shall now proceed.

MENDIP HILLS.

This chain of mountainous land extended, according to the ancient boundary, from Cottle's-Oak, near the town of Frome, to a place called the Black-Rock, in the Bristol channel near Uphill, being a distance of more than thirty miles. A great portion of this land having been inclosed, divided, and cultivated, in the course of the last forty years, and nearly an equal portion still remaining in its open uncultivated state, I cannot forward the views of the respectable Board, under whose auspices this report will be brought forward to the publick, in a better way than by a minute description of the origin, progress, and success of those undertakings.

And first, let us begin with taking a view of the objections which have been started to this species of improvement, and see if we cannot prove them to be for the most part either false or frivolous.

1st. Invasion of the rights and interest of the cottagers.

2^{dly}. A

2dly. A supposed injury done to the breeding system.

3dly. The expences attending the act of parliament with those of commissioners, and other subordinate agents employed in its execution.

4thly. The expence of buildings, such as farm-houses, barns, stables, stalls, and pools, for the purpose of creating distinct farms, superadded to the expences of cultivation and fencing, altogether constituting an expenditure which the improved value will not reimburse.

5thly. Injury done to the woollen-manufacture, by lessening the number of sheep, and deteriorating the quality of the wool.

6thly. A supposed diminution of the rent of the old farms, to which such commons were appertenant.

The foremost of these objections carries with it the appearance of a humane attention to the comfort of the poor; but a brief investigation will lessen its influence, if not totally refute it.

There are but two modes of inclosing commons. First, By unanimous consent of the parties claiming rights, who delegate power to commissioners, chosen by themselves, to ascertain their validity, and divide accordingly, under covenants and agreements properly drawn and executed for the purpose. Or secondly, by act of parliament obtained by the petition of a certain proportion of the commoners, both in number and value, whereby a minority, sanctioned only by ignorance, prejudice, or selfishness, is precluded from defeating the ends of private advantage and publick utility.

In point of œconomy, the first of these methods is the most eligible, as it saves the expence of an act of parliament, with equal security to the proprietors. But it is seldom practised, unless in commons on a *small scale*, from the dif-

ficulty of procuring the consent of *every individual claimant*, without which it cannot be accomplished.

In either of these methods, it is manifest that the right of the cottager cannot be invaded; since, with respect to legal or equitable construction, he stands precisely on the same ground with his more opulent neighbours; and as to his interest, I can truly declare that, in all cases which have fallen within my observation, inclosures have meliorated his condition, by exciting a spirit of activity and industry, whereby habits of sloth have been by degrees overcome, and supineness and inactivity have been exchanged for vigour and exertion. No stronger proof can be given of this than the reduction of the poor's-rate, in many of those parishes, wherein such inclosing has taken place.*

Upland commons are principally depastured in the summer with sheep; and if a cottager were able to stock ever so largely, the *winter keeping*, and his total inability to furnish them with food between the fifth of April and the twelfth of May, (before which time these commons ought not to be stocked) would be such a drawback as effectually to exclude every idea of profit.

On the *moors*, cottagers within a moderate distance from the common generally turned out a cow or two, perhaps a few geese, and I believe the latter were the only profitable stock. Not one in ten rented land to raise winter subsistence. In summer, the moor commons were frequently inundated. The cattle must be removed, and temporary pasturage hired on extravagant terms. On the other hand,

* If in every bill of inclosure it were stipulated, that a certain number of cottages should be built, to which small allotments should be annexed for the benefit of poor persons, it would give a salutary sanction to the measure, and tend to lessen the poor's-rate. W. F.

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should the season be favourable, the redundancy of stock from an unlimited right of feeding, by reducing the produce of the cottager's cow so much below what it ought to be, deprives him of every real advantage.

Proprietors or occupiers of large estates, in the vicinity of a common, by turning out great quantities of stock by *day*, and taking them home to feed by *night*, have derived the only benefit which an overfed common could afford.

The cattle of the *cottager*, as well as of the *distant commoner*, under this competition, must unavoidably suffer. The latter may be recruited by occasional removal to better pasturage; the former, having none, must hire, or leave them on the common either in a stunted or starved condition. These are facts of general notoriety, on which it will not be easy to deduce (*communibus annis*) any material benefit to the cottager from stocking; but when the expence of winter support is added, the question is decided, and the presumed *advantage* is converted into a positive *loss*. For ten or twelve shillings per annum, a common right might be rented. Nothing gives with greater accuracy the value of a thing, than fair and unrestrained competition; if so, when the privilege of stocking a common for a year might be obtained for ten or twelve shillings, by a farmer in possession of means to accommodate stocking to every variety of season, what can the value be to a cottager deprived of these? Instead of ten or twelve shillings, the annual nett value of common rights *inclosed* has been from three pounds to twenty pounds per annum, which, as an unquestionable fact, establishes, without scruple or hesitation, the *private* as well as *publick* importance of the inclosing system. Most of the stocking cottagers have rights appendant to the cottages without land, under the denomination of *auster tenements*. To these, allotments are made equal in quantity,

and quality, as to farms of the greatest extent. Here, the cottage claimant, by relinquishing a privilege, injurious rather than lucrative, is placed in a better situation than the proprietor of an extensive farm, who surrenders every advantage of stocking which *capital, situation, and convenience*, give him, for an equality of allotment with the former, who has no sacrifice to make, but ignorance and prejudice, and who derives from his allotment a clear undiminished profit.

Besides, moral effects of an injurious tendency accrue to the cottager, from a reliance on the imaginary benefits of stocking a common. The possession of a cow or two, with a hog, and a few geese, naturally exalts the peasant, in his own conception, above his brethren in the same rank of society. It inspires some degree of confidence in a property, inadequate to his support. In sauntering after his cattle, he acquires a habit of indolence. Quarter, half, and occasionally whole days are imperceptibly lost. Day-labour becomes disgusting; the aversion increases by indulgence; and at length the sale of a half-fed calf, or hog, furnishes the means of adding intemperance to idleness. The sale of the cow frequently succeeds, and its wretched and disappointed possessor, unwilling to resume the daily and regular course of labour, from whence he drew his former subsistence, by various modes of artifice and imposition, exacts from the poor's-rate that relief to which he is in no degree intitled.

This description is by no means exaggerated. The parish of Wedmore, which abounded with cottage commons, and one of the largest and most opulent in this county, will illustrate its truth and justice. Within twenty years there have been inclosed upwards of three thousand acres of rich moor land, heretofore, when in commons, rendered unproductive by inundations and their consequences, six or seven months in the year, and when pascible for the remaining months,

months, of little value from being overstocked; which land is now set, with liberal allowance of profit to the occupier, from thirty to sixty shillings per acre. These inclosures are made by ditches, which, by annual cleansing and spreading the contents over the surface, afford an excellent manure, with a new and extensive source of labour of the most productive kind, whereby the poor's-rate has been reduced, or at least has not exceeded its former amount before any inclosure had taken place.*

The second objection to inclosing is the supposed injury done to the breeding system.

Few observations will suffice on this head. Commons are in general overstocked. Young cattle abridged of their food become stunted in their growth, and injured in shape and form. To restore them in these respects, by better keeping, is sometimes impracticable—always expensive. It is more than problematical with many intelligent farmers in the neighbourhood, whether, from the circumstances before-mentioned, the breeding system on an average of seasons and years has yielded any profit. But this is undeniably certain, that the same land, when inclosed and improved, will maintain at least three times the stock *breeding*, or *any other*, than it did in a state of nature. Suppose every acre of waste land in Great-Britain by inclosure were improved threefold, what would be the consequence? A declension of the breeding system? The very contrary; an extention of it very probably in the same proportion. Without breeding, can you graze or make cheese and butter? Are not these

* It may be here noted as a fact, that in most of those parishes where no inclosure of the waste lands had taken place, the poor's levy has been doubled, trebled, nay quadrupled, in the course of the last twenty years.

different modes of occupation most intimately connected with, and dependent on each other? Is not the same land convertible to all and every of these purposes, subject to the controul and regulation of the market for each? Can young stock be kept too well? Should the breeding of cattle exceed the demand, and from a reduction of price no longer pay the rent of land, will the farmer repine, because his land is susceptible of other methods of application no less beneficial? Surely not. Could he hesitate what to do, when its high state of culture would direct him either to dairy, or grazing, as attendant circumstances might require? And should the market be glutted with the produce of dairy and grazing farms, the farmer would naturally recur to breeding stock, or raising corn; so that all these articles would find their natural level, which the demand for each, whether inadequate, moderate, or excessive, would invariably regulate. But waste and uncultivated land, being solely appropriated to the breeding of stock, and not convertible to *any other purpose*, is without remedy, whenever the market is overcharged with its produce.

The same reasoning applies to hilly lands in their improved state, by substituting corn instead of dairy or grazing. From the foregoing premises, I think it may be inferred, that since commons of every description, when inclosed and cultivated, are capable of supporting at least *three times* more stock than they did in a state of nature, no serious apprehensions should prevail with respect to the diminution or injury of the breeding system. I do not mean to deny that some local disadvantages may occur; but these are too trifling and limited to merit attention, and still less to impede the progress of an improvement of the greatest national importance. The preceding remarks more particularly apply to the moor, or low lands. In addition thereto I have

have to observe, with heartfelt satisfaction, its happy effects on the *health* and comfort of the inhabitants of the adjacent villages. Agues, and low fevers, from the humidity of the air, impregnated with exhalations from the stagnant contents of the marshes, prevailed very generally during the vernal and autumnal seasons; and these for the most part were obstinate and more frequently subdued by the drought and heat of summer, and frost of winter, than by the most judicious medical treatment. Inclosing and draining have rendered these diseases as scarce in the *low*, as in the *uplands*, to the prevention whereof advance of wages (from four to six-pence per day) with constant employ arising from the same cause, have not a little contributed, by enabling the poor to *live better*, which is generally accompanied with a growing taste for comfort and cleanliness.

The third objection to inclosing, is to the expences attending the act of parliament, with those of commissioners and other subordinate agents employed in its execution.

I do not mean to contend, that rigid œconomy, and expert management, have been prominent features in this line of publick business. I am ready to acknowledge, that in some instances it has been justly chargeable with profusion, mismanagement, and unnecessary delay. In several instances within my own cognizance, the most enormous expence has been wantonly incurred in obtaining the act, nay, double at least beyond the most liberal estimate of a fair and equitable charge.

In these cases the excess arose from the attendance of supernumeraries in London, under the pretence of securing and expediting the bill, without rendering the least service in that or any other way. Charges of this sort are not subject to the controul or regulation of the commissioners, since they originate previous to their appointment; and
should

should they refuse payment, a law-suit of hazardous issue might ensue, which, if unsuccessful, would expose them to reproach from the proprietors. The blame therefore must attach to the latter, for not exercising more vigilance at the outset of the business. After passing the bill, *delay in the execution*, so as to withhold the possession of allotments from the proprietors for a year or two more than necessary, has been imputable, and with some colour of justice, to the negligence and inattention of commissioners. It must be acknowledged such conduct is truly reprehensible; since, under many inclosures, especially of low lands, of prime quality, the loss of even a year's occupation, if the inclosure be of considerable extent, might be deemed nearly equivalent to a moiety of the expence. In this neighbourhood, for some years past, this defect has been in a great measure remedied; for unless their proceedings have been interrupted by issues at law, or the inclosure has been of great extent, the commissioners have given the proprietors possession of their allotments within a year from passing the act. This dispatch requires a considerable share of judgment and exertion on the part of the commissioners, as well as sufficient leisure and activity on the part of the surveyor. Another error in management relates to the expence of meetings, which heretofore was very improperly augmented by the attendance of some of the principal commoners for purposes of festivity, without being of the least use; rather retarding than forwarding the business. This practice was general; but for some years past has been for the most part abolished, by a very judicious regulation of allowing the commissioners and their agents a certain sum per day as a compensation for attendance and expences.

The publick will be enabled to judge in what degree the expence of inclosing ought to affect its determinations under the

the present course of management, by adducing the following specimens of a moor or low land, and a Mendip or upland inclosure:

LOW LAND.

	£.	s.	d.
Act of Parliament, &c. &c.	—	510	0 0
Roads	—	450	0 0
Subdivision, Rhynes, or Ditches, 8 feet wide at top, 4 feet at bottom, and 5 feet deep. Price of digging from 1s. 2d. to 2s. per rope (20 feet)	—	850	0 0
Gates, Bridges	—	140	0 0
Commissioners (3)	—	200	0 0
Clerk	—	60	0 0
Surveyor	—	140	0 0
Award and other Law expences	—	110	0 0
Interest of Money borrowed	—	25	0 0
		<u>2485</u>	<u>0 0</u>

UPLAND INCLOSURE.

	£.	s.	d.
Act of Parliament, &c. &c.	—	306	0 0
Roads	—	350	0 0
Fences, part wall, part quick-fets	—	850	0 0
Gates, &c.	—	56	0 0
Commissioners (3)	—	200	0 0
Clerk	—	80	0 0
Surveyor	—	80	0 0
Interest of Money	—	35	0 0
		<u>1951</u>	<u>0 0</u>

Under

Under the first description, the expence of obtaining the act amounted to upwards of 500*l.* which, under proper management, would not have exceeded 300*l.* Near two miles of road; stones quarried and broken at ten-pence per load, (eight load to a rope of twenty feet) hallage, at least one shilling per rope. Two bridges made; rhynes made for draining the water and fences by ditching, for the subdivision and allotment of upwards of 800 acres. Commissioners attendance, surveyors, solicitors, and clerks bills, with every other incidental charge, all of which did not much exceed three pounds per acre. The average value of the land, under a moderate computation, may be reckoned at thirty pounds per acre.

The latter is a Mendip inclosure; quantity of land nearly as the former; a mile of road more; fences partly quick-set, partly young living stock of hazel, black-thorn, &c. and dry wall. Allotments not numerous but large, which materially curtailed the expence of fencing; road materials cheaply got. Parliamentary charges reasonable; commissioners and agents as in the moor inclosure, all of which did not exceed two pounds ten shillings per acre. The average value of the land, as ascertained by the portions sold to defray expences, may be reckoned at twenty pounds per acre.*

If facts like these be insufficient to appease the clamours of ignorance and selfishness against the inclosing system, or to enforce conviction on the unprejudiced mind, the effects of reason and argument must be altogether fruitless.

* I never before knew an instance of Mendip land in its uncultivated state selling so high; the general price is from eight to twelve pounds per acre.

That the present mode of conducting the business is susceptible of further improvement, no one conversant with the subject can deny. Yet to accomplish this, many obstacles are to be combated, and perhaps one of the most formidable is, that of its having been regarded, more or less, as a *little system of patronage*. The lord of the soil, the rector, and a few of the principal commoners, monopolize and distribute the appointments. It is well known, that bills of this sort have found their way through parliament without the intervention of a country solicitor. In cases where no opposition was meditated, the parliamentary solicitor, and a surveyor, have answered every purpose. By this, a saving was made of from sixty to a hundred pounds; but this might exclude the friend of one or more of the governing party. In some acts, *five* commissioners have been appointed; in general there are *three*; but *two* would be sufficient, with power to nominate a third under the circumstance of difference of opinion, which seldom happens; and in small inclosures, perhaps one commissioner would answer every purpose. If a country solicitor be employed, he should act as clerk to the commissioners, and save the expence of a supernumerary in that capacity. Hereby another saving would be made, without any injury to the concern. The office of surveyor is by no means inconsiderable in the aggregate of expence. This might be disposed of, under a fair competition, to the lowest given sum for executing the whole of the business, (after the act is obtained) by advertising for proposals to such effect; taking care that the contracting party be competent to the undertaking. This alteration, it is probable, would save one-third, and in some cases nearly half of a bill made out by charges in detail.

In the choice of commissioners, it is of the utmost consequence to appoint *one*, at least, in the neighbourhood of the inclosure,

inclosure, familiarized with all the varieties of the soil, with the influence of seasons, and with its local peculiarities; whereby its present value, and capacity for future improvement would be ascertained with precision, and the important office of qualifying the land executed with safety and confidence. The next in the scale of utility should be a person conversant with all the forms and routine of the business; well instructed from experience in accounts, and in the prices and different modes of fencing, making roads, bridges, gates, &c. of general and comprehensive knowledge of agriculture, both practical and speculative, and of genius to suggest such modern improvements as are best adapted to the situation and soil. Two persons, thus qualified, are fully competent to execute the office with credit to themselves, and justice to the proprietors. But should the concern suffer by the absence of either, through sickness, private business, or any other cause, a clause in the act might be inserted, empowering them, or the proprietors, to choose a third for the purpose of avoiding delay. Commissioners, whose residence is at a great distance, should (on account of the extra charges of time and travelling expences) only be resorted to as an alternative, from the impossibility of getting others properly qualified near home.

The office of commissioner is, without doubt, the first in consequence and authority, under an inclosing act, but with respect to *emolument* the very lowest. Even the clerk's bill of charges, *not* as a solicitor acting in that capacity, but as any other indifferent person did in times past, exceed twice, and sometimes three times the amount of the fees of the former. The publick have been not a little misled in their conceptions of this subject. The real fact is, that the whole of the responsibility attaches to the office of commissioner, which,

which, in pecuniary recompence, is by far the most insignificant.*

Thus have I impartially stated the defects of the present system, with their correspondent remedies. In its most improved state it will retain somewhat of imperfection, which perhaps cannot be entirely obviated.

I shall only add, that within a few years past, in the neighbourhood of Wells, an inclosure was *farmed* by an attorney of extensive practice, and well known respectability, at a sum considerably less than it would have amounted to in the usual way. The commissioners were appointed by the proprietors; the business executed with singular dispatch, and all parties interested perfectly satisfied. Fences, roads, &c. were made by the proprietors.

When the inclosing system is appreciated by its obvious tendency to increase the produce of land, and the demand for labour, to augment the rate of wages to the husbandman, and to lessen the amount of the poor's rate, it is a subject of regret and astonishment, that so few means have been devised by the legislature, either to facilitate, or extend its progress. How much is to be done this way, a general inclosure act, unfettered by tedious and expensive formalities, would speedily manifest. From the very great number of private acts which have passed within the last twenty years, such general principles might be selected for its basis, as to implicate almost every possible variety of claim, interest,

* Under the allowance of two guineas a day, the nett receipts of a commissioner, after deducting daily expences, horse-hire, &c. does not exceed twenty-four shillings; and where a servant is kept, eighteen shillings per day. This is no extravagant compensation, particularly when we reflect that the *wear and tear of constitution, clothes, &c.* are left out of the calculation.

and property. An act thus constituted might, without hazard, or injury, be entrusted to a given number of justices at the quarter-sessions, to dispense its powers, and controul its execution; and such justices, I should conceive, perfectly competent to determine on the propriety or impropriety of any proposed inclosure.

Thus a total extinction of parliamentary expence would encourage inclosing on the smallest scale, and, with advantages not to be despised, would accommodate the most extensive.

This measure, however consonant to the principles of individual benefit, and national policy, would notwithstanding have a host of adversaries to encounter.

Fourth objection.—*The expence of cultivation and buildings, such as farm-house, barn, stable, stalling, pools, &c. for the purpose of creating a distinct farm, &c. &c.*

The low land, or moor inclosures, being principally appropriated to grazing, dairy, or feeding young and poor stock, are not within the limits of this objection. It is therefore confined to the upland or Mendip inclosures.

The nature of Mendip soil, its first manure, the mode of cropping, the necessity of spending thereon the whole of its produce, of hay, straw, &c. will be severally noticed hereafter, and consequently will not be attended to in this place.

By a reference to these particulars, the necessity and advantage of buildings must be obvious, as not only contributing to the soil its utmost latitude of improvement, but also, when obtained, the means of preservation therein. Without a barn, stalling, convenient farm-yard, and pool, neither one nor the other can be accomplished.

But it may be asked, are buildings to be provided for every allotment? By no means. I do not think they are admissible, with the addition of a farm-house, on a smaller scale of land than 100 acres. The expence to accommo-
date

date this quantity with a farm-house, barn, stable, stalling, barton, pool, and pig-stye, should not exceed three hundred pounds.

The next subject of enquiry is the additional value communicated to the land by buildings. Should this be answerable to the expence incurred, the whole of the objection must fall to the ground, notwithstanding its apparent plausibility.

Let us suppose an hundred acres of Mendip land inclosed, and divided into four pieces of *prime* quality, but destitute of buildings; grant a lease of it to a farmer of property and judgment for twenty-one years, (a shorter term would be injurious to the landlord) and I may venture to say, that more than twenty shillings per acre could not be got for it, accompanied with the usual covenants and restrictions to guard against wilful impoverishment. With equal confidence, I may assert, the same land, *with suitable buildings*, would let to the same farmer, for a like term, at twenty-five shillings per acre, with a subdivision of the four pieces into six. The increase of rent in the latter case will be twenty-five pounds per annum. Allow an interest of seven and half per cent. on the capital of three hundred pounds expended on the buildings, which amounts to twenty-two pounds ten shillings, and there will remain two pounds ten shillings as interest on the money laid out to make fences under a subdivision, and if quick-set, to rear them when made. Under this plan, you do justice to the native qualities of the soil, by giving it a separate and independent existence as a farm; and with a lease of proper covenants, you need not fear its being exhausted.

A speculative farmer will be apt to exclaim, Is it possible that the want of buildings can create a difference of five shillings per acre to the occupier? Most assuredly it is;

as will be evident by even a very general statement of the comparative effects of a twenty-one year's occupation, *with* and *without* buildings. To begin with the latter; here lime must be chiefly, if not altogether depended on, as a manure. This, even with successive cropping with corn, will maintain its ground tolerably well during the first seven years. Its second application is attended with considerable diminution of its efficacy. From this period, the degeneracy of the soil is no less rapid than astonishing: it becomes light; coltsfoot and couch-grass abound; clover and ray-grasses fail. Intervals of rest of three, or even four years, seldom recruit its vigour sufficiently to produce even a moderate crop of oats, which, if followed by a second of the same grain, would scarcely return the seed. Feed during the two last years of rest, not worth more than nine shillings per acre. No turnips for want of dung; no fold, because the land is too much impoverished to maintain it; straw carried off, and clover hay only partially consumed on the premises by reason of the exposed situation. In this unproductive state, the land must remain during the last nine years of the term, reduced to the value of ten or twelve shillings per acre, and with little prospect of melioration.

Painful and disgusting as this representation must be to every judicious farmer, it is nevertheless strictly conformable to fact; and many instances might be adduced to establish its veracity in every point. Such has been, and most probably ever will be, the situation of Mendip inclosures, *without buildings*, and more *judicious course of crops*. *With buildings*, we have to contemplate effects directly opposite, under a similar term of twenty-one years. Lime, in the proportion of twenty quarters per acre, will sustain the land, with little abatement of its fertility, for the first six or seven years. During this period, farm-yard manure will be plentifully

tifully supplied, and may be devoted to turnips, cabbage, and potatoes, on a considerable scale, as it will not be wanted either for corn or clover for several succeeding years; it may be appropriated to turnips and clover, assisted by the fold, which a feed of clover and ray-grass of the second year will sufficiently maintain. Should these resources be thought inadequate to support the whole of the land, from the ninth or tenth year, piece after piece in succession might be broken up, and limed afresh, with an effect very little, if at all, inferior to that of its first application; as dung and the fold are found excellent preparatives for the repetition of this manure. By the alternate use of lime, dung, and the fold, together with the following rotation of crops:

- 1st year, Oats on the Lay
- 2d — Winter and Spring Vetches folded off, and Turnips
- 3d — Oats and Artificial Grass Seeds
- 4th — Artificial Grass Seeds mowed
- 5th — Ditto fed
- 6th — Ditto ditto:

which the improved husbandry of the last twenty years has suggested, and which is gradually extending to the mutual interest and satisfaction of landlord and tenant, it must be evident, that the land under a term of fourteen or twenty-one years cannot sustain the least injury, but must be in a state of melioration and improvement. By the preceding observations, I trust the propriety and advantage of buildings, erected on a scale of Mendip inclosure of one hundred acres and upwards, are fully established to the conviction of every unbiassed mind. Under this statement, what plan of management should be adopted for smaller inclosures? Separate occupation at a distance from the farm-yard, by the expence of carting, so as to preclude the return of produce in dung, must necessarily impoverish. Must inclosures of this description then be abandoned to the fate of a wretched

and ruinous husbandry? By no means. A remedy as a palliative, if not wholly effectual, may be found. In the greater part of Mendip inclosures, either by allotment or purchase, or both, a sufficient portion of land has been vested in an individual, to induce the necessity of building, with local residence and occupation of the farmer. The smaller inclosures should be let to the tenant or tenants of these farms, for the same term, and subject to the same covenants and restrictions, under which such farms are respectively held; with, however, a proportionate abatement of rent, by way of an equivalent for the want of buildings. If the lands with the latter be rented at one pound per acre, the former should be rented at fifteen shillings, or at most at sixteen shillings; and if either price be obtained, smaller inclosures would be provided for, on a footing without buildings, equally, if not more advantageous than larger, with them. Perhaps it may be objected to this plan, that by such additions Mendip farms would become too extensive and unwieldy for general occupation. Under an improved system of management, it is now well known that the most profitable destination of these farms must be, with little variation, to *corn* and *sheep*; and for these purposes, it is no less obvious that farms cannot be well too *large*, provided tenants can be found of sufficient ability and capital to occupy. This, at first, may create some difficulty and inconvenience, in letting to farmers in a neighbourhood where the largest farms seldom exceed two hundred pounds per annum.— This, however, can only be temporary; since the quality of the soil and the situation are favourable to corn and sheep, and begin to attract the notice of farmers, who have been accustomed in other counties to occupy farms of this description on a very large scale. These, by a system of management adapted to the foregoing purposes, founded on experience,

experience, and prosecuted with vigour, will soon convince those of the neighbourhood that *Mendip farms*, thus appropriated, of almost any extent, may be occupied with as much safety and advantage as can be reasonably expected or desired.

Having stated 300*l.* as the sum requisite for buildings to accommodate one hundred acres of land, I would observe, that 400*l.* would accommodate two hundred acres; 500*l.* four hundred acres; and 600*l.* five hundred acres; so that this expence decreases by an inverse ratio as the farm is augmented: and in like manner that of fencing, as a large farm requires less subdivision than a small one. Both these circumstances further tend to justify the predilection for *large farms*.

I shall conclude this head, by adducing an instance to exemplify the necessity and importance of raising Mendip inclosures to separate and distinct farms.

About twenty years since, near six hundred acres of Mendip land were inclosed, the property of a gentleman of large landed estate in the neighbourhood. For situation and quality, it could not be surpassed by any land of this sort. The contiguity to markets with good roads was another privilege; the quantity was equal to a respectable farm; and 600*l.* was judged sufficient to provide the necessary buildings, in the opinion of those who recommended the measure. A gentleman farmer from Norfolk, of considerable property, was so much struck with the soil, situation, and other circumstances, as to declare, that if proper buildings were erected, he would give fifteen shillings an acre for a term of twenty-one years; this was refused, nor have any buildings been erected since. The land was let to the proprietor's tenants of the adjacent farms in different proportions, at not more than twelve shillings per acre for the first

nine or ten years, but since, for not more than ten shillings. Great expectations were formed on the improvement of *the old farms*, by the produce of the new inclosure being entirely consumed thereon. These, however, are not realized, for the straw was for the most part sold to the adjacent towns, and during the first seven years of tillage, it was no unusual practice to crop with oats three or four years *successively*; yet such was the fertility of soil, and its aptitude for this species of grain, that the produce in favourable seasons, with a single ploughing, has been occasionally six quarters per acre. The consequences of this wretched husbandry, with regard to the soil, are too apparent to particularize, and too absurd and ruinous to need any further comment. I shall only subjoin, had a distinct farm been made in this case, seven per cent. would have been paid for the buildings, exclusively of *an increase of rent of upwards of one hundred pounds per annum*, and the land under a proper lease, instead of its present reduced rent of ten shillings or twelve shillings per acre, would have attained a permanent value of a guinea per acre.

The fifth objection involves two distinct relations:

- 1st. Deterioration of the quality of wool.
- 2dly. Diminution of its produce by lessening the number of sheep.

With respect to the first, by way of preliminary, it may be necessary to enquire, to what degree has this deterioration of quality manifested itself by a reduction of price on wool from sheep of the *same species*, fed on improved and *cultivated lands*, or on *common and waste lands*? Was this point, so essential to the present discussion, ever ascertained by fair and accurate experiment? If not, the objection is wholly hypothetical. If it have, the result ought not only to be known but established as data to argue from. Nothing of
this

this kind, however, has fallen within my observation. I must therefore proceed assumptively, and grant, for the sake of investigation, a deterioration of quality as far as six-pence in the pound by depasturing sheep, which afford the finest English wool on *cultivated* land, instead of waste or *barren*. If the concession as to price be sufficiently liberal, let us enquire how far the publick or individuals are obnoxious to injury therefrom. The clothier may mix somewhat less of this sort of wool with Spanish, the better to disguise the alteration in quality; or if used by itself, some difference in the texture or feel of the cloth might be the consequence. But if the alteration be *universal*, in neither point of view could any particular clothier, nor the trade collectively, be affected by it; and it is at least probable, the publick at large would not be endued with sufficient knowledge of the manufacture to detect it, or if they did, would regard it as too frivolous to merit notice. Allow for a moment the finest English wool to be worth two shillings per pound, from sheep fed on commons or waste land, and one shilling and six-pence if fed on cultivated land. In the former case the manufacturer of cloth would be a gainer, by having four pounds of wool for the same money as three pounds, and he could not complain of a proportional reduction of price; a benefit might therefore, but no possible injury could accrue, to this party in the business. Let us now advert to the farmer, who not only represents himself, but the nation at large, as being deeply interested in the increased produce of land, not only in *this*, but in every possible variety of its application. Enquire of the farmer, and he will tell you, that on an acre of cultivated land, by the aid of turnips and grasses, he can keep four sheep instead of one on waste or land in common, and this too with an undoubted augmentation both of fleece and carcase. He has, therefore, four
fleeces

fleeces and four carcases instead of one, with a manifest improvement in the value of each. Must he then, from a mere phantom of a grievance which bewilders the imagination of the manufacturer, relinquish advantages of decided and unspeakable importance both to himself and the publick? Surely not.

The foregoing remarks apply principally to the small breed of sheep; but this sort is apparently on the decline in favour of the improved breeds of Dorsetshire, South-down, and other larger sorts, as being more productive in wool, (quality and quantity considered) in size of carcase, and in requiring a less given time to graze. Let it be admitted from these considerations, that in course of time the former breed should become extinct. What then? Should a real degeneracy of the quality of wool, magnified by the fears of the manufacturer, be permitted to militate against the solid benefit enumerated as above? The quality of cloth as to fineness is *comparative*. Distinction would vanish, pride and vanity would cease to murmur, if the wool destined to the manufacture of cloth were of the *same* quality, however coarse. The more *opulent* classes of society might still be gratified with cloth made entirely of Spanish wool; the *middle* with a mixture of Spanish and English; and the *lower* with that wholly manufactured of English wool. But all this being uniform in its operation and effect, and being evidently calculated to advance national prosperity, as well as individual advantage, could create no symptoms of mortification or disgust. Let us contemplate the subject under the still more interesting claims of humanity. Can the little farmer and the artificer, the labouring manufacturer and the husbandman, be fed with the fleece? Suppose this valuable species of animal food were confined to the small breed, would there not be a diminution of its quantity so considerable

able as might probably advance the price of mutton from four-pence to six-pence per pound? Let it be remembered too, that in proportion to the increased value of the fleece, the farmer will be enabled to reduce the price of the carcase; for his profit is derived from the *whole animal*, not as separated into parts. Therefore the more value the fleece, the cheaper he can afford to sell the carcase.

The next article under this objection, is the diminution of the produce of wool by lessening the number of sheep.

This takes for granted what still remains to be proved, namely, that the inclosing of commons, fed principally by sheep, has a tendency to lessen the breed. I shall consider this objection as applicable to sheep *in general*, and not to any particular description or species. Here I have not only my doubts as to the truth of the position, but I am inclined to think that the number of sheep will be *increased* thereby, and this too in a very considerable degree. For, perhaps, four years after inclosing, an exception may be pleaded, since this portion of time must be allowed to a course of tillage *necessarily* previous to the cultivation of sheep feed. This circumstance, as being altogether temporary, should not in the least operate as a deduction from the validity of the opinion. From this period, when turnips and artificial grasses are brought forward, I would date my calculation.

Recurring to a former observation, that Mendip or upland inclosures were most profitably applied as corn and sheep farms, I will suppose one of this sort to consist of four hundred acres. In its cultivated state, one hundred acres may be allowed to sustain as many sheep as the *whole* did when in common, and a less proportion of land than this will scarcely be allowed for sheep feed. If this be admitted, let me ask what becomes of the futile apprehensions of *lessening the number of sheep*. Let the manufacturer no longer repine,

repine, nor the *timid* senator be the victim of groundless distrust: the former will have the same quantity of wool provided from a fourth portion of land as was before devoted to the purpose, and the latter will have the consolation to reflect that the other three-fourths are raised, from a state totally unproductive, to a capacity of supplying its owner with corn, and pasturage for cattle.

I have some reason to believe, that unfavourable impressions have been made on the minds of both houses of parliament against a general inclosing system; and these may have arisen from the magical influence of an expression long sanctified by the public mind, namely, that of the woollen manufacture being the *staple trade* of the nation, to which even the land, in all its diversity of produce, must ever be subordinate under every kind of parliamentary regulation. A little consideration would serve to detect the fallacy of this opinion.

But to recur. In this farm of four hundred acres, suppose one hundred and fifty should be appropriated to sheep. On the same ground of reasoning, this would increase the number by the addition of a moiety. Perhaps this proportion of sheep-food is much nearer to the standard of practice than the former; if so, in any ratio, the manufacturer, instead of being abridged of his supply of wool by inclosing, will have considerably more, and probably too at a reduced price.

Such are the facts relative to Wool: the conclusions are simple and obvious. The suspicious manufacturer, actuated by a spirit of monopoly which the legislature has ever been too much disposed to countenance, may rest satisfied that he can receive no *injury*, but may great *benefit* from the inclosing system.

The

The sixth objection supposes a diminution of the rental value of estates, to which commons are appertenant.

In *theory*, this may appear in some degree specious, because an increased produce, without an increased consumption, would more or less countenance such an inference.

But admitting the premises, it induces the necessity of investigating the relative operation of the cause presumed. Let us suppose a farm with common appertenances to be worth one hundred pounds per year, and that by a deprivation of the common its value be reduced five pounds per year. If the common *inclosed* be worth ten pounds per year, the objection must give way.

This statement, however, bestows a degree of importance on the objection which it scarce deserves; for in fact, the inclosing both of the low and up-lands has been uniformly accompanied with an increased produce from *both*; and it is no less true, that scarce an instance can be produced of the least abatement in rent on the *old estates*, in consequence of the tenants being deprived of their *commons* by inclosing.

I shall now proceed to a minute delineation of the general practice of farmers occupying land in this forest; and endeavour to shew how far the general end of improvement has been kept in view, how far it has been deviated from, and in what respect the general system is susceptible of amendment.

It appears, by the foregoing statement, that the expences of the act of parliament, commissioners fees, roads, dividing and allotting, fencing, drawing and enrolling the award, and all other incidental expences, ought not to exceed two pounds ten shillings per acre; to this must be added twenty shillings per acre for raising the quick-set hedges to maturity; and to avoid objections, I will say fifty shillings per acre for necessary buildings, pools, &c.

Let

Let us now endeavour to state the "*cui bono*" of such speculation.

In its open uncultivated state, the value of this waste could not be estimated at more than three shillings per acre; indeed it is a matter of doubt, all circumstances considered, if it were worth *any thing* to the possessors. In its inclosed state, and previous to its cultivation, it might be let for eight shillings per acre; and when cultivated and manured with lime, its value will be advanced to fifteen, twenty, and in some instances to thirty shillings per acre.

Let us state the account both ways.

Dr.	£. s. d.		Cr.	£. s. d.
To first value 3s. per acre, and 25 years purchase	3 15 0			
To inclosing, di- viding, without buildings	3 10 0		By value at 8s. per acre, 25 years purchase	10 0 0
Profit	2 15 0			
	<u>£. 10 0 0</u>			<u>£. 10 0 0</u>

In this instance the profit is not despicable.

OR,

OR, SECONDLY,

Dr.	£.	s.	d.		Cr.	£.	s.	d.	
To above cost without build- ings	7	5	0	}					
To buildings, &c.					2				10
Sundry plowings, harrowings, and liming, 20 qrs. per acre	4	5	0	}					
	14	0	0		By value at 15s. per acre, 25 years purchase	18	15	0	
From which must be deducted the value of the first crop, exclusive of seed, interest of money, and all other charges	3	12	0	}					
	10	8	0						
Profit	8	7	0						
	£.	18	15	0		£.	18	15	0

There are few ways in which money or industry can be employed to greater advantage than this, or in which the publick good can be more promoted; and yet I have frequently heard men, in other respects of sound understanding, ridicule such speculations as altogether visionary, and absurd.

Were it even admitted, that the adventurers in these schemes are for the most part sufferers, yet it cannot be denied that the community is benefited, inasmuch as the land is made to produce ten times as much as it did in its primitive state; and the amount of labour is nothing but an addition to the capital stock of the nation.

Notwith-

Notwithstanding these improvements, on the forest of which we are now treating, have been carried on with unabating ardour and activity, yet it will appear by the following statement, that much is left to be done:

INCLOSED.		UNINCLOSED.	
<i>Parishes</i>	<i>Acres</i>	<i>Parishes</i>	<i>Acres</i>
Leigh	— 100	Chewton	— 2000
Ashwick	— 350	East-Harptry	— 1100
Cranmoor, &c.	— 400	Priddy and Stoke	— 1200
Charterhouse	— 1000	Cheddar	— 2500
Hayden	— 400	Axbridge	— 300
Uby	— 950	Compton-Bishop	— 500
Bleadon	— 1000	Winscomb & Shipham	800
Doulton and Stoke	800	Rowboro' & Churchill	1000
Shepton	— 800	Berrington	— 1000
Shuters Bottom	— 600	Charter-House	— 350
Westbury	— 350	Banwell, Lockstone,	} 800
West-Harptry	— 900	Curston, Locking,	
Compton-Martin	— 700	and Hutton	
Blagdon	— 800		
Old-Down	— 50		
Dinder and Croscumb	800		
Chilcot and Horrington	800		
Wells	— 2800		
	13,600		* 11,550

* This account was taken in 1794, since which acts have been obtained for the inclosing of East-Harptry, Cheddar, Banwell, Chewton, and Winscomb. All the others are likely to follow. J. B.

The soil of these hills is for the most part deep, loamy, and of a good consistence; and were the climate more genial, could not fail of being highly productive *in all seasons*. Occasionally are to be found spots of land less valuable, being of a light spongy nature, black in colour, and totally unproductive of corn on *first cultivation*.

Nature, however, has wisely provided a manure within itself; for under the surface, at the depth of a foot, is generally found a strong clay, which, being spread after the rate of thirty or forty cart-loads per acre, gives such a tenacity to the soil as enables it to produce corn or any crop in great abundance.

And here let me advise a general investigation of the strata of all soils about to be improved; for I verily believe, that in most instances a manure may there be found near at hand, and congenial thereunto. Do we not frequently find clay under sand, and sand under clay; under flint, *chalk*; under white-lias or stone-brash, *marle*; under red earth, *lime-stone*; under peat-bogs, *sea mud* or *clay*? Are not these circumstances sufficient indication to the wary husbandman, to examine minutely the interior quality of his land previous to applying extraneous and expensive manures?*

* An incontrovertible proof of the justness of this observation was exhibited about twenty-four years ago at East-Cranmore, one of the first commons on Mendip inclosed by act of parliament. On making the banks round a field of twelve acres, of which almost the whole was black spongy earth, a great part of the ditches, consisting of a yellowish red tenacious earth strongly verging to clay, was thrown by their sides to make room for what was thought better mould for the plants to grow in. The field was ploughed and sown on one earth with oats, previous to which the malm, as it is called, by the side of the ditches was spread and levelled. The consequence was, that on the black earth there was a very thin crop not equal to the seed sown, whilst round the ditches, where the malm was spread, there was a fine luxuriant growth. R. P.

The climate of these hills is cold, moist, and boisterous, during the winter season, and frequently immersed in fogs; but in summer, the air is clear, salubrious, and invigorating. And it frequently happens that potatoes, French beans, and other spring crops, are destroyed in the *vale* by frost in April or May, when those on the *hill* are in no degree injured.

The favourite corn crop is *oats*, which are produced in great abundance, and of good quality. The wheat and barley are inferior, being thick in the skin, and of a dark colour; however, the defect in *quality* is amply made up by the *quantity*; for it is no unusual thing, after the land is manured with lime, to get from twenty to thirty bushels (Winchester) of wheat, and forty or fifty bushels of barley per acre. As to oats, the usual crop is from forty to sixty bushels.

But the most eligible mode of conducting a farm on lands of this description, is to grow *comparatively* but little corn, and *that little* in the highest perfection. To have a great breadth of turnips, cabbages, potatoes, vetches, artificial-grasses, and consequently to maintain a great stock. To provide all necessary buildings for shelter in the winter, and for the purposes of making mountains of dung, which the large produce of straw will enable the occupier to do. If sheep be kept, let the choice be of wedders, (a breeding flock on such exposed situations is hazardous) and let them be folded every night in the year.

By these means, lands of this description may be carried on in a progressive state of improvement; and if the present price of the different articles of produce be not greatly reduced, neither the proprietor nor the tenant will have any reason to complain.

FENCES,

FENCES, BUILDINGS, &c.

Let us now proceed to a description of the fences, buildings, reservoirs or pools, limekilns, roads, and all other the needful appendages to such undertakings.

There are various modes of fencing, and each has its advocates, but the two principal are *walls* and *quickset hedges*.

WALL FENCE.

In most instances, the *outside bounds* are a wall fence, five feet six inches high, two feet and a half wide at bottom, and fifteen inches at the top, which is covered with a turf of six inches put on in the form of an arch, making together an height of six feet. This wall is partly dry and partly cemented with mortar, or what is commonly called a *lift-wall*. In some instances, where a flat bed of stone can be procured, it is made without cement, and if well built such a wall is very durable. When the ground is level, the foundation of the wall is laid on the turf, and this is to be preferred, as it will not be so apt to sink as when a trench is dug. The expence of a lift-wall may be thus calculated per rope of twenty feet running length:

	£.	s.	d.
To quarring or digging eight loads of stone, (25 cwt. each) at 3d.	—	0	2 0
To halling the same, supposing the distance half a mile, at 6d.	—	0	4 0
To building per rope, (twenty feet) at 3s. 6d.		0	3 6
To seven bushels of lime, at 3d.	—	0	1 9
To covering with turf (if done very well)	—	0	0 3
		<u>0</u>	<u>11 6</u>

* In consequence of the advanced price of wages and of coal, about fifteen per cent. must be added to these calculations—1797. J. B.

DRY WALL.

			£.	s.	d.
To quarring as before	—	—	0	2	0
To halling ditto	—	—	0	4	0
To building, at 2s.		—	0	2	0
To turfing	—	—	0	0	3
			0	8	3

When stones can be got within a wheeling distance, or about sixty or seventy yards, the cost will be reduced about two shillings per rope, and if the wall be *wholly* made with cement, it will be enhanced about two shillings and six-pence per rope.

In making of dry stone walls, two masons should work opposite each other, so that the surface of their work may be always level. Stones also should be occasionally selected of a sufficient length to reach the whole breadth of the wall; this precaution will bind the work together, and render it durable.

QUICKSET HEDGES.

These hedges, if rightly managed and attended to whilst young, are in themselves great advantage and profit; they afford good shelter for the cattle, and they furnish fuel and writh or dead fence for the necessary purposes of the occupier.

The first thing to be done, is to mark out the course of the ditch. The dimensions of the bank on which the quicksets are planted is generally six feet at the bottom, three and a half

a half feet at the top, and two feet high.* On each side is a ditch three feet wide and two feet deep; the sides being made sloping, and the bottom not wider than six inches; this is to prevent the cattle from walking in the ditch and cropping the young shoots. In making the ditch, the men should be particularly careful not to throw any bad earth from the bottom of the ditches into the centre of the bank. If this be done, the growth of the quick will be greatly retarded. The making this bank will cost nine-pence per rope (twenty feet.)

Let the sets be taken from a nursery formed on a good soil; let them be straight in their growth, having been once transplanted from the seed-bed, and four or five years old. The shoots should also be smooth on the bark, and well rooted. These sets are worth about one shilling per hundred.

The bank being thus prepared, and the quick ready, let a trench be cut in the middle of the bank, and let the sets be cut off and laid with the head inclining a little at the distance of about three inches from plant to plant. Let the roots be then covered with a little of the best mould, after which fill up the whole trench with rotten dung, or compost, strewing a little more good mould on the top. The digging the trench and planting will cost two-pence per rope.

Nothing more is necessary than to secure them from injury. For their defence therefore, and shelter, two dead hedges must be made about four inches distant from the

* In some instances there is only one ditch, the earth on the other side being worked off to a slope; by this plan the bank is kept more moist, and the thorn plants flourish better.

outside edges of the bank.† These hedges are about two feet and half high, and composed of wreath or bush wood, with a proper number of stakes; the expence of materials and labour is about two shillings and ten-pence per rope. Time of planting the quick either in the months of October, February, or March. It is the practice of some to plant *two* rows of quick instead of *one*, but I have not found this plan succeed well. Some also recommend the planting at a greater distance than three inches, under an idea that *thick* planting retards the growth; but I have invariably found that the hedges planted *thick* thrive the best.

Some advise the planting of timber trees in the hedge, but I think it a bad practice, as the dripping from them frequently kills the thorn plants, and makes a vacancy in the hedge.

After this, the young quick must be carefully weeded and hoed twice a year, and particular care must be taken to prevent their being cropped either by cattle or sheep, both of which are very fond of the tender buds; and if by any accident they have gained access to them, and gnawed them, they must be cut down within an inch and half of the ground. In cold exposed situations, *two sets* of dead fences are requisite to bring the quick to maturity, and the cost may be thus calculated:—

† The expence of securing thorn hedges with oak railing is very expensive, and in some instances has exceeded the value of the land so inclosed—besides, the young quicks are not so well sheltered as by a wreathed hedge, and consequently do not make so rapid a progress in their growth.

			£.	s.	d.
Making the bank	—	—	0	0	9
Quick-fets eighty in a rope	—	—	0	0	9
Planting and dunging	—	—	0	0	2
Two dead hedges	—	—	0	2	5
(N. B. One waggon-load of writh will cost 17s. 6d. and make about fifteen rope of single hedge.)					
Making two dead fences	—	—	0	0	5
				0	4 6
Weeding plants for three years	—	—	0	0	3
Two additional dead hedges	—	—	0	2	10
				*0	7 7

N. B. The old wood will pay for sundry repairs of the hedges injured by sportsmen, &c.

In many counties it is the custom to plant the quick in the face of the bank, and where wood for fencing is scarce, this method generally prevails.

Having now stated the different expence of a *mortar and list wall*, a *dry wall*, and also of raising a bank, and planting *quick*, it may not be amiss to enumerate the comparative advantages and disadvantages.

A wall is certainly the best fence for a given number of years. It covers less ground, it does less injury to the crops; if part by accident fall, it is easily repaired, cattle are kept more secure, sportsmen are excluded. These are the prin-

* The price of hazel coppice-wood and labour being considerably advanced, one shilling per rope must be added to this estimate. J.B.

cial advantages, which in a great degree compensate for the want of shelter and durability, and in most instances where stone can easily be got, and I think in all cases where land is poor and exposed to violent and destructive winds, it is the preferable fence.

On the other hand, quickset hedges are beautiful to the eye; and if the climate, quality, and depth of soil, be such as to throw out a vigorous shoot, and minute attention be paid to them in their infancy, they are less expensive, and at the end of fourteen years will yield a sufficient produce when cut down and plashed to pay all the expences incurred by the first making; and this cutting may be repeated every twelve or fourteen years without injury to the stocks. And here let me remind the farmer, that the proper time to cut and plash his hedges is, when the ground is to be ploughed, or if it be pasture, when the crop is to stand for hay; for cattle are very fond of the young branches, and by cropping them in the summer, will greatly injure the shoots.

But may not these two modes be so combined as to reap the advantage of both, that is, by making both a wall and a hedge? To this there can be no objection but the expence.

A dry stone-wall, four feet and half high, with six inches turf on the top, may be built on a similar calculation with the foregoing, for six shillings per rope; and a low bank may be raised under it, on which quick may be planted. The growth, encouraged by shelter and warmth, will be rapid, and in four or five years time the wall may be taken away, and the stones converted into lime, or used on the publick roads, or for any other purpose. If this fence be made at the time when the land is converted into tillage, one dead fence to secure the plants on the inside will be sufficient, and that not an expensive one.

The

The DISBURSEMENT will be as follows:

	£.	s.	d.
Building four feet and half of wall, stones and halling included	—	0	6 0
Turfing	—	0	0 2
Making bank and planting quick	—	0	0 4
Sets	—	0	0 8
One dead fence on the inside	—	0	1 2
Weeding	—	0	0 2
		0	8 6
From which deduct the value of the stones at three-pence per cart-load	—	0	1 6
		*0	7 0

This I think a more eligible mode of fencing than either of the preceding, but still there is another method which I prefer to all others in situations such as that on which we are now treating.

This is making a bank three feet high, and planting on it *full grown sloe* or *black-thorn*, setting them very thick, and cutting off the top to the height of three feet. The principal objection that can be started to this plant is, the running of its roots, which are said to obstruct the plough; but I can declare from long experience, that in banks such as I describe, accompanied with ditches two feet and half deep, no such inconvenience has occurred. In most countries great quantities of this black-thorn might be found in coppices, borders of fields, commons, &c. and the owners will

* The same addition as before for advance of wages, &c.

be obliged by your digging them up; one good waggon-load of these plants will be sufficient for twelve rope, and the cost may be thus estimated:

	£.	s.	d.	
Making the bank	—	0	1	0 per rope.
Digging up and planting	—	0	1	6 ditto
Carriage of plants	—	0	0	9
		0	3	3

N. B. The price of carriage must vary according to the distance.

It may be adviseable to mix with the black-thorn some hazel or withy stocks, together with the *large brier*, and to lay the loppings of the floe along the summit of the bank, securing them by small stakes so as to prevent sheep from making a passage through the stocks. This fence requires but little repair; the floe will throw out so many shoots from its root, and the briar will so intertwine its branches with the hedge, as to make it in a few years impervious to cattle of any kind. And though it cannot be expected to grow to a great height, yet it will be as close and thick as the farmer can wish; and, together with the bank, will constitute excellent shelter and defence, *and withal* will be made at the least possible expence.

After inclosing and dividing, the next objects of attention are suitable buildings, such as a dwelling-house, barns, stables, stallings, &c. &c. These are placed as near as possible to the centre of the farm, and though not elegant, are for the most part useful and commodious. They are built with stone, and generally thatched, the inconvenience of which is severely felt; for the moisture of the air, and the powerful effects

effects of the wind, render frequent repairs necessary.* A roof will require coating every eight or ten years; it is a harbour for vermin; is more dangerous in respect to fire, and, every thing considered, is more expensive than tile, to encourage the use of which, our rulers would do well, were they to repeal the present tax upon that article, (or at least to allow a drawback on such as may be used on farm-houses, barns, &c.) for I think it would not be difficult to prove that the injury done to the kingdom in respect to its agriculture, is five times greater than the produce of the tax. Exempt from duty, the use of tile must, I think, be general, by which means all the straw would be devoted to the purpose of subsistence for cattle, or manure. The expence of a comfortable farm-house, with its necessary appendages, is estimated at about two hundred and fifty pounds. That of a barn, roomy enough for four threshers, and capacious enough to hold twenty or thirty loads of corn, one hundred and fifty pounds. Stables, stalling, pig-styes, &c. one hundred and fifty pounds more, making in the whole five hundred and fifty pounds. This expenditure will be sufficient for a farm of five hundred acres. The practice lately introduced of placing the barns on a declivity cannot be too much commended; a warm and commodious stall for oxen, covered by one roof, is thereby gained. The barn floor, thus elevated, is rendered more durable, and less subject to vermin; the corn is kept more dry and sweet than on a ground floor; nor can it slip through the barn-floor without discovery; and I know of no possible inconvenience that can accompany this plan. Barns, such as these, are placed

* Repair (if possible) thatched buildings in the summer season. A covering put on then, will last years longer than one put on in the winter. J. B.

with

with a south-east aspect, and the arches of the stalling front that way. Annexed thereto is a capacious yard, with proper cribs for hay and straw, where the animals feed, and retire at their pleasure to their comfortable lodging under the barn.

Nothing is necessary to complete the farm-yard but a pond or reservoir of water; and as the situation is on a descent, such pond is soon filled by the common current of rain, or it may be supplied by shoots from the roof of the barn.

On one farm, situate in the parish of Compton-Martin, the proprietor has made a semicircular farm-yard, and by building a wall on the *outside*, and round pillars on the *inside*, at the distance of about fourteen feet from each other, and covering the same with strong lugs or poles, has made an excellent *staddle* for corn. To secure it from vermin, he has placed a row of flat stones at a foot distance from the top both of the wall and pillars *inside* and *outside*. This row of stones projects about eight inches, and shuts so close together that no vermin can gain access to the corn. On this staddle (as it is here called) he places the whole of his wheat crop, except that portion which he intends to thresh for seed; for the moisture of the air in winter renders the wheat on these hills so damp and cold, that the sale at that season is very slack, and should in most instances be avoided. In all my farming excursions, I never saw a more comfortable covering for cattle, nor a better foundation for a corn mow; and under the supposition of its being threshed in the summer months, no possible inconvenience can attend it, for the staddle is cleared, and ready before harvest to take another burthen.

POOLS.

The next, and not the least important appendage of these farms, are *pools* or *reservoirs of water*; for on hills so elevated few springs can be expected. Nothing more strongly verifies the truth of the old adage, "Necessity is the mother of invention," than the skill exhibited by the masons of this district in buildings of this nature. Scarcely ever do these pools let through the water, and the cost, supposing it to be of the following dimensions, 40 feet long, 16 wide, and 6 feet deep in the middle, may be thus stated:

	£.	s.	d.
Digging out for foundation	—	2	2 0
<i>N. B.</i> In most instances this will furnish a sufficient quantity of stone for the building.			
Mason's labour	—	10	10 0
Three hundred bushels of lime	—	3	0 0
Ten loads of clay and carriage	—	1	0 0
Eight loads of coal-ashes and carriage	—	1	8 0
		*18	0 0

A pool of these dimensions, if properly situated, will supply eighty or one hundred acres with a sufficiency of water for the stock throughout the year; and if well made, may be kept in repair for six-pence a year.

* Some cautious people go to a considerable distance for lime made from the white-lyas stone, which is certainly a stronger cement under water than the lime burnt on these hills. In this case, an additional expence is incurred.

LIMEKILNS.

As *Lime* is the grand manure of this district, by which the improvements of cultivation are in a great measure brought about, kilns for burning it are numerous, and generally thought well constructed; their form is that of a French bottle, the height seventeen feet, the length of the neck, in which the calcination is wholly effected, seven feet; its diameter four feet, and the diameter of the belly in the largest part twelve feet. They are built on the side of a hill, by which means the top is on a level with the adjacent rock, and the cost is as follows:

	£.	s.	d.
Digging out the concavity	—	1	1 0
(This will furnish stone for the building)			
Building	—	4	4 0
Lime and ashes	—	1	15 0
Building a shelf-house for the kiln to deposit the lime, and covering the same	—	3	0 0
		<u>£.10</u>	<u>0 0</u>

In such a kiln, may be burnt four hundred and eighty bushels of lime per week, and this will consume fifteen quarters, or one hundred and twenty bushels of refuse coal, such as is not commonly used for any household purposes. The coal costs at the pit two-pence per bushel, and the dis-

* In consequence of the advance of lime, coal, and wages, lime-kilns now cost about thirteen pounds; and from the same causes, the cost of the lime will be advanced to sixteen-pence per quarter.

tance being six miles, the carriage is three-pence, the prime cost of the lime therefore is fourteen-pence per quarter, as the following calculation shews:

<i>Weekly expence.</i>			<i>Weekly produce.</i>		
Fifteen quarters of coal, at			Sixty quarters,		
3s. 4d.	2	10 0	at 1s. 2d.		
Limeburner 4d. per quarter,				3	10 0
digging stones and burning	1	0 0			
	<u>£.3</u>	<u>10 0</u>		<u>£.3</u>	<u>10 0</u>

The lime produced by one of these kilns will amply manure three acres per week; and I leave my readers to determine, whether kilns of this construction are or are not to be preferred to those in shape of an inverted cone. The largeness of the surface in the last-mentioned must, I should think, require coal of a better quality, and consume a greater quantity.

ROADS.

Lastly, let us take a view of the publick Roads. They are left forty feet wide, and are stoned twelve feet.

It is usual to stone these roads one foot thick in the middle, and nine inches at the sides, making thereby a gentle curve.

	s.	d.
First forming —	0	6 per rope of 20 feet.
Digging eight loads of stone (25 cwt. each) —	2	0
Wheeling or halling ditto —	3	0
Breaking ditto —	3	0
	8	6*

Note, The expence of halling must vary according to the distance of the stone.

MODE OF CULTIVATION.

The inclosure being now finished, buildings erected, pools made, and publick roads formed, let us now take a survey of the expence of cultivating these lands, under the following heads: ploughing, manuring, cropping, and harvesting. In this, I shall endeavour to draw information from reason and experience, and shew upon what grounds the practices are founded, so that my readers may then take or refuse them, according to their own judgments.

I have before stated, that the soil of Mendip hills is a fine mellow mould, intermixed occasionally with less fertile ingredients, such as stone, gravel, clay, and the like; and according as these are greater or lesser in quantity, the soil is worse or better. In all cases the husbandman may distin-

* I must here reprobate the narrow policy of which I have myself been too guilty, viz. that of stoning the roads only twelve feet wide. In consequence of its narrowness, *one track only* is formed by wheel-carriages, and the repairs are endless. On all accounts, experience directs me to recommend sixteen feet at least. J. B. 1797.

guish the general nature of the soil, by its aspect on the surface, or by the produce thereof. Where the fern grows in great luxuriance, there he is sure to find deep good land; but weak low furze, rushes, or white grass, are symptoms of poverty.

The object to which we now proceed in our disquisition may be deemed the most important and interesting, being nothing less than the process by which this comparatively barren soil is converted into fertile and productive land: and on a nearer inspection, it will probably be allowed, that few instances can be adduced of attempts more successful to individuals, or more beneficial to community. This soil does not pour forth its vegetable productions spontaneously, but its qualities and strength are such as to produce great returns, if properly cultivated and manured; and were an ancient inhabitant of these regions to return to life, he would be at a loss to know the name of this apparently new country.

The months of September or October are the best to commence the tillage. The instrument made use of, is a strong foot plough, without wheels, cost two guineas. The breadth of the plit about ten, and the depth four inches. Four horses, or six oxen, will turn about three-fourths of an acre in eight hours. A man is employed to go after the plough with a spade, to repair balks, to dig up stones, and to lay the plit flat: this ploughing may be valued from twelve to twenty shillings per acre. In this state it remains to be mellowed by the winter frosts till March, when black oats are sown, after the rate of six or seven bushels per acre, and harrowed in by four turns of the harrow on the same ground. A few farmers, previous to this sowing, have lately adopted the plan of *backing* the surface, at the expence of five shillings per acre: by which means less seed will do, and the
same

fame is more regularly distributed and better covered; beside, the hacking and harrowing is not more expensive than the troublesome dragging before-mentioned: the expence of either of these operations may be estimated at seven shillings per acre.

After this, it is rolled at an expence of one shilling per acre. Nothing more is done till harvest, and the average produce may be set at twenty-five bushels per acre; the straw of which will pay for harvesting and threshing (that is, about eight shillings per acre.)

Soon after harvest, or indeed at any part of the winter, the ground is cross-ploughed with the *double-furrow* plough, value six shillings per acre. Harrowed in March, value two shillings; and in April the liming is begun. Four horses and two men, with two carts holding thirty-two bushels of lime each, (if the kiln be not at a greater distance than one mile) will cover one acre and half per day, at the rate of one hundred and sixty bushels per acre.

The lime is deposited in heaps of one bushel, at the distance of sixteen feet and half every way. Cost per acre (value of lime included) thirty-five shillings.

Covering these heaps with earth, and afterwards spreading them, (which should be done as soon as the lime is dissolved) are worth one shilling and six-pence per acre.

After this the ground is well harrowed, two shillings per acre; then ploughed very thin or raftered, five shillings; harrowed again two shillings, and in this state remains for the seed earth. It is found highly advantageous to expedite the liming, and to finish all the work previous to the seed earth by the middle of July; so that all the stock, such as cows, sheep, horses, &c. may have free access to the fallow, or may be frequently driven over it, for the purpose of making it close and compact. The latter end of September,
or

or beginning of the month of October, is the time for sowing; and this is done in two ways, some sowing under furrow, others harrow in the seed; the latter I think preferable, as the uncorrupted sward, furze, &c. are by harrowing brought to the surface, and are a great defence to the infant plant during winter; whereas, if buried, they keep the ground hollow, and expose the roots to injury. Which ever way it be done, the last ploughing, sowing, and harrowing, will cost about seven shillings per acre, to which add two bushels and half of seed, value fifteen shillings, and the whole expence has been enumerated. No weeding is necessary, nor is there any other disbursement, save rolling in April, which should be performed with a very heavy roller, at the expence of two shillings per acre.

Let

Let us now recapitulate the expences, and state the average produce per acre.

<i>First year.</i>		<i>First year.</i>	
<i>Dr.</i>	<i>£. s. d.</i>		<i>Cr.</i>
To first ploughing	— 0 16 0		<i>£. s. d.</i>
To hacking and sowing oats	0 7 0		
To six bushels of seed	— 0 15 0	By 25 bushels	
To rolling	— 0 1 0	oats 2s. 6d. 3 2 6	
To one year's rent	— 0 8 0		
<i>Second year.</i>		<i>Second year.</i>	
To cross ploughing	— 0 6 0	By 25 bushels	
To harrowing	— 0 2 0	wheat 6s. 7 10 0	
To liming (160 bushels per acre)	— 1 15 0		
To covering and spreading	0 1 6		
To harrowing	— 0 2 0		
To ploughing	— 0 5 0		
To harrowing	— 0 2 0		
To last ploughing, sowing, and harrowing	— 0 7 0		
To two bushels and half of seed	— 0 15 0		
To rolling	— 0 2 0		
To two years rent	— 0 16 0		
	7 0 6		
Profit	3 12 0		
	10 12 6		
			10 12 6

N. B. The straw in both instances will pay for reaping, harvesting, and threshing.

HARVESTING

HARVESTING AND THRESHING.

The reaping of wheat is generally performed by the acre; and, as the ripening is a fortnight later on these hills than in the vale, there is no want of hands. The price from five to seven shillings and six-pence per acre, including cutting, binding, and mowing. It is always hand-griped as it is called, that is, collected within the palm of the hand before the hook or sickle is applied. All the corn, wheat, barley, and oats, are bound into sheaves and mowed in the field. The price for barley and oats from three to five shillings; besides these prices, the men are allowed for wheat two gallons of beer, and for barley and oats one gallon and half, per acre.

In situations subject to sudden and violent rain, this custom of mowing in the field cannot be condemned, as, in respect to wheat, the day's cutting is secured every evening, and the lent corn can be put together and secured much sooner than in the common method.

The principal objections are, the bringing mice with the sheaves into the barn, or large mow; and the want of sufficient dryness in the corn for winter threshing.

The men of this country are very dextrous in making these mows, so as to prevent rain from injuring the corn; and they frequently remain five or six weeks in the field without suffering any damage.

Wheat is seldom threshed with the straw, but the ears are cut off, and the straw bound in sheaves tied very tight; the circumference of the sheaf at the bond should be six feet; this costs five-pence per sheaf, including the threshing of the ears. A good acre of wheat will produce three dozen

sheaves, value eight shillings and six-pence per dozen,* and each sheaf should weigh fifty-six pounds. By this method, the firmness of the stalk is preserved, and rendered more valuable for the purposes of thatching buildings,† &c.

Barley and oats are threshed by the quarter. Price from one shilling to one shilling and six-pence per quarter.

A good acre of oats will produce two waggon-loads of straw.

The land is now considered in its highest state of strength and vigour; and it is thought by most farmers, that every succeeding year reduces its value; nor can this be wondered at, when the subsequent course of cropping is stated.

It is no unusual thing to have three or four successive crops of corn, nay, sometimes five or six without an intervening fallow, or fallow crop; greatest part of the straw is fold, nor is the land sown with artificial grasses till it is no longer able to bear corn.

* Ear-pitching is the provincial term for this management, and the sheaves thus prepared are called reed-sheaves. They are in general use for the purpose of thatching, for which, indeed, they are solely intended. The practice is not confined to Mendip, but is in common use through great part of the district. The workmen are very dextrous in making, and the thatchers no less expert in using it; and at the same time that it makes a covering more durable than any other of straw, it is of such superior neatness, that the thatched buildings of this neighbourhood excite the admiration of many strangers coming from other parts where this practice is not known.

A dozen sheaves will cover a square of one hundred feet. Price of laying them up (new work) three shillings per dozen. A second or any succeeding coat, two shillings per dozen. Mending, four-pence per sheaf. R. P.

† Some people dispute this point, and say, that the hollow tube of the wheat-straw admits the air, and that its decay is thereby accelerated, and assert (from experience) that *threshed* straw is more durable than *unthreshed*. J. B.

This

This mode of treatment, together with the coldness of the climate, has hitherto operated as an effectual bar to the settlement of opulent and more enlightened farmers; but I am well persuaded, than if even one of that description were to settle here on a farm of a proper size, viz. five or six hundred acres, he would, according to the farmer's phrase, "find himself at home," and his example would soon be followed by many others.

Cabbages, turnips, potatoes, carrots, parsnips, vetches, flax, oats, clover, and all artificial grasses, may be sown in the highest abundance and perfection.

The land is never glutted with rain, nor subject to drought, and the fogs (of which so much is said) are prevalent only in the winter season.*

It cannot be denied, but that a cold wet summer, such as that of 1792, is peculiarly unfavourable to the ripening of corn on lands of such elevation, but in summers like the last, few countries could vie with it.

Though I am no advocate for farms of an *excessive* extent, yet I think, that on soils, and in situations such as Mendip hills, they should not be less than four or five hundred acres. I mean sufficient to keep a flock of sheep for the purposes of *folding*, which should be unremittingly pursued through both winter and summer months. On the fallows in the summer, and on the grass land or in the farm-yard in the winter. A wether flock would be best calculated for the purpose; and it is a matter of doubt with many judicious farmers, whether sheep of that kind are not equally profitable with the breeding flock, even in situations more

* The inconvenience of fogs is greatly abated by the inclosing and draining of the low moor lands in the vicinity of Mendip.

mild and temperate. By such a system of management, one hundred acres might be manured every year with the fold, which, joined with occasional liming and the application of the farm-yard dung, would keep the land in a progressive state of improvement, and at the least possible expence.

DOUBLE-FURROW PLOUGH.

Formerly the ploughs used here were the most awkward, and ill-contrived, that could be conceived, but they have in a great measure given place to the *double-furrowed* plough, which was introduced to this neighbourhood by a speculative man who turned farmer on these lands, disregarded and despised by all practical husbandmen.

Though common farmers are for the most part backward in adopting new plans, yet I never knew any *valuable* discovery that they did not sooner or later fall into. So it happened with the double ploughs. For ten years, did the person above alluded to use this instrument, and was constant in season, and out of season, in recommending it to others; (for they who have a true taste for agriculture, enjoy themselves in the communication of every useful discovery) but all in vain, the more warm he was in enforcing its utility, the more reluctant were the common renters in adopting the use of it; and in all probability it would have remained to the present day, undistinguished for its superiority, had not the same been manifested at the different trials of ploughs exhibited under the direction of the Bath Agricultural Society.

At present, scarce any other plough is used after the first breaking; and, I believe, I may truly assert, that in comparison

rison with the old ploughs of the district, no less than fifty pounds per year is saved on a farm of five hundred acres. Another mode of management has been for many years past introduced by the person before alluded to, namely, ploughing by the *acre* instead of the *day*.

The contract is thus conducted; the master finds oxen and food, and the ploughman labour and driver. The latter is also bound to attend the cattle at all times, even when debarred from work by rain, snow, frost, or any other cause. The price is two shillings and two-pence per acre for the ploughing of the rough Mendip lands when first inclosed, (this is done with a single plough) and one shilling and two-pence for all other ploughings of every description, with the double plough.

By this system of management he has annually had more ground ploughed by *one* team, than his neighbours by *two*; and it has been no unusual thing for his man and boy to earn regularly per week seventeen shillings and six-pence, that is, for two acres and half per day on an average. Nay, his man has repeatedly ploughed with six oxen (in yokes) twenty acres of land, statute measure, in forty-eight hours; I mean in six successive days, reckoning eight hours per day: the breadth of the plit according to agreement not exceeding nine inches, nor the depth less than four inches, (when the soil was deep enough to admit thereof.)

Let us pause here, and seriously consider the advantages of *contract* in comparison with *daily* labour.* The English labourer

* Many sensible and well-meaning men have objected to *contract labour*, under the idea of its being injurious to the health and longevity of the labourer;—but though I have been in the habit of letting my work by the job or task for twenty years past, I never perceived any ill effect on the health or strength of my workmen. Where great exertion

labourer is naturally disposed to vigorous exertion, if encouraged thereto, either by an increase of wages, or by the exhilarating influence of good cheer.

Do we not see in times of harvest a degree of activity exhibited, unknown at other times of the year? and this at a season when the heat of the weather naturally induces fatigue.

Do not the manufacturer and artisan, almost of every description, have recourse to contract labour? And though their workmen earn from ten to thirty shillings per week, do they not find their account in so doing, from the emulation which it excites, and the perfection of workmanship which it produces?

Must it not be acknowledged, that in those countries where *daily labour* is the prevailing mode, a slow and indolent habit is generated, which neither promises nor threats can entirely overcome, to the great injury of the commonwealth, as well as of the farmer. Suppose we allow the average rate of daily labour to be sixteen-pence, and admit that by contract, men will be excited to earn twenty-pence, what an addition of useful labour would be created, taking it in an aggregate point of view!

But I must not enter too widely into this field of discussion, and shall only add, that in respect to the operation of ploughing, the method now suggested can only be subject to *two* objections.

exertion and excess of wages are forerunners to drunkenness and debauchery, such consequences may follow;—but no practical man will deny, that where daily labour prevails, a considerable portion of the day is wasted in sauntering, holding tales, and in a sluggish use of those limbs which are capable of more lively motion.

At any rate, *ploughing by the acre* cannot possibly be attended with any injury to the health or strength of the ploughman.

First,

First, the possibility of cattle being injured by too great exertion; and secondly, imperfection in the execution.

Both these are easily obviated by stating, that the eye of the master may see, and his judgment may direct, so as to preclude the possibility of imposition, without detection.

Dispatch at particular seasons of the year may be considered as invaluable, particularly in respect to spring and summer crops. A dry and favourable season for sowing occurs in March; by contract labour, and improved instruments, you are enabled to plough and sow *double* the usual quantity. The increased produce in comparison with a sowing in April, may be fairly calculated at more than the rent of the land, exclusive of the comparative cheapness. The same argument will hold good, in respect to flax, hemp, turnips, potatoes, cabbages, summer-fallows, &c. &c.

COMPARISON BETWEEN HORSES AND OXEN.

It is the general opinion of farmers in this district, that oxen are preferable to horses, for the purpose of ploughing, but for harrowing and all other purposes, the contrary.

The expences of keeping a team of each for the purposes of farming may be thus stated, and it will appear, that the superiority of oxen is not so great as some sanguine men have stated.

HORSE

HORSE TEAM, (4)

The first cost, including harness, cannot be estimated at less than one hundred pounds.

	£.	s.	d.
To 30 weeks keeping at hay, 12 tons at 40s.	24	0	0
Corn throughout the year	30	0	0
To twenty-two weeks keeping at grafs, at 3s. 6d.			
each horse	15	8	0
Repairs of harness	2	12	0
Farrier and shoeing	4	0	0
	<u>£.76</u>	<u>0</u>	<u>0</u>

OX TEAM, (6)

The first cost of these, supposing them to be the best North-Devon breed, and four or five years old, yokes, bows, and chains included,* 70l.

To twenty-six weeks at hay, twenty-four tons,			
at 40s.	48	0	0
Twenty-six ditto at grafs, 2s. 6d. per week			
each ox	19	10	0
Repairs of yokes and bows, and chains	0	10	0
	<u>£.68</u>	<u>0</u>	<u>0</u>

Some farmers think that three horses are equal in exertion to six oxen; if that be admitted, the expences of the horse team will be less than those of the oxen.

If an accident should happen whereby a horse is lamed, the value is much more lessened than in the case of an ox;

* Oxen are now (January 1797) fifty per cent. dearer. J. B.

but

but in all other respects they stand on equal ground; for horses, if purchased at the age of four or five years, are improving in value for two or three years, as much or more than oxen. And every intelligent farmer must be sensible of the folly of keeping a horse after he is six or seven years old; they should then be transferred to common carriers, &c. and agriculture should only be the medium whereby a young horse becomes, by gentle labour, inured to more severe discipline.

LIMING.

Having already stated that lime is the great article of modern improvement of these hills, I shall only add, that instances might be produced of lands letting at this time for thirty shillings per acre, which forty years ago were not worth four shillings; and the beginning of all these improvements has been by lime, whereby the acidity of the soil, impregnated with mineral exhalation, has been corrected, and crops raised on them as good as those on improved fields; and it is no less wonderful than true, that thirty cart-loads of rotten dung per acre, *previous to liming*, have had no sensible effect; but after the land has been once limed, the operation of dung is as perceptible here as on other lands. Surely this circumstance will prove, that these hills come under the description of barren land, as referred to in the statute of Edward VI. and as such be exempt from the payment of tithes for seven years. §

Before we leave the subject of liming, it may be right to inform my readers, that some have dressed their old pastures

§ It is much to be lamented, that all ambiguity in that act is not done away by a new bill explanatory of its meaning.

with

with hot lime, by which the moss has been destroyed, and a fine herbage produced, highly grateful to the palate of all sorts of stock. The lime, after the rate of one hundred and sixty bushels per acre, is put on the land soon after it is mown, and its effects are very durable; being perceptible for fifteen or twenty years, and it quite alters the nature of the coarse four grass, to which old layers are very subject.

I confess I am ignorant of the *whole* cause, whereby lime produces such happy effects; but, however unknown the cause, all agree that it is the most cheap and efficacious manure that the husbandman on these hills can have recourse to.

Here ends the detail of the Mendip husbandry.



CHAPTER VII

ARABLE LAND.

AS corn is but little attended to, in the greatest part of this district, the mode of tillage is very defective. The stubbles are scarce ever ploughed till near Christmas; and as it is the common practice to have at least two crops of lent corn after wheat, the ground is seldom in a proper state to receive grafs seeds.

Few turnips* are grown; and the land intended for summer fallow, preparatory to wheat, is not ploughed till the sowing of the spring-corn is finished,—from these causes the land abounds with *couch-grafs*, *coltsfoot*, &c. Nor can we recommend the

ROTATION OF CROPS.

On the Clay, it is

1st. Beans 2d. Summer Fallow 3d. Wheat 4th. Oats 5th. Oats and grafs-seeds	} or,	1st. Beans 2d. Wheat 3d. Winter-fallow and oats, with artificial feeds <i>N. B.</i> This will do tolera- bly well.
Or, 1st. Teazles 2d. Wheat 3d. Beans 4th. Oats. } This is a pretty good course.		

* An acre of good turnips will (between the months of November and March) maintain one hundred sheep six weeks, and an acre of cabbages two months. An acre also of good turnip-rooted cabbages, or an acre of Swedish turnip, will maintain one hundred sheep through the trying month of March.

It is supposed that a little may be given with the roots.

On the Red Earth,

- | | |
|----------------------|--------------------------|
| 1st. Oats on the lay | 4th. Oats |
| 2d. Summer-fallow | 5th. Oats |
| 3d. Wheat | 6th. Oats and grafs-feed |

Sometimes the grafs seeds are sown in the second crop of oats after a winter fallow.

On the Stone-Brash,

(That is, the land abounding with marl.)

- | | |
|------------|------------------------|
| 1st. Wheat | 4th. Barley and clover |
| 2d. Wheat | 5th. Clover. |
| 3d. Wheat | |

Of this soil and its management I shall speak more fully hereafter.

Fallowing is generally practised in all those soils; for as turnips are little known, the farmers are obliged to have occasional recourse thereunto to clean their land, made foul by successive corn crops.

CROPS COMMONLY CULTIVATED.

WHEAT generally sown after a summer fallow, sometimes after beans; but in consequence of inattention to the hoeing and cleaning the bean crops, the wheat is so choaked with weeds, that this rotation is on the decline. It is the general practice to manure for wheat either with lime, dung, or the sheep-fold.

The last produces the best corn. Many sorts of wheat are sown, and each has its advocates. In the vales, and on strong clay-land, the *cone* or *bearded* wheat takes the lead;—next to that, the *white* and *red hoar* or *velvet wheat*—the *brazil*—the *white Holland*, and *red lammas*. On the hills, and on all exposed situations, the *red straw*, which differs from

from the red lammas, inasmuch as every blossom is of a purple colour. Most attentive farmers prepare their seed by steeping it in water, mixed with a sufficient quantity of salt or brine to swim an egg, stirring it well and skimming off the light and defective grains, and afterwards drying it with hot lime; this is found a never-failing preventative of the smut. The seed is always sown broadcast, after the rate of two and half or three Winchester bushels per acre, and most commonly under furrow, on six-feet ridges. It is weeded in the spring, and but seldom has any top-dressing.

The method of harrowing and threshing has been already explained. The produce varies from twelve to thirty bushels per acre.

BARLEY.—Excepting the stone-brash or marl soil, there is very little land in this district favourable to the culture of barley.

OATS may be considered as the principal spring crop, and, though sown on a corn stubble, is generally productive. The quantity of seed six bushels.

The time of sowing March and April,* and the produce from thirty to fifty bushels per acre.

* Few farmers agree in opinion respecting early or late sowing, and perhaps no fixed time can with propriety be established. The success, or otherwise, depends so much on fortuitous circumstances, such as, the wetness or dryness of the season, the temperature of the air, both at the time of sowing and after, that what is successful one year is quite the contrary the next.

The following rules may, I think, be safely followed: not to sow wheat before the month of September, nor later than the beginning of November.

Not to sow till the ground is perfectly moistened, and made close and firm by rain.

After the middle of February, whenever the land devoted to spring crops is dry and healthy, begin planting beans, and sowing oats; and under the same circumstances let all your barley be in the ground before the middle of April. J. B.

RYE and BUCK-WHEAT scarcely known.

BEANS and PEASE are sometimes sown broadcast, and sometimes planted; the latter is considered as the best method.

VETCHES are not cultivated so much as they ought.

TEASELS.

In the parishes of Wroughton, Blagdon, Ubley, Compton-Martin, and Harptry, teasels are much cultivated. The head of this plant, which is composed of well-turned vegetable hooks, is used in dressing of cloth; and the manufacturers of this county and Wilts are, for the most part, supplied from these parishes. Large quantities are also sent (by water conveyance from Bristol) into Yorkshire.

As this is a plant not generally known, I will describe its culture.

The most favourable soil is a strong rich clay, or what is generally denominated good wheat land.

Sometimes an old ley is broke up, and sometimes a wheat-stubble; the seed is sown, after the rate of two pecks per acre, in the month of April. During the summer the land is worked over three or four times with long narrow spades to destroy the weeds.

In the month of November, if the plants are too thick, they are drawn out to fill up vacancies, and the plants are set at a foot distance. If, after this thinning, too many plants remain, another field is prepared, into which they are transplanted; but those plants which are never removed produce the best heads.

At the next spring and ensuing summer the land is worked over three or four times with the narrow spades, by which it is kept thorough clean, and the plants earthed up. This is called speedling.

In

In the month of July the uppermost heads begin to blossom, and as soon as the blossom falls, they are ripe. The gathering is performed at three different times. A man, with a knife made for the purpose, cuts the heads which are ripe, and ties them up in handfuls. After a fortnight he goes over the ground again, and at a third cutting the business is completed. On the day of cutting they are carried into a house, and if the air be clear, they are taken out daily and exposed to the sun till they are compleatly dry; but great care must be taken that no rain falls on them.

The crop is very hazardous. A wet season rots them, particularly when there is much rain at the time of blossoming.

In the year 1792 there were few worth harvesting. The crop this year is but indifferent. When dry they are separated into three different parts, called kings, middlings, and scrubs; and are, after that, made into packs, containing of kings nine thousand heads, and of middling twenty thousand. The scrubs are but of little value. The average price is forty shillings per pack; and sometimes the produce is fifteen or sixteen packs an acre, at other times a total blank. There is an amazing inequality in the produce of different plants; some stocks will send forth one hundred heads, others not more than three or four.

Should not great attention therefore be paid to the selection of seed, namely, by taking it from those plants which appear to be most prolific? This, however, is not done, but the seed is taken indiscriminately from the whole crop.

As the goodness of the crop chiefly depends on the care taken to keep the land free from weeds, leaving the plants at proper distances, and earthing them up well; and as most of the common workmen will pay more attention to their own than to another person's interest, it frequently happens that
a partnership

a partnership is formed between master and man. The former finds ground and ploughing, and the latter seed and labour.

At harvest the crop is divided, and each party takes a moiety.

The expence and produce of teasels may be thus estimated per acre.

	£.	s.	d.
To two years' rent — — —	3	0	0
To ploughing — — —	0	15	0
To workmen's labour — — —	3	15	0
To making out in bundles, tying together, and teasel-bands, 2s. per pack — — —	0	14	0
	8	4	0
Profit	5	16	0
	£ 14	0	0

BY AVERAGE PRODUCE.

Seven packs, at 40s. — — —	14	0	0
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Tithe and taxes excepted: the first of which is generally compounded for at 5s. per acre.

The working with the spade can only be done to advantage by the men accustomed to it, who are become, by habit, so dexterous in the use of this implement, that they will even thin out a crop of carrots.

The common hoe has been tried, and though in the hand of a compleat turnip-hoer, it was not found to answer.

After the crop wheat is sown, on one ploughing, and seldom fails of a good produce; so that it may not be quite fair to charge the teasels with two years' rent.

Few soils will bear frequent repetitions of this crop; and the farmer finds it his interest to devote newly broken-up land to this culture.

WOAD.

WOAD.

This is an article of cultivation, which, being important, as it relates to the woollen manufactory, must not be omitted. It is raised principally in the neighbourhood of Keynsham, and its quality is much esteemed.

The farmers who raise it have an opinion that the parish of Keynsham is particularly favourable to the growth and perfection of it; but this is most likely a vulgar error, for experiments are attested of as good crops elsewhere. The soil must be strong and good where it flourishes; it delights most in a deep fat loam, of a dark colour, which must have so much sand as to admit of easy pulverization. As the excellence of woad consists in its size, and the succulency of its leaf, it requires careful management as well as a rich soil. It is most commonly sown on land fresh broken up, and on narrow ridges.

The first ploughing should be against winter; the second in the spring, when the ridges should be formed; a third in April; and the last in May or June, just before the sowing of the seed.* In the intervals of the ploughing, harrowing should take place, to destroy all weeds.

The seed is sometimes sown by the best farmers in drills, for which purpose the surface should be harrowed very fine and level. The plants, in a moist season, appear in a fortnight, and in two or three weeks after are fit to hoe; they should be hoed out clean, to the distance of about six inches at least; some prefer a greater distance. In this neighbourhood, hand-weeding and thinning are generally used; and at the employ, women and children earn very high wages, especially since a cotton manufactory has been introduced in the

* Frequently woad is sown on *ley* ground, and on one ploughing, the surface being well harrowed.

parish. The success of the crops depends much on the hoeing and weeding, so as to keep the ground fresh and clean. Thus managed, three or four crops or gatherings will be produced in succession; but the first two are the best. The time of gathering is determined by the full growth of the leaves, and the first appearance of change of colour at the extremities; and this rule of course governs the succeeding crops.

The leaves are cut by hand, and gathered into baskets by women and children, who carry them to a very deep large cart at the edge of the field. After two cuttings, the crop is suffered to go to seed for the next year, if seed be wanted; but if only one crop be taken, the seed will be the finer. When the pods turn of a dark colour, the seed is deemed ripe. The stalks should then be reaped like wheat, and spread abroad; and if the weather be favourable, the seed will be fit for threshing in four or five days.

When the green crops are carted home, the plant is thrown into a mill, constructed with a heavy iron ribbed roller, something like that which is used for bruising bark and other substances; by this process it is cut and bruised to a pulp. It is then laid in small heaps, pressed close and smooth; and as the crust formed on the outside cracks, it is closed again to preserve the strength of the substance. After lying about a fortnight in this state, the heaps are broken up, the outside worked into the mass, and the whole formed by the hand, and sometimes by wooden moulds, into oval balls, which are then dried on hurdles, under a shed exposed to the sun.

They turn black, or of a dark-brown, on the outside, when well manufactured, and are valued in proportion to their specific weight and a purplish cast in the inside. Thus they are sold to the dyer; and it is scarcely necessary to add further,

further, that the use of this article in dying consists in forming the ground of the indigo blue. The crop is generally a profitable one. The quantity per acre near a ton and half. The nett profit of course must be governed by the goodness and price of the article. But it seems, on an average, to be so lucrative a culture, that few farmers who can raise it ever discontinue the practice. It however exhausts the land exceedingly, and more than two years crops must not in general be taken. To this crop succeed wheat and beans.*

POTATOES.

The rapid extension of the cultivation of this root can only be equalled by its general utility as a food both for man and beast. Thirty or forty years ago it was an extraordinary thing to see an acre of potatoes in one spot, and in one man's possession; now there are many parishes in this district which can produce fifty acres. Nay, the writer of this report has grown thirty or forty acres per year, for a succession of years; and once he had upwards of one hundred acres in one year.

* About forty years ago woad was cultivated in the neighbourhood of Mells; and there was in the parish a horse-mill for grinding, and sheds for drying it, the property of one HARVEY, who was more generally known by the appellation of the Woadman, than his own surname. Since his death it has been entirely discontinued.

From whence this man originally came is unknown; but most probably from some part where this plant was in usual culture. Small plots of teasels, hops, &c. are sometimes seen in villages far distant from those parts where they are raised on a large scale. Hence one is led to observe the attachment which most men have to the local husbandry of the district in which they are born and brought up, and the consequent difficulty of introducing a new system of agriculture into any place. The person migrating carries his attachments and habits with him, whilst the neighbours, where he settles, are unconcerned, or perhaps contemptuous spectators of his proceedings; and though they see him flourish and do well, are scarce ever induced to relinquish their old ways and imitate his example. R. P.

The soil most favourable is a rich sandy loam, newly broke up, and of a loose texture. The sorts cultivated are, the *kidney*, *white Scotch*, *magpie*, *rough red*, *purple*, and *silver-skin*. Rotten horse-dung is considered as the best manure; next to that, hog's dung; and after that, all sorts of farm-yard dung.

Lime, marl, soaper's ashes, or rags, make the potatoes scabby. The season of planting is April or May, and the quantity planted per acre from five to eight sacks, (240lb.) The seed should be changed every two years, and *large* cuttings used from your *largest* and *finest* potatoes. Whole potatoes have been tried, and found not to answer. There are various methods of planting, but they may be reduced to two, viz. the drill and the promiscuous.

If labourers are plenty, the promiscuous method is supposed to be the best. In this way the land is thrown into beds, five feet wide; intervals or alleys three feet, which are dug and thrown on to the beds.

The sets are placed one foot apart. Let the season be ever so wet, the potatoes in this way lie dry. In hoeing* also, access is had to the plants without treading on them. They are not so liable to be injured by rooks; and such a putrid fermentation is excited by the close thick shade of the haulm, that the land is more meliorated, and the weeds more compleatly suffocated and destroyed than in any other method. In regard to expence there is no great difference, for in this way it may be done for a guinea an acre, and in the drill method it will cost at least twelve shillings. The same reasoning weighs still stronger in respect to taking up: dexterous labourers, by thrusting their spades under the po-

* In hoeing, be particularly careful to cut out all plants which appear curled in the leaf.

potatoes, avoid cutting the roots. They also, in digging, separate the *small* from the *large*. They pulverize the soil more: they can dig clean, though the land be wet: and, on the whole, the expence of digging will not exceed that of ploughing out, more than *ten shillings* an acre. If the crop be a good one, the separating the small potatoes from the large will cost more than this difference. The produce varies from fifty to one hundred and twenty sacks (240lb. each) an acre; and the general price, as human food, is from four shillings to seven shillings per sack; and on particular occasions they have been sold at ten shillings.

When dug, they are secured in pits, and if common care and attention be bestowed, they are preserved in this way through the most severe winter, without injury; but they will shrink in respect to measure about one sack in twenty.

From a series of experiments made by the writer of this report, and communicated through the channel of the Bath Society's Papers, it appears that their value, when applied to the fattening of hogs, could not be made to exceed two shillings and six-pence, or three shillings, per sack, of 240lb.: and from other experiments since made, it is probable, that no greater value can be affixed to them if applied to the sustenance of any other stock. However, this should be no discouragement, for on good land, and with good management, they may be grown for one shilling and six-pence per sack, and will furnish the farmer with a certain supply of food in those months wherein he is most distressed.

Many object to the cultivation of this root *on a large scale*, considering it in the light of a great exhauster. If the produce of any crop, so productive as this is, be sold from the farm, and consumed at so great a distance that no return can be made, I will acknowledge that such must be the effect; but if potatoes are consumed on the premises, the return of
manure,

manure, from the consumption of *one* acre, will be sufficient for *two* or *three*; and as the potatoe crop ought always to be highly manured, no deficiency need be feared in the subsequent crops of corn, grasses, &c. particularly if wheat be banished as a succeeding crop, and barley or oats substituted in its place.*

It is now a common practice, instead of boiling, to dress potatoes by steam, and by so doing, the quality is rendered more farinaceous, and a considerable saving is made in the article of fuel.

* The reason why wheat frequently fails after potatoes, is because the frequent hoeings and digging render the land so light and porous, that it is more subject to the ravages of the grub, earth-worm, &c.; beside, in cold and exposed situations, the sowing is generally protracted till the month of November, which alone is sufficient to check the practice.

N. B. The writer has known thirty-two successive crops of potatoes from the same field, and the produce as good at the latter part of the term as at the beginning. This will puzzle the theorist, with his *peculiar substances of nutrition*.

A large cow, tied up a month after calving, ate 2cwt. and 18lb. of hay in one week, and on the ensuing week, being given four bushels (Winchester) of potatoes, the consumption of hay was reduced to 3qrs. and 26lb. It appears, therefore, that a sack of potatoes is equal to 1 cwt. of hay. The quantity of milk was increased by the potatoes, but it was thinner in quality.



CHAPTER VIII.

SECT. I. *Natural Meadows and Pastures.*

IT has been already observed, that the grass land of this district greatly preponderates; and if it be not chilled by too much moisture, it may boast of almost a perpetual verdure.

On the rich marsh land near the Bristol Channel, the grazing system prevails. In the vicinity of Bristol and Bath, the scythe is in constant use; and at a greater distance nothing is scarcely seen but the milking-pail. To which ever of these purposes the land is devoted, its bounties are not niggardly dispensed. If we view them comparatively, the hay system is perhaps the most injurious to the land, and the least productive of profit. This article seldom exceeds three pounds per ton; and if we consider the risk in making, the expence of carriage, the loss of time, and above all, the declining value of the estate so occupied, few arguments can be wanted to prove the impolicy of the system. In short, I never knew a hay-selling farmer get rich.

SECT. 2. *Artificial Grasses.*

On the stone-brash and freestone-grit soil, *sainfoine* takes the lead; and though the seed is very expensive, the quantity and quality of its produce, together with its durability, make an ample return of profit, particularly if sown when the land is clean.

Next to sainfoin, *rye-grass*,* *marl grass*, and white *Dutch clover*, are in deserved repute when the land is intended to remain

* The Agricultural Body is much indebted to Mr. PEACEY, of Northleach, Gloucestershire, for his careful selection and dissemination of

remain some years in grafs; but when it is intended to be ploughed again in the course of a year or two, *broad-clover* is preferred to all other artificial graffes.

Perhaps there are few things in husbandry more difficult to be accomplished than that of restoring worn-out arable to a good pasture. A few hints on this subject may not be unacceptable.

The first step is to extirpate from the land all noxious weeds. This may be done by a compleat winter and summer-fallow; or, in place of the summer-fallow, by a crop of potatoes, well manured, and kept perfectly clean, and followed by winter vetches, fed off in the spring.

At the latter end of May, or beginning of June, sow one bushel of buck-wheat per acre, and when that is up, and in rough leaf, harrow in (choosing, if possible, moist weather) two bushels of hay seed, collected from the best meadow hay, half a bushel of rye-grass, four pounds of marl grass, and four pounds of white Dutch clover. The buck is intended principally as a screen to the grass seeds.

If, therefore, the harrowing should pull up some of the plants, so much the better. A thick crop is not desirable. After the buck-wheat is harvested, which will be some time in September, let the field be hayned, or shut up for the winter; and let it be fed the next summer with sheep, or any kind of cattle, except horses; the latter animal will tear up the young plants with his teeth.

of the true perennial rye-grass, which is in every respect so much superior to the common rye-grass, sold by seedsmen, as to justify the warmest recommendation to the practical and discriminating husbandmen. Some people have objected to this grass, under an idea that it is not so palatable as the common rye-grass. Stock it whilst young, and put double the quantity of sheep that you generally do, and this objection will vanish. J. B.

Should

Should this pasture, in the course of three or four years, decline in fineness of herbage, and become coarse and rough, which is frequently the case, give it a top-dressing of lime, or lime mixed with pond or ditch earth, or the scraping of a road made with lime-stone, or marl; and if neither of these can be procured, with coal or soapers' ashes, or any kind of compost; and two years after either of the above manures are administered, serve out some good meadow hay on it in the months of January and February, and then give it a compleat covering of rotten dung.

By this method a good permanent pasture may be obtained. If the ground so laid down be intended for *pleasure* ground, omit the rye-grass, and add to the natural grass seeds,

SECT. 3. *Hay Harvest.*

In the management and curing of the natural grass, the inhabitants of this district, particularly in those parts where it is intended for sale, are very attentive.

Women or children are employed to spread the grass after the mower. About the middle of the day it is turned, and in the afternoon put into small cocks. Next day it is again spread with great care, shaking it high up in the air, and separating as much as possible every blade. In the course of the second day, it is twice turned; and early in the afternoon, whilst the *sun's rays are strong and powerful, and the hay warm*, it is again cocked in heaps, about double as large as those of the preceding evening. On the third day it undergoes a similar process in regard to the spreading and turning; and if the weather be very fine, and the crop not exceeding thirty cwt. per acre, it will be fit for stacking;—if otherwise, it should be put into large cocks, and left till the fourth morning, avoiding on all occasions stacking late in the evening,

evening, or in a strong dew. Should the weather be difficult, and the hay-making be interrupted by frequent showers, or by some days rain, make a point of drying it thoroughly, and then *salt it* after the rate of a peck of salt to a ton of hay; this will make it palatable to the cattle. On all accounts, avoid making a chimney in the stack, for this will inevitably make the hay mouldy and unwholesome.

Should it heat too much, and be in danger of taking fire, *turn the mow* before the heat is too far advanced. The expences of hay-making varies from eight to twelve shillings per acre.

In making artificial hay, the small cocks into which it is got the second day, are frequently turned and shook up, but *not spread*; and it requires two or three days more than natural hay before it is fit for the large mow.

N. B. One cubic yard of hay, in a mow well made and not overheated, will weigh on an average of the whole mow about thirteen cwt.

SECT. 4. *Feeding.*

The upland pastures of this district have seldom a sufficient bite of grass till May-day.

Two acres, worth thirty shillings, per acre are necessary to summer a cow well, and one acre and half for her winter provender. As it is the general practice to serve their cows during the winter with hay in the fields, the land is frequently in wet seasons so pounded, as to be unproductive great part of the summer.

In summer feeding, attentive farmers have the dung which falls from the animal scraped up and wheeled into heaps, and the thistles and rough spots frequently mown.

They also make a point of excluding horses and sheep from their cow pastures. And when their mown ground is
fit

fit to be stocked, they hayn their summer leaze, so as to have a good supply of rough grafs or rowen in the winter. They also mow and feed alternately, by which means the best sorts of grasses are preserved and encouraged.

A RECEIPT for making HAY-TEA.

BOIL about a handful of hay in three gallons of water, (and so in proportion for a greater or smaller quantity) or if the water be poured boiling hot on the hay, it will answer nearly as well.

Give it to the cattle and horses to drink when cold; or if the cattle and horses are any ways ill, and under cover, give it them blood warm. This drink is so extremely nutritive, that it nourishes the cattle astonishingly, replenishes the udders of the cow with a prodigious quantity of milk, makes the horses stale plentifully, and keeps them healthy and strong; and by this method one truss or hundred of hay will go as far as eight or ten otherwise would do.

The cattle and horses do not seem to like it at first; but if they are kept till they are very thirsty, they will drink freely of it ever afterwards.

The hay, after being used as before-mentioned and dried, may be used as litter for horses and cattle, make very good manure, and save straw, which will be a considerable advantage, especially where there is a scarcity of straw.

N. B. By a handful of hay, is meant as much as a person can grasp in his hand from a parcel of loose hay.

And it is presumed and wished, as the above method is so very easy and safe, that no person who has cattle, cows, horses, or sheep, will neglect to try it.

CHAPTER IX.

GARDENS AND ORCHARDS.

THE horticulture of this district is sufficiently understood and practised, to supply the cities of Bristol and Bath with a great variety and abundance of culinary productions; but there are no remarkable instances of skill in the exhibition of early field crops.

In respect to nurseries, the Rev. J. BROOKES, of Cold-Hinton, takes the lead; he has eight or ten acres under a very regular system of management. The annual expence of labour in a nursery amounts to about twenty-five pounds per acre.

The whole district is full of orchards, which let from three pounds to six pounds per acre; and the fruit produced at the northern base of Mendip hills, viz. at Langford, Burrington, Rickford, Blagdon, Ubly, Compton-Martin, and Harptry, affords a cyder strong, palatable, and highly esteemed as a wholesome *table* liquor. Many of these orchards have a northern aspect, and are sheltered from the violence of the westerly winds; and it is noticed, that orchards, so situated, are the most regular and uniform bearers.

The favourite apple, both as a table and cyder fruit, is the *Court of Wick Pippin*; taking its name from the spot where it was first produced. It originated from the pip or seed of the golden pippin, and may be considered as a beautiful variety of that fruit. In shape, colour, and flavour, it has not its superior: the tree is large, handsome, and spreading, and
a very

a very luxuriant bearer.* On the whole, it cannot be too strongly recommended.

Mr. GOOD, who occupies a large farm in Hutton, has a method of making cyder, which it may not be amiss to describe. The apples are ground by a horse-mill. The pumice is then wrung in hair bags; after which it is put into a tub and chopped. It is then ground over again, and made into a cheese, which stands in the press all night.

In the morning the press is strained as tight as it will bear by a lever or cap-staff; by these means, the cheese is made so dry, that it is cut into narrow strips, tied up in faggots, and burnt. He can make one hoghead upon eight more than by the common method. Two men make and tun five hogheads in a day, and the horse will grind the apples in three hours.

Query. Is not the quality of the cyder injured by such close expression?

The grinding apples by a horse-mill saves much manual labour, and expedites the business of cyder-making. But whether Mr. GOOD's method may be the best, or most lucrative, is a matter of question, for what is gained in quantity is lost in quality; the liquor procured by the second forcible expression being certainly weaker than the first, and being mixed with it, must reduce the whole to a lower staple. No water-cyder can be made after so strong a pressure of the pumice; and as, in the common way, two hogheads of good water-cyder can be made after seven of the best, the loss seems more than the gain.

* Grafts from this tree may be had by application to the reporter; and a sample of the fruit has been sent to Sir John Sinclair for the observation of the curious in this article.

Notwithstanding

Notwithstanding the apparent utility of extensive and productive orchards, many considerate and sensible men have hesitated in giving their unqualified assent to this sentiment; alledging, that a plenty of cyder is the forerunner of idleness, drunkenness, and debauchery, not only among the lower class, but also among the yeomanry themselves, who at these times spend successive days and nights in toping and guzzling at each others' houses. We ought not, however, to confound the abuse of a thing with its intrinsic value.



CHAPTER X.

WOODS AND PLANTATIONS.

THE country is but partially wooded, and, on account of the demand from the collieries, the wood is but very irregularly cut. Systematic plantation is but little studied.

Kingswood covers about two hundred and thirty acres. The timber is chiefly oak, but does not get to any large size; the woods being, for the most part, situate at the declivity of the hills, where there is but little depth of earth. The underwood is cut for wreaths or faggots. The valleys are in general richly laden with elm, which grows spontaneously in the hedge-rows, and gets to a good size. The method practised here of lopping off the side branches, to what is called a besom-head, cannot be too much execrated. It is destructive to the growth of timber, and by lessening the agitation produced by winds, deprives it of what may be deemed its salutary exercise. The effect of cutting off the lower branches is a premature delay, which first takes place in the top of the tree, a general check is given to the circulation of the sap, and it reduces the tree nearly to the state of a pollard.*

On the northern declivity of Mendip hills are some very good coppice woods; the principal are, Blagdon, Hasel, and Uby, containing in the whole about 150 acres.

* This is not the worst consequence of the besom-head. Philosophers are now agreed, that trees in full verdure receive a great portion of their nourishment from the atmosphere, by the absorbent vessels of their leaves; hence appears the impolicy of depriving a tree of that head which nature intended should assist in bringing the body to perfection. A.C.

These woods are very romantick and picturesque, and being secured from the south-west breezes, the growth is very rapid, and the profit greater than any will believe who have not had experience thereof; beside, these profits may be made annual, and are in themselves more certain than any other produce. You have only to divide a coppice of forty-eight acres into twelve parts, that is, four acres per year, twelve years growth. The more ash in these coppices the more valuable, as the poles are very saleable at the coal-pits; and I have known many instances of an acre producing in value sixteen pounds net after the expences of cutting, carriage, &c. have been deducted. This is nearly twenty-eight shillings per acre per annum, for the whole forty-eight acres, besides the accumulating value of timber-trees. It is more profitable to cut coppice-wood every twelve years, than to let it remain longer. On the southern declivity of Mendip hills, there are also some coppice woods, *Stoke wood* the principal; but these being exposed to the western breezes, are not so productive.

In the eastern part of this district there are also some large and productive woods, such as Mells, Leigh, Edford, Harwich, Compton, Camely, &c. these being near the coal-works are very valuable; interspersed also are many beautiful plantations, which are not only an ornament to the respective seats to which they belong, but are in themselves a fertile source of annual profit.

On land properly situated, no speculation can be more profitable or more pleasing than planting; the only objection is, the length of time required to bring it to perfection; but surely this ought not to have much weight, as the benefit must accrue either to the planter or his heirs; and certainly there is no way so easy of raising fortunes for younger children as by planting.

The

The ancient forest of Selwood (on the verge of which the town of Frome stands) appears to have comprised a woody vale of about twenty thousand acres, about eighteen thousand of which are now cleansed and converted into pasture and arable land, with a small portion of meadow; the remainder continuing in a state of coppice-wood. The chief sorts of timber in these coppices are oak and ash, which, though not of large growth, are very good of their kinds, and find profitable markets in the neighbourhood; the oak selling from fifty shillings to three pounds sixteen shillings per ton, and ash from forty-five shillings to three pounds. The underwood is chiefly hazel, ash, alder, withy, and birch; some of which, at eighteen or twenty years growth, sell as high as sixteen pounds per acre. To state the profit of these coppices in a clearer light, I would remark, that the annual value per acre, in timber and underwood, (I speak of those coppices which lie towards the northern end of Selwood) is from fifteen to thirty shillings. Much of the open land within the limits of this ancient forest does not net more than ten or twelve shillings per acre.*

* Digging holes one foot and half square and four inches deep, for planting young trees, may be done for two-pence per score, if the land be not very stony; but the best method of planting trees is on the sod, covering the roots with other sods inverted, that is, grafts to grafts. J. B.



CHAPTER XI.

WASTE LANDS.

IN this district there are many commons uninclosed; the principal of which are, Broadfield-Down near Wrington, and Lansdown near Bath. The former contains two thousand five hundred acres, and is for the most part a good soil, deep in earth, and easily ploughed.

Surely the inclosing and cultivating a tract like this, situate only eight miles distant from the city of Bristol, could not fail of being a great advantage to the proprietors; particularly as it abounds with excellent lime-stone, and the coal-pits are only a few miles distant.

Lansdown comprehends nearly one thousand acres; but as the soil is thin, and the surface perfectly smooth, and remarkable for its excellence in feeding sheep, to which it imparts a delicate flavour, it might not be prudent to break it up, especially as it affords a luxurious and beautiful ride to the sojourners in Bath.

Inclosing has been of long standing in most of these parts; many have exemplified an advance of rent more than two-thirds. The produce in many instances has been, of wheat thirty bushels, barley forty, oats fifty, and beans from thirty to forty per acre.

Increase of population in proportion.

Besides the above, there are several thousand acres of moor-land in what is called the North-Marsh, the present condition of which is disgraceful to the owners. Most of these moors consist of a rich fertile pasture, overcharged with stagnant water many months in the year, which inconvenience might easily be removed by the methods before suggested.

CHAPTER

CHAPTER XII.
IMPROVEMENTS.

SECT. I. *Draining.*

NOT so much attention has been paid to the draining of land as the object undoubtedly requires; but in some cases, where inclosures have been accompanied with a weeping surface, great improvements have been made by stone-draining. The acclivities from the vales are for the most part of this quality and complexion; and if the springs, which issue from the sides of the hills, were taken off at their head by judicious drains, and diverted into a proper channel, the value of the land would be advanced at least one-third.

Main drains two feet and half deep and two feet wide, in a heavy strong clay soil, may be dug for one shilling and six-pence per rope, (twenty feet) viz. nine-pence per rope digging the drain and placing the stones, three-pence per cart-load quarrying the stones, and three-pence per load halling. Each rope will require one cart-load and half of stones.

Small drains, leading to the main drain, may be executed for ten-pence per rope (twenty feet.)

SECT. 2. *Paring and Burning.*

Burn-baiting, that is, cutting off the turf, drying it, and piling it in heaps, and afterwards burning it to ashes, has been tried, but no sensible good effect, either immediate or distant, having been experienced, the practice is relinquished;

and I rather think this process is best calculated for cold, rushy, and heathy grounds, of little or no value.

The effect of burn-baiting, even on lands best adapted to this process, does not last more than three or four years; and if followed up with successive corn crops, the strength of the land is so exhausted by the forced fertility, that a rest of eight or ten years is necessary to prepare for its repetition. If burn-baiting be practised, it should be for turnips, after which only one crop of barley or oats should be taken, and artificial grasses sown therewith. If this rotation of crops be adopted, I see no reason why lands to which the manure is congenial, should be wholly denied the advantages of the practice.

A great deal in these instances depends upon the skill and judgment of the farmer. If he be wantonly debarred from the use of a valuable manure, he is injured; and if, on the other hand, he uses it without discretion, his landlord suffers, and the most indefatigable industry will not save himself ultimately from loss, and perhaps ruin.

SECT. 3. *Manuring.*

MARL.

The parishes of Midsummer-Norton, Stratton-on-the-Foss, Kilmerdon, Radstock, Timbury, High-Littleton, Farmborough, Paulton, Ston-Easton, Binegar, and Chilcompton, comprehend a district of land, part of which is rendered remarkably fertile by the application of marl.*

The soil consists of an earth more or less loamy, of a mixed colour, between brown and red, with a prevalence of

* Marl also may be found at Queen-Charlton, Chewton-Keynsham, and Burnett.

one or the other; very stony, resembling that kind of soil usually denominated corn-grit, and naturally so barren, that when in common field, at the beginning of the present century, the lands were not set at more than three shillings and six-pence per statute acre.

By a moderate computation, this soil may be said to occupy, in the parishes before enumerated, an average proportion of at least one-third. At a variable depth from the surface an inexhaustible store of black marl is constantly found, which, from properties equally singular as to fertility and duration, has advanced the lands from three shillings and six-pence to one pound eleven shillings and six-pence, and some to two pounds per statute acre; and this too with a very liberal allowance of profit to the occupier.

This valuable manure is raised in the summer at the average depth of about seven or eight fathom, by sinking a pit or shaft of four feet diameter, the sides whereof are secured by timber props, interspersed with wreathings of brushwood, and it is drawn to the surface by means of a windlass and buckets.

The first bed of marl perforated is blue, two feet thick, of a stiff consistence, and on repeated trials found in a comparative degree useless. Below this lies a stratum of stone, nine inches thick, and of a blue colour; next to which is found a bed of marl, from three to four feet in thickness, nearly horizontal, of a colour approaching to black, and, towards the lower part, of a shelly substance; the greater predominance whereof is found proportionably to improve its fertilizing property.

The expence of raising it, including that of sinking the shaft, is from eight-pence to one shilling per cart-load of twenty-four bushels. That, and carting out, spreading and brushing in, eighteen shillings per statute acre.

Forty

Forty load is an ample dressing for a statute acre, which,	
at one shilling per load, amounts to	£.2 0 0
Carting, spreading, &c.	0 18 0
The whole	2 18 0

For which a manure is obtained that secures a luxuriant undiminished vegetation, not requiring any further assistance for fifteen or twenty years. The generation of moss manifests the declining effects of this manure. It is considered as an indication for breaking up the old sward, which is generally done. This developes a very curious and singular phenomenon; namely, the marl spread on the surface forty or fifty years before, has only obtained the depth of between five and six inches, where it forms a regular, uniform, consolidated bed. Even at this depth its effects, although not exhausted, are nevertheless so much impaired as to demand its renewal. Will not this fact tend, in some degree, to elucidate its *modus operandi*?

While it remains within two or three inches of the surface, which is the case in some instances perhaps for twenty years or more, it may be supposed to form a kind of pan or reservoir for the nutritious and fructifying influences deposited by the atmosphere; which being there retained, and in contact with the roots of the grasses, form such combinations in the laboratory of nature as are best adapted to give vigour and permanence to the elementary principles of vegetation. These are evidently weakened when the marl, by its descent, gets below the roots of the grasses, and thereby deprives them of the matrix, which seems to preserve the means of their nutrition and support. This may account for the production and increase of moss on the surface, and the necessity of marling afresh, not only to impede its propagation but to destroy it.

It

It is observable that when marl is laid on this mossy surface, which accompanies an old fward, to avoid a course of tillage, the improvement is not equal to that of laying it on clover, or marl-grafs, the second year from the time of sowing.

An inconsiderable portion of these lands is employed in tillage under the following course of cropping:

1st year.—Old fward ploughed up in August.

Wheat—harrowed in October and the beginning of November on one earth.

Produce—from twenty-five to thirty bushels (eight gallons) per acre.

2d year. Wheat—single ploughing harrowed in as before.

Produce from thirty to thirty-five bushels.

3d year. Wheat again.

Produce, from twenty-five to thirty bushels.

Sometimes barley with or without fallow.

Produce fifty-six bushels.

4th year. Pease with two or three ploughings.

Produce, from twenty to twenty-five bushels.

Then winter-fallow as a preparation for next year.

5th year. Barley and clover or marl-grafs.

Produce, forty-eight bushels.

6th year. Clover or marl-grafs.

When mowed, produce from thirty to forty cwt. per acre.

7th year. Clover or marl-grafs fed.

Defective and ruinous to the land as the first three years' rotation of crops may appear, it is nevertheless with little variation uniformly pursued; and, with little abatement of produce, is renewed for another seven years succession.—

Even a third is carried through by many farmers, accompanied

panied with fallowing for some of the wheat crops, and assisting the land with a sprinkling of farm-yard manure. Even a fourth succession, with less wheat and more barley, is carried on by a few considerable farmers in the district; but from the lightness of the soil, and the difficulty of keeping weeds under, the crops fail, notwithstanding a more liberal use of manure.

A system of cropping, so very perverse and erroneous, carried to such a length on land rented at thirty or forty shillings per acre, must in the end involve the farmer in a yearly loss, and cannot but astonish every one; more especially if it be recollected, that this very land is susceptible of restoration to its former vigour and fertility at the moderate expence of two pounds eighteen shillings per acre.†

Marl grass* is the spontaneous production of the marl land. It was first noticed and collected fifty or sixty years ago by a Mr. JAMES, who lived on a farm belonging to the Marquis of BATH, in the parish of Chilcompton. By his assiduity in preserving and propagating the seed, in the course of a few years it became common, and has been considered ever since as a valuable substitute for red or broad clover,

† As every acre of land improved by marl gives a permanent addition to the national stock, premiums for the discovery of it, where it has not yet been found, and for the application of it, where it is known to exist, but has not been used, might very probably be attended with more real and durable benefit to the community, than a multitude of others which are annually proposed by the different Agricultural Societies established in various parts of the kingdom. Covenants might also be inserted in leases, obliging the lessor and lessee, on proper considerations, the former to be at the expence of raising, the latter of carting and spreading the marl on any given number of acres that may be agreed on. R. P.

* *Trifolium Alpestre*.

to which it bears rather a striking analogy; with, however, this difference, that it will continue much longer in the land.

When the marl lands are laid down to grasses, trefoil or white Dutch clover is sown in the proportion of seven pounds to twenty pounds of marl-grass or broad-clover, which enriches, diversifies, and by its early vegetation and blossoming, produces a carpet the most beautiful and picturesque that can well be imagined.

Marl has been repeatedly tried on the looser red earth lands, and on freestone grit soil, in different parts of the district, without producing any good effect. It has also been carried some miles out of the district, and applied to the light red earth of the lime-stone lands, with no better success.

The contiguity of the parishes to Bath and Bristol not exceeding a mean distance of nine miles, accessible by good roads, and which afford markets of almost unlimited consumption; the luxuriance of the pasturage, the early vegetation in the spring, all concur to render dairies a very eligible, as it is a general mode of occupation; yet notwithstanding on the larger farms, if a greater proportion were devoted to tillage, since they produce wheat and barley of excellent quality, and require, under a judicious routine of crops, little manure but the first marling for fifteen or twenty years, both landlord and tenant would derive considerable advantage therefrom.

The landlord might levy an additional rent of ten shillings per acre on the lands so converted to arable, under a lease of twenty-one years, compelling the tenants to dress with marl four years previous to the expiration of the term, by which means they would be left in a very good state of proof.

The

The tenant would be amply repaid his advance of rent, not only by the general certainty and superabundance of his crops, but by the application of the farm-yard manure, arising therefrom, to his red earth lands; which he may well do without injury to the former, and thereby find an equivalent, in their improved state, for the advanced rent.

Rational and well-founded as this change of management must appear to every intelligent and unprejudiced man, it has nevertheless many formidable obstacles to encounter. The landlord's groundless apprehensions of injury to his lands, under even a well-regulated course of tillage; his prepossession in favour of dairies and grazing, neither of which tend in any great degree to impoverish or exhaust the soil; the rich and beautiful complexion of the surface so gratifying to the eye during the greatest part of the year; his reluctance to build or enlarge barns, stalls, &c.; the frequency of moduses for tithe of cows; the easy rate of agistment, and other vicarial tithes; with his rooted aversion to the payment of corn tithes, however moderately levied; the smallness of many of the farms; and lastly, his dread of innovation on the accustomed practice of his neighbourhood, all concur to diminish the quantity of arable land. It must be admitted, that farms under one hundred pounds per ann. might not bear the expence of suitable buildings, to accommodate the plan here suggested; but since this, on every scale, would be proportioned to the size of the farm, the advance of the rent, exclusive of interest on money expended thereon, would secure to the landlord an augmentation of income deserving his notice.

With respect to tithes, the tenant would readily submit to the increased amount, and would find more than an adequate compensation in the abundance of his crops, and the moderate expences of tillage. Yet so revolting is tithe, though

though unaccompanied with severity in its application, as to induce the land-owner and tenant to forego a positive advantage rather than comply with its demands.

In the parish of Kilmerston there is a species of soil usually called a freestone-grit, of a light brown colour, stiff, clayey, and abounding in stone. Underneath, at various depths, is to be found a blue marl, which, on repeated trials, has not hitherto been known to communicate any improvement. This marl is not readily soluble when exposed to the air; but retains its clay-like quality, which renders it unfit either to pervade, or incorporate with the soil. These lands are sometimes devoted to tillage; but are soon exhausted, and left to poverty and rest for seven or eight years, when a similar course of management is resumed. Present value from five to six shillings per acre.

COURSE OF CROPS.

1st year. Lay broke up in the spring. Summer fallow.

2d year. Wheat sown early in October.

Produce, twelve bushels per acre.

3d year. Oats.

Produce, sixteen or twenty bushels per acre.

No clover; the soil will not support it. If sown, it gradually declines through want of sustenance.

Here ends the cropping without manure. Mr. WALWYN, of Kilmerston parish, fourteen or fifteen years ago tried sainfoin in this soil. The produce, from mowing four or five years successively, averaged twenty cwt. per acre. It so far exists now in some of these lands, as to keep up their value to twelve or fourteen shillings per acre. Where totally extinct, on breaking up afresh, the soil is found in better proof than in its pristine state. Notwithstanding this experiment, accompanied

accompanied with effects so obviously beneficial, yet the example has been but very little, if at all, followed in the neighbourhood, although surrounded by several hundred acres of a similar quality. However, a gentleman of large fortune, and proprietor of the greatest part of this barren district in the same parish, has for two or three years past attempted its melioration, by summer fallowing and turnips, to some parts of which he gives four or five ploughings and harrowings. Its texture is already considerably loosened.—Barns, stalling, and farm-yards, are provided on a large scale, in a situation to command the whole. Within a reasonable distance he can procure a supply of sand and coal-ashes; a resource too valuable to be overlooked. With a relish for agricultural improvement, a practical attention to its progress, and the conveniencies before mentioned, there is little doubt, but that in the course of time he will be enabled, in no trifling degree, by a judicious system of cropping, to fertilize this very intractable soil.

LIME.

The liming system of improvement has been fully detailed in the account given of Mendip hills. Green crops are seldom ploughed in as a manure, nor are the drainings of the farm-yard collected into reservoirs as they ought to be.

Bones, rags, night-soil, horn shavings, foot, &c. which in some countries are highly esteemed, are here little regarded. In short, too much confidence is placed in the natural richness and fertility of the soil.

SECT. 4. *Weeding.*

Some attention is paid to the weeding of the wheat crop, but little to the weeding of lent corn. This branch of rural œconomy is too much neglected.

SECT.

SECT. 5. *Watering.*

The watering of pastures is not much known, though the advantage resulting from that practice in neighbouring counties is not questioned.

The intermixture of lands embarrasses the operation of individuals in that respect, and this seems likely to prevent a practice from becoming more general, which numerous springs and rivulets would otherwise favour.

The water issuing from Mendip hills is unfit for this purpose, carrying with it noxious mineral particles, destructive to vegetation.

More will be said of watering when we come to the southwest district of the county.



CHAPTER XIII.

LIVE STOCK.

SECT. I. *Cows.*

AS the cows are all devoted to the dairy, preference is given to that sort which gives the most milk and of the best quality; or, in the farmer's language, to that stock which makes the most goods, whether it be butter, or cheese, or both; hence it follows, that in point of carcase they are very deficient. They are mostly of the short-horned breed; and though the fine long-horned cows of North-Wiltshire have been tried, and strongly recommended by some, yet the general run of dairymen are strongly attached to their own breed.

As this is a subject of some magnitude, let us bestow on it a few moments attention.

In the choice of stock, the buyer should principally attend to the purposes for which that stock is designed, and to the nature and quality of his land.

If his principal object be rearing, either with a view to fat himself or to sell to others, the form or shape of the parent stock should first be regarded.

That frame of body, which is accompanied with the greatest portion of valuable flesh, and the least offal, is to be preferred.

An aptitude to fat in youth is also an object of great importance. By an attention to these points, the farmers of Leicestershire and other counties have so attracted the notice of emulous breeders, as to sell their stock at a price scarcely

scarcely credible to a plain old-fashioned farmer. But, however we may admire their care and ingenuity, does it follow that we are to be led astray by the extravagant ideas which some people entertain of their superiority? A heifer of three or four years old, which discovers a disposition to fat, seldom proves a good milker, and is by our farmers turned out of the dairy. Beside, I have been informed that the great breeders are frequently obliged to have the assistance of Welch nurses for their calves, through a deficiency of milk in the parent animal. Is this a recommendation of them to the dairyman?

As a confirmation of the idea that handsome stock are seldom good milkers, I shall advert to the North-Devon breed, and I believe in all other respects there is not a more valuable in the kingdom.

In that part of the kingdom, little attention is paid to cheese or butter; but if a cow produce handsome stock, it is all that is required of her; and it frequently happens that a farmer, with ten or twelve cows, has but little more of those articles than is sufficient to supply his family.

The Somersetshire dairymen generally keep their good cows till they are ten or twelve years old, at which time their value is reduced to four or five pounds each. A long-horned cow, at that age, might be worth eight or ten pounds; (I mean of the middling breed) here is then an apparent deficiency of four or five pounds; but when we reflect that the keeping of one is worth ten shillings a year more than the other, the loss is not so apparent; and if we admit, that the short-horned will make half a hundred of cheese more per year than the long-horned, the balance of profit is then in favour of the former.

I do not mean by what I have said to detract from the merit of Mr. BAKEWELL, or other great breeders of the North.

North. I only wish to recommend a discriminating principle, and to deter the credulous farmer from *too hastily* a dereliction of principles and practices founded in experience, and to which he has been long accustomed.

I may be here told, that the foregoing premises, from which conclusions are drawn unfavourable to the long-horned cow, are delusive; that a North-country breeder would laugh at the idea of keeping a cow till she is ten years old; that at six years, or at the farthest at seven, she ought to be in the possession of the butcher.

But, coolly and calmly, ask a practical cow-keeper at what period of life a cow makes the most goods, and he will tell you between the age of six and twelve years old. I have known cows continue good milkers till they have passed their twentieth year.*

When cheese only is made, the annual produce per cow is from three to four cwt.

Many dairy farmers, in the vicinity of Bath and Bristol, make butter and half-skimmed cheese; in either way, the annual produce per cow is from eight to twelve pounds, including the calf, and profit of pigs.

From three to four acres of land will keep a cow throughout the year.

* The discriminating principle recommended, is a very necessary one, and deserves particular attention. It may here be observed in general, that in many parts there is a sort of cattle, as it were provincial, hardy, thriving, and well adapted to the soil on which it is bred. Let the cautious farmer furnish himself with the best of this sort which he can select, and if he must improve, as it is called, let him not lose sight of the discriminating principle, but do it with wariness and discernment. And as very little of the dairyman's profit is expected from sale of the carcase, if his cows are well kept, and yield him a good quantity of rich productive milk, it will be immaterial whether they have long horns, short horns, or any horns at all. R. P.

If

If kept on hay alone, a middle-sized cow will eat one hundred and three-quarters per week during the winter month, and on an average thirty hundred in the whole winter; this calculation is formed on a supposition that she calves between Christmas and Candlemas. If turnips or cabbages be given, she will eat, of the former two hundred, and of the latter one hundred and half in twenty-four hours, and the quantity of hay will be lessened about one half.—Heifers are put to the bull when one year and half old; and very few calves are reared for bulls or oxen, and no more of the female kind than just sufficient to keep up the stock.

Next to the selection of a proper sort, good keeping when young is of the first importance; and it has been observed, that calves, after being turned out to graze, should have but little water given them. The first winter each calf will eat about sixteen hundred of hay.

SECT. 2. *Sheep.*

In the North-East part of this district, that is, in the vicinity of Bath, a very large and good race of sheep are bred; the wethers of which are commonly folded till they are between two or three years old, and then grazed. Some of these sheep, when well fatted, run to thirty or forty pounds per quarter. Mr. MOGER, of Woolverton; Mr. DAY, of Foxcote; Mr. YOUNG, of Camerton; Mr. HOLBROOK, of Corston; and Mr. SMITH, of Twerton, are the principal breeders; and this sort of sheep, having a large quantity of tallow, is highly approved by the butchers. There is also the native Mendip breed, a sort that will thrive on the poorest soil, and fatten on such land as will scarcely keep other sorts alive. Pasturage ever so dry and exposed will feed this kind. They are very hardy, and their wool fine. The

L

mutton

mutton is also excellent for the table, being full of gravy and of a rich flavour.

The large heavy loaded sheep of Leicestershire and Lincolnshire have been tried; but the great doubt lies whether this sort of sheep would bear folding; if not, they are inadmissible, as folding is the *sine qua non* of good husbandry, on the sheep and corn farms* of this district.

Under the auspices of the Bath Society, unto which his Majesty was graciously pleased to present a Spanish ram, a

* Some time ago the Leicestershire sheep-breeders were modest enough to express only their *doubts* of the utility of *folding* sheep, but now they do not hesitate positively to condemn the practice, and to represent it as altogether ridiculous and absurd. "It is only (say they) robbing the *pasture* land to support the *arable*. It cannot increase the quantity of manure, nor can the benefit attending it be a sufficient compensation for the injury done to the flock."

In a rich fertile country, where the quantity of arable land is small, and in mere subserviency to the breeding or grazing system, where dung is plenty, and can be put in the corn land at a small expence, and where each ewe is valued at four or six pounds, it is not to be wondered, that the folding system should be held in contempt and derision; but I will be bold enough to repeat, that in a poor exposed and extensive corn farm, the soil of which is light and stony, it is the *sine qua non* of good husbandry.

Let me ask these gentlemen, whether the downs of Wilts and Dorset would wave with luxuriant corn if folding were abolished? No. The farmer would plough and sow to little purpose, were his fallows to remain untrod with the feet, and unmanured by the dung and perspiration of these useful animals. Beside, in the hot summer months, nothing is so grateful to the flock itself, as fresh ploughed ground; and sheep will, of their own accord, retire to it when their hunger is satisfied. The following may be some of the reasons why these gentlemen set their faces against this useful practice:

1st. Their sheep are too valuable to be kept in sufficient numbers for folding.

2dly. Their inability to walk to any great distance.

3dly. Their liability to disorders from too great heat of body.

J. B.

new

new breed of sheep has been lately introduced, which bids fair to exceed all others of equal size, in quantity and quality of wool, accompanied with a carcase by no means despicable; but as these crosses of breed are found sometimes to degenerate, I shall not be too warm in recommendation till a farther trial has been made, and experience has confirmed their superiority.

More sheep would be kept in this district, were it not for the disposition of the land to bring the foot-rot.

The marl land in particular generates this disorder; and though the following receipt will make a temporary cure, yet it is a very difficult undertaking thoroughly to keep the feet sound. The scab is also a troublesome and infectious disorder. The goggles or rickets is a disorder not much known: it attacks sheep between one and two years old, and no method of cure has yet been discovered.

RECEIPT FOR THE SCAB ON SHEEP.

One pound of quick-silver
Half ditto of Venice turpentine
Half a pint of oil turpentine
Four pounds of hogs-lard.

Let them be rubbed in a mortar till the quick-silver be thoroughly incorporated with the other ingredients.

RECEIPT FOR THE FOOT-ROT.

Roman Vitriol
Verdigrease
Gunpowder, and
Linseed-oil, made into an ointment.

ANOTHER.

One spoonful of turpentine
wo ditto of crab-verjuice.

SECT. 3. *Horses.*

There are but few horses bred in this district—the farmers are principally supplied by dealers who attend the North-country fairs. Farriery is in the hands of men equally conceited and illiterate; and these useful animals frequently die of a disease called the *doctor*. Few people are aware of the expences which attend the keeping of a team for *road* work.

The following being taken (as an average of seven years past) from an account kept by a person whose accuracy may be depended on, needs no apology:

TWO TEAMS, NINE HORSES.

	£.	s.	d.
Two waggoners 6l. turnpike 50l. expences 27l. 6s.	137	6	0
Corn of all sorts	110	10	0
Brewers' grains four-pence per bushel	38	19	0
Hay, at three pounds per ton	74	0	0
Harnes-maker	9	12	0
Tilts, lines, &c.	11	0	0
Blacksmith	27	10	0
Farrier	3	1	0
Wear and tear of waggons	20	0	0
Ditto of horses	30	0	0
Straw	16	0	0
	*£.477	18	0

Or nearly 240l. per team.

* This calculation affords a very substantial reason why *traunters*, as they are called, (that is, men who keep horses and waggons for hire) seldom get rich.

Cutting straw into chaff is much practised, but I doubt its utility in respect to horses. The food, in this method, passes into the animal's stomach without proper mastication, and in my opinion affords but little nutrition. For oxen, cows, and all ruminating animals, the practice may be advantageous.

SECT. 4. *Hogs.*

The vast number of hogs fatted in this district are for the most part bought at Bristol market of Welchmen, or of itinerant drovers, who travel through the county. They are fed chiefly with whey, sometimes a little corn is given to finish; and their flesh is of a fine colour and delicate flavour; their weight when fatted from ten to twenty score. Those few that are bred, are of various sorts:—1st. The native white, with large ears and long body. 2d. The Berkshire, black and white in colour, and of a compact round form, 3d. The Chinese. 4th. A mixed breed.

In breeding hogs, nothing should be more attended to than *warmth* and *cleanliness*; without these, the most liberal allowance of food will not avail; and as there is a great difference in the quantity of food necessary to support hogs of different sorts, though of the same age and size, experiments are wanting to ascertain their different degrees of perfection. In the writer's opinion, the best sort of hogs he ever saw, was sent to a friend of his from Mr. ASTLEY, a great breeder of sheep in Leicestershire.

The writer of this report has been in the habit of folding hogs on his pasture land, feeding them with raw potatoes.

The improvement of the land has been astonishing; and when hogs are kept on a large scale, the practice cannot be too warmly recommended.

SECT.

SECT. 5. *Rabbits.*

Some years since there were many warrens in this district, but the only ones now left are, Charter-House, Temple-Down, and Ubly, containing about sixteen hundred acres. Both the flesh and skin of the rabbits, bred on these warrens, are much esteemed; and they sell, when in season, (that is, from November to January) for two shillings and six-pence a couple, skins included. Could coney be preserved from the depredation of *two-legged* and *four-legged vermin*, the occupation would be very profitable; but one snowy winter drives them off the warrens never to return, and wipes out the profit of many favourable years.

SECT. 6. *Poultry.*

The great demand in Bristol and Bath naturally induces an attention to the rearing and fattening of all kinds of fowls. Of late it has been found that potatoes, boiled and mixed with the skimmings of the pot, or with any other fat or greasy substance, is the cheapest food that can be given to all kinds of poultry, and fattens them in a few days, making the flesh of a most delicate colour and flavour.

SECT. 7. *Pigeons.*

These are considered so ravenous and mischievous, that few are kept.

SECT. 8. *Bees.*

It is to be regretted that these useful insects are so little attended to.

Suppose in each parish of the county there were kept only ten hives, and the average produce of each hive was twenty pounds of honey, this would amount at the present price to near five thousand a year, besides the value of the wax.

Though

Though many directions have been given in books for the preservation of the lives of bees, and at the same time taking away their stores, it does not appear that any of them has been practised in this county with success.

After they have swarmed, driving them out of the full hive, and putting an empty one in its stead, has sometimes answered the purpose.

This should be done early in the season, so that the bees may have time to collect a store of food before winter.



CHAPTER XIV.

RURAL ŒCONOMY.

SECT. I. *Labour.*

THE rate of wages, in hay and corn-harvest, is about nine shillings per week, with dinner and beer; at other parts of the year about seven shillings, with small-beer or cyder.

Time of labour in the summer from six to six; in the winter from daylight till it is dark.

SECT. 2. *Provisions.*

In the year 1793 wheat was six shillings per bushel, (Winchester) barley four shillings and six-pence, oats three shillings and three-pence, beef four-pence halfpenny per pound, mutton four-pence halfpenny, pork five-pence, butter nine-pence,* and cheese, six months old, forty shillings per cwt. Now, viz. January 1797, wheat is at seven shillings, barley three shillings, oats two shillings and three-pence, per Winchester bushel; beef at six-pence, mutton five-pence halfpenny, pork seven-pence, butter one shilling per pound, and cheese fifty-six shillings per cwt. The prices of all grain are declining rapidly; and it is probable, that before the conclusion of the year 1797, they will be very low indeed.

* In the years 1795-6 wheat was at fourteen shillings per bushel, barley five shillings, oats three shillings and nine-pence, beef five-pence, butter ten-pence, and cheese fifty shillings per cwt.

In the alarming scarcity of bread-corn, and the dearth of all other grain, which was felt in the years 1795-6, the attention of mankind was naturally directed to an investigation of those causes from which that distressing evil might have originated. Various were the opinions of mankind on this subject; and the chief causes stated, were, the *consolidation of farms*, the *combination of farmers, jobbers, and millers*; the *consumption made by the distillers*, the *oppression of tithes*, the *sale of corn by sample*, and lastly, the *increased luxury of the times*.

Though all these causes have undoubtedly contributed in part to produce the effect, which we have had so much reason to deplore, yet I think the great operating causes have been, *scanty crops of corn*, the *prevailing disposition of converting arable to pasture*, and the *unavoidable waste which must inevitably accompany war*.

From the year 1791 to 1796 we had not a first-rate crop of corn. The summer and autumn of 1792 were a continued series of wet weather; both corn and hay were greatly injured in harvesting, and consequently the little corn that was well secured, advanced in price; but under all these unfavourable circumstances, the old stock in hand was so considerable, that the price in 1793 did not exceed (in the county of Somerset, at least) seven shillings and six-pence per bushel, Winchester. The produce of 1793 being a middling crop, wheat did not experience much advance, till a probable deficiency in the crop of 1794, accompanied with nearly a total failure in the crop of pulse, was discoverable. Its advance then was very rapid, and great part of the old stock being exhausted, apprehensions were entertained of an absolute famine. We may, therefore, from the foregoing statement, draw this fair inference, that three out of the five years before referred to were *deficient in produce*; and that the crops of 1791 and

1793,

1793, though tolerable, were not sufficient to make good the deficiency of the three unproductive years.

For argument sake, let us suppose the average produce of a good crop to be twenty bushels per acre, and the average consumption of the kingdom eighteen bushels?

Let us also suppose the average produce of 1792 and 1794 not to exceed fourteen bushels, and that of 1795 not to exceed twelve bushels per acre, the amount will then stand thus, admitting that 1791 and 1793 were good years of produce:

1791,	-	-	20	bushels per acre.
1792,	-	-	14	ditto.
1793,	-	-	20	ditto.
1794,	-	-	14	ditto.
1795,	-	-	12	ditto.

80 Produce of five years.

90 Consumption in ditto.

10 Deficient, or two bushels per acre
per annum.

Admitting that three million of acres are annually sown with wheat, a deficiency of two bushels per acre, of produce, compared with the consumption, would require an annual importation, for the above stated five years, of 750,000 quarters.

Now, according to a certain writer, the importation from foreign countries, for eighteen years, ending January 5th, 1789, amounted to only 42,657 quarters of wheat, and 283,175 quarters of oats per annum.

From the statement made in the first report of the Select Committee appointed to take into consideration the means of promoting the cultivation and improvement of waste land,
it

it appears that the total increase, in the consumption of cattle and sheep, for the last sixty-two years, amounts to the enormous number of 32,854 head of cattle, and 203,290 sheep, or nearly one-third *for the metropolis alone*; and as the size and weight, both of cattle and sheep, have probably increased at least one-fourth since 1732, such augmented proportion ought to be added to the calculation of consumption. This denotes such an increase, both of inhabitants and of luxury, as must have been attended with a proportionate consumption of butter, cheese, hay, &c.; and if extended to the whole kingdom, clearly accounts for the increased price of the before-mentioned articles, and is a sufficient apology for that predilection for *pasture* land, which, for many years past, seems to have been universally manifested.

In the course of the last thirty years, the price of labour, butter and cheese, beef and hay, have advanced in price nearly fifty pounds per cent. Barley and oats have also advanced thirty or forty per cent. Not so *bread corn*. If we except the last two years, that article has advanced but little; and perhaps the average price of the last thirty years, namely, from 1764 to 1794, is not much higher than that from 1734 to 1764.

Let us now advert to the consolidation of farms, to which the multitude have attributed the late scarcity; and here I cannot help remarking, that without farms, at least moderately large, I much question the possibility of extending an improved agriculture; and were the prevailing wish gratified, and the plan of small farms adopted, such a measure must be attended with a total extinction of that energy and spirit which are the life and soul of adventure.

What would be the operation of such a system in trade, were the clothier, the cotton manufacturer, the artisan, to be restricted to a limited capital? Why, a total dereliction of
all

all that animation and exertion which have gained to them a trade with the whole world, and which have rendered their late and present improvements the object of general admiration and astonishment.

An equal division of farms never has existed, nor could it continue, if it had. The unequal ability of tenants, the assiduity and economy of some contrasted with the indolence and dissipation of others, the diversity of soils, the mode of manuring, course of cropping, proximity or distance from large and populous cities and towns, and variety of stocking, are all so unsettled in their nature and qualities, that what might be *right* in one instance, would be *wrong* in another.

Let me ask the advocates for small farms what occasioned that consolidation of them, which they so much reprobate, and to which they attribute, in a great degree, that dearth which the nation now experiences. Was it not because the large holder could afford to give more rent than the small? And how was this to be done, but by an increased produce? And if an increased produce was the consequence, how could such a measure operate in the way stated?

But some will say, does not the consolidation of farms act as a check to population? I say, no.

The ideas of large farmers are more expanded than those of small. The extent of their capital; their more liberal education, and more general intercourse with the farmers of other districts; the dissemination amongst those of knowledge, by means of books and agricultural societies, whereby discoveries reach them long before they can possibly be known to the small farmer; all these comparative advantages concur to introduce a system of *cropping*, *cleaning*, *manuring*, and *stocking* the land, by which the necessary manual labour on a farm is greatly increased. And what difference

is it to the publick whether this manual labour be performed by the little *farmer himself*, or by the *hired labourer* of the large farmer?

True it is, that where cottages are levelled, and the married labourer is obliged to give way to the domestick or *single* servant, then its operation may be in some degree fatal to population; but for this a remedy might be devised.*

On the whole, I am of opinion, that any system adopted by the British Legislature to limit the extent of farms would be unwise and injurious in its operation.

Let it not be inferred, from the preceding remark, that I am an advocate for farms of an *unlimited* extent. No. A farm should never be so large as to preclude the possibility of good management. Where this limitation (as to corn or grazing farms) may be fixed, it is difficult to say, for the reasons before stated; perhaps in no case should they exceed six hundred pounds per annum. This is large enough to produce, with good management, a sufficient profit to render its occupier independent and comfortable.

As to dairy-farms, they cannot well be too small.

One even so low as sixty or seventy pounds per annum will afford a comfortable provision for a family, be wholly conducted (serving cattle excepted) by the females of the household; and the male part thereof might increase their income by occasional work done for their more opulent neighbours, the corn farmers of the district.

But the most formidable objection to large corn farms still remains to be answered, this is, the capacity which large capital gives the holders of withdrawing the produce from

* Let a tax be put on all unmarried male-servants beyond a certain number living and lodging in a farmer's house, and let the produce go to the industrious married cottager.

market,

market, and thereby producing an artificial scarcity; to which may be also added, the practicability of combination to enhance the price much beyond a due proportion.

In years of plenty, when the soil produces more than is necessary for the consumption of its inhabitants, the man who holds back from market a *part* of this superfluity, so far from being an object of condemnation, ought rather to be an object of applause, in as much as such conduct tends to preserve a greater equality of price than could otherwise exist.

In the latter end of the year 1791, and the beginning of the year 1792, the price of wheat did not exceed six shillings per bushel.

The wet summer of 1792 occasioned an advance of price, but even then it did not exceed seven shillings and six-pence per bushel, nor did it much advance till 1794, when the drought of the spring having occasioned a total failure of pulse, and a poor crop of wheat, the price advanced rapidly, and at last reached the enormous value of fourteen shillings per bushel.

Other causes beside this deficiency of the crop may have contributed to this alarming and melancholy event; but if the foregoing observations are founded on fact, we may safely infer that the late dearness of wheat is easily accounted for, without having recourse to the combination of farmers, the monopoly of jobbers, or to any other of the causes before enumerated.

It arose from *three years out of five of deficient produce. The almost total failure of pulse in the year 1794, and the destructive ravages of war*, which has not only lessened importation, but has inevitably produced in our fleets and armies a wasteful expenditure of this necessary article of human food.

CHAPTER XV.

POLITICAL ŒCONOMY, *as connected with or*
affecting AGRICULTURE.

SECT. I. *Roads.*

PUBLICK roads pretty good, considering the traffick upon them. Parochial ones ill managed, and bad; notwithstanding good materials for keeping them in repair are near and abundant. But some examples are beginning to be set of more judicious management, by throwing the fides to the middle, thereby widening the space of passage, and making drains at both fides. This obvious piece of œconomy cannot be too much imitated.

SECT. 2. *Canals.*

The *Somersetshire Coal Canal*, which has two branches, the one commencing at Paulton, the other at Radstock, and both communicating with the Kennet and Avon canal; the *Dorset and Somerset Canal*, commencing near Nettlebridge, and extending through Frome to the county of Dorset; and the *Ilchester Canal*; are the only three canals for which acts have been obtained. Another was attempted which was intended to commence at Pill near Bristol, and to communicate with the Grand Western canal at Taunton. This Bristol and Western canal, as it was called, might have been carried near fifty miles without a lock, and for the most part through a strong clay soil. It would, in conjunction with the Grand Western canal, (an act for which has been obtained) have delivered coal to the inhabitants of
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the county of Devon at nearly half the present price; and yet all these benefits were lost, and a scheme, fraught with publick good, as well as private convenience, was frustrated by a certain nobleman, merely because he conceived that he had not been treated by the ostensible promoters of it with becoming deference and respect.

SECT. 3 and 4. *Fairs and Weekly Markets.*

Many fairs are held in this district, but Bath and Frome are the only towns which have a weekly market of any consequence.

SECT. 5 and 6. *Commerce and Manufactures.*

The principal manufactures in this district are those of woollen cloth, and knit worsted stockings, which, in the town of Frome, as well as Shepton-Mallet, are considerable; and from the number of hands therein employed, must have some effect on the agriculture of the neighbourhood.

The town and parish of Frome are found to contain nearly seventeen hundred families, or about ten thousand people; more than one-third of which are actually and immediately supported by the manufactures spoken of; besides a vast number of the lower order of people in the adjacent villages. In this town, the annual quantity of cloth manufactured has lately been found to be more than one hundred and fifty thousand yards. In Shepton, the inhabitants may be reckoned six thousand, and the cloth manufactured one hundred and twenty thousand yards.

Justice and impartiality compel me to remark, that the woollen manufacture, in almost all its branches, has been for some years past, and is now rapidly decreasing in its heretofore most fertile source of national benefit; namely, in furnishing labour adapted to the different periods and
stages

stages of life. Machinery *must* and *will* be universally introduced, otherwise the districts, where *it is not used*, must be sacrificed to those where *it is*. Would the legislature interfere to suspend its operations, or limit its progress? This would be incompatible with its wisdom and justice. To allow only its *partial establishment*, would be oppressive; to admit of *none*, would be ruinous; because such machinery, with its appendant branches of manufacture, and a *few individuals* allotted to each, is not only susceptible of, but it is presumed will shortly be, in a state of migration. In Yorkshire, where it has received a degree of perfection, and an extent of establishment, beyond that of any other part of the kingdom, I have been informed, from indisputable authority, that before the present war, the great demand for the produce of the manufactures left but few, in comparison, to resort to agriculture for support. What the present situation may be, in this momentous relation to national prosperity, I am not able circumstantially to describe, but general rumour states it as a melancholy reverse.

Whether the introduction of machinery for the expediting carding, spinning, &c. will enable the manufacturers to make more cloth, or whether a number of the poor must be driven to seek subsistence by other labour, may, perhaps, be best ascertained by experiment. If the revival of the export of kerseymeres and fine cloth should take place, and sufficient stock of wool can be obtained, the decision will be in favour of the former part of the question, and all will be well; but should the present check on the export long continue, or should it be found that by the hands now in employ, and the machinery already in use, the whole stock of wool (which is most certainly a limited article) shall be wrought into cloth in nine or ten months of the year; the full-grown and aged labourers in this manufacture will be

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seriously

seriously distressed. Landed property in the neighbourhood will be heavily burthened; and the children must migrate and seek subsistence by other employ where it can be found. Should this be the case, many other professions and employments, which are either mediately or immediately connected with this manufacture, or otherwise dependant on the populousness of the neighbourhood, will be ultimately affected. Further, the agriculture of the Western part of Wiltshire, and the North-Western part of Dorsetshire, must partake of the consequence of such a migration; for the lands about Frome or Shepton not being well adapted to tillage, the inhabitants are chiefly supplied with corn and grain from those counties. The assistance of machinery was had recourse to by the manufacturers of Frome and Shepton from absolute necessity; for had they continued in the old method, their trade must have been lost; and indeed *now* the North-country manufacturers are beforehand with them, particularly in the application of water, the best *primum mobile* of all machinery.*

It is much to be feared, that the improvements already made, and those now going on, will ultimately be the means of disseminating manufactures in other countries, to the prejudice of the export trade of Britain.

There are also several mills on the Avon for preparing iron and copper, and sundry others for the spinning of worsted, and spinning and weaving of cotton. The effect on agriculture has been considerable; the pay of men, in the

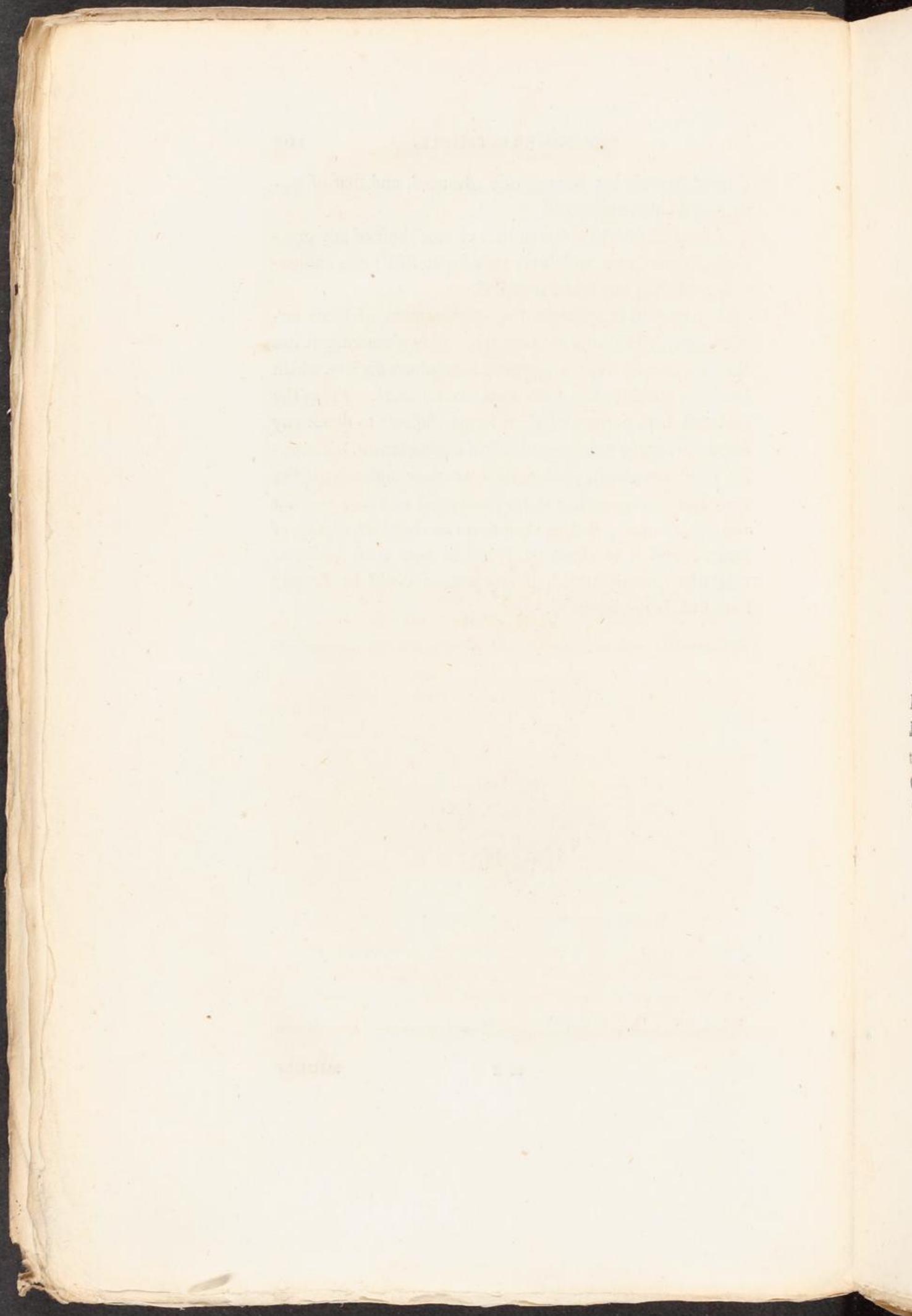
* The prudence of the North-country manufacturers was highly conspicuous, in their introducing the cotton manufacture fully into their neighbourhood, before they much extended machinery in their woollen; thereby first securing full employment for the poor, and then enjoying all the advantages which machinery could bestow. A.C.

time of harvest, has been greatly advanced, and that of women and children doubled.

It may be said, that this district cannot boast of any practices in agriculture which are peculiar to itself; the cultivation of teazles and woad excepted.

Its advances in receiving the improvement of more enlightened agriculturists are very slow, notwithstanding it has the advantage of a very respectable Agriculture Society, which has been established in Bath near twenty years. From the tardiness before mentioned, it seems difficult to devise any means to engage a stronger desire of improvement. *Draining their wet lands, folding sheep on their uplands, feeding their cows during winter in the farm-yard, and more frequent marling*, naturally present themselves as the chief objects of notice; and it is especially desirable, that these practices might be strongly urged, if any means could be happily found to do it effectually.







MIDDLE DISTRICT.

CHAPTER I.

GEOGRAPHICAL STATE AND CIRCUMSTANCES.

SITUATION AND EXTENT.

THE middle division of the county is the largest, being that part comprehended between the Mendip hills on the North-East; Quantock-hill and the forest of Neroche on the South-West; parts of Devonshire and Wilts on the South-East; and the Bristol Channel on the North-West. It includes the city and borough of Wells, the boroughs of Bridgwater, Ilchester, and Milborne-Port, and the market-towns of Axbridge, Shepton-Mallet, Glastonbury, Brewton, Castle-Cary, Wincanton, Somerton, Langport, Yeovil, South-Petherton, Ilminster, Crewkerne, and Chard, together with their adjacent parishes and villages, amounting in the whole to between four and five hundred thousand acres.

CLIMATE AND SOIL.

The climate of this district may, for the most part, be pronounced mild and temperate; but on so varied a surface an uniformity of soil cannot be expected.

On the borders of Wilts and Dorset the lands are high, and partake of the soil and management of those counties; sheep-

sheep-walks and corn constituting the principal parts of husbandry. The farms are here large, and *folding* is unremittingly pursued. Wheat is seldom sown without *two* foldings; and fallowing every four or five years is the general practice. The corn produced is of a good quality, and finds a ready sale at Wincanton, Bruton, and other markets.

The next division of this district, namely, the country around Shepton, Bruton, Castle-Cary, Ilchester, Somerton, Langport, Petherton, and Ilminster, is exceedingly fertile, both in corn and pasture; abounds with good orchards and fine luxuriant meadows, and is altogether as well cultivated and as productive as most parts of the kingdom. In some parts, flax and hemp are produced in great abundance, which, together with wool, furnish the raw materials for extensive manufactures. Westward of this, Polden and Ham-hills rise boldly to the view, and constitute some of the inferior lands of the county. The soil on these hills being very thin, and the estates disposed in small portions of common field, no considerable improvement can be effected without a fundamental change in the system of management.

Hence we descend into the marsh or fen-lands, which are divided into two districts, namely, *Brent-Marsh*, and the *Bridgwater* or *South-Marsh*. *Brent-Marsh* is that portion of land comprehended between Mendip-hills and Polden-hill on the North and South, Bridgwater-bay on the West, and extending to Wells and Glastonbury on the East.

This marsh may also be divided into two parts, separated by a tract of elevated land, on which stand the parishes of Allerton, Mark, Blackford, Wedmore, &c. Through the Northern level runs the river *Axe*, emptying itself into the Bristol Channel at Uphill; and through the Southern the river *Brue*, emptying itself into Bridgwater-bay near Burnham.

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This country has been heretofore much neglected, being destitute of gentlemen's houses, probably on account of the stagnant waters, and unwholsome air; but of late many efforts have been made to improve the soil, by draining and inclosing, under a variety of acts of parliament. The benefit resulting therefrom has been astonishing. The rhynes and ditches necessarily cut to divide the property, together with the deepening of the general outlets, discharge so much of the superfluous water, that many thousand acres, which heretofore were overflowed for months together, and of course of little or no value, are become fine grazing and dairy lands; to the great emolument of the individual possessors, as well as the benefit of the community. The quantities thus inclosed in Brent-Marsh, within twenty years past, under authority of parliament, are as follows:

ACRES.		
Wedmore and Mear	4,400	} together with 1,100 acres of turf-bog as yet unimproved.
Compton-Bishop	300	
Glastonbury	— 1,500	Ditto 300 ditto
Westhay, &c.	— 1,700	Ditto 1,000 ditto
Mark	— 2,000	
Huntspill	— 1,200	
Shapwick	— 100	
Blackford	— 900	
Wookey	— 900	
Westbury	— 450	
Bleadon	— 400	
West-Pennard	— 250	
Eddington	— 1,000	Ditto 400 ditto
Stoke and Draycot	800	
Nylands	— 350	
Wells	— 1,150	
	17,400	2,800 of turf-bog.

Of these seventeen thousand four hundred acres, six parts out of seven are cleared of stagnant water, and rendered highly productive: on the turf-bog but little improvement has hitherto taken place.* There remain about three thousand acres to be inclosed, which (the turf-bogs excepted) will compleat the division of all the moors within the Brent-Marsh district. It is not to be understood, that the local drains, under such a variety of acts, and at such different times, can have the most perfect influence on the country; particularly when it is considered, that the river Axe has no barrier to the tide, which flows several miles, and choaks the lower part of it with *slime*, to such a degree, that many thousand acres adjoining the upper parts of the river are, in consequence thereof, very much injured. Were a barrier, with proper sluices, erected near the Bristol Channel, some of the most considerable windings of the river shortened, and the shallow parts deepened, not only the moors, but the *old inclosures*, would be benefited thereby, to the amount of at least five thousand pounds per annum.

The river Brue drains a much more considerable part of Brent-Marsh than the Axe, and has a barrier to the tide (which rises there no less than twenty feet in height) with sluices therein, at Highbridge; but its foundation, and the apron and cills of the sluices, are at such a height above low water mark, that the drain is very imperfect, and the lowest lands, which lie some miles up the river, are frequently incommoded by the land floods.

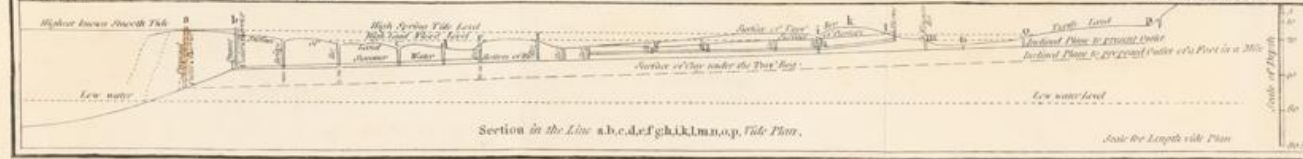
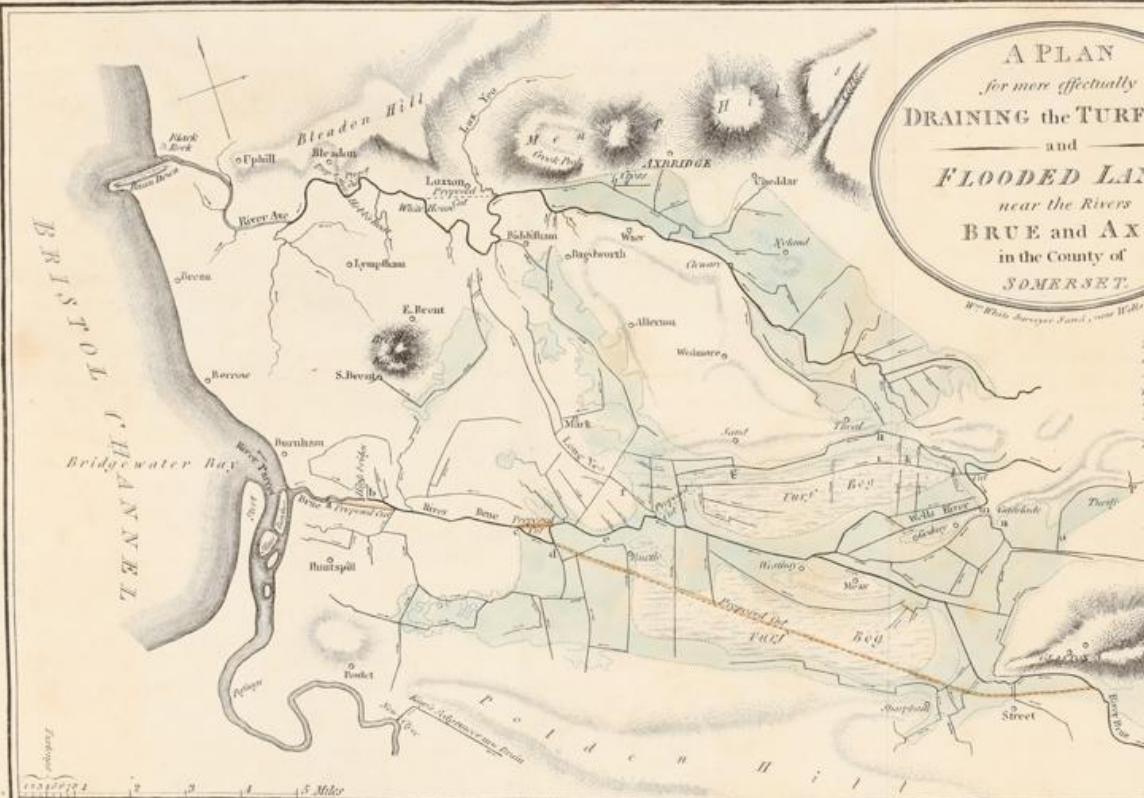
On the confines of the Brue are two heath or turf bogs: one on the north side containing about three thousand, and the other on the south containing about six thousand acres.

* Ten thousand sheep have been rotted in one year in the parish of Mark, before the inclosing and draining took place.

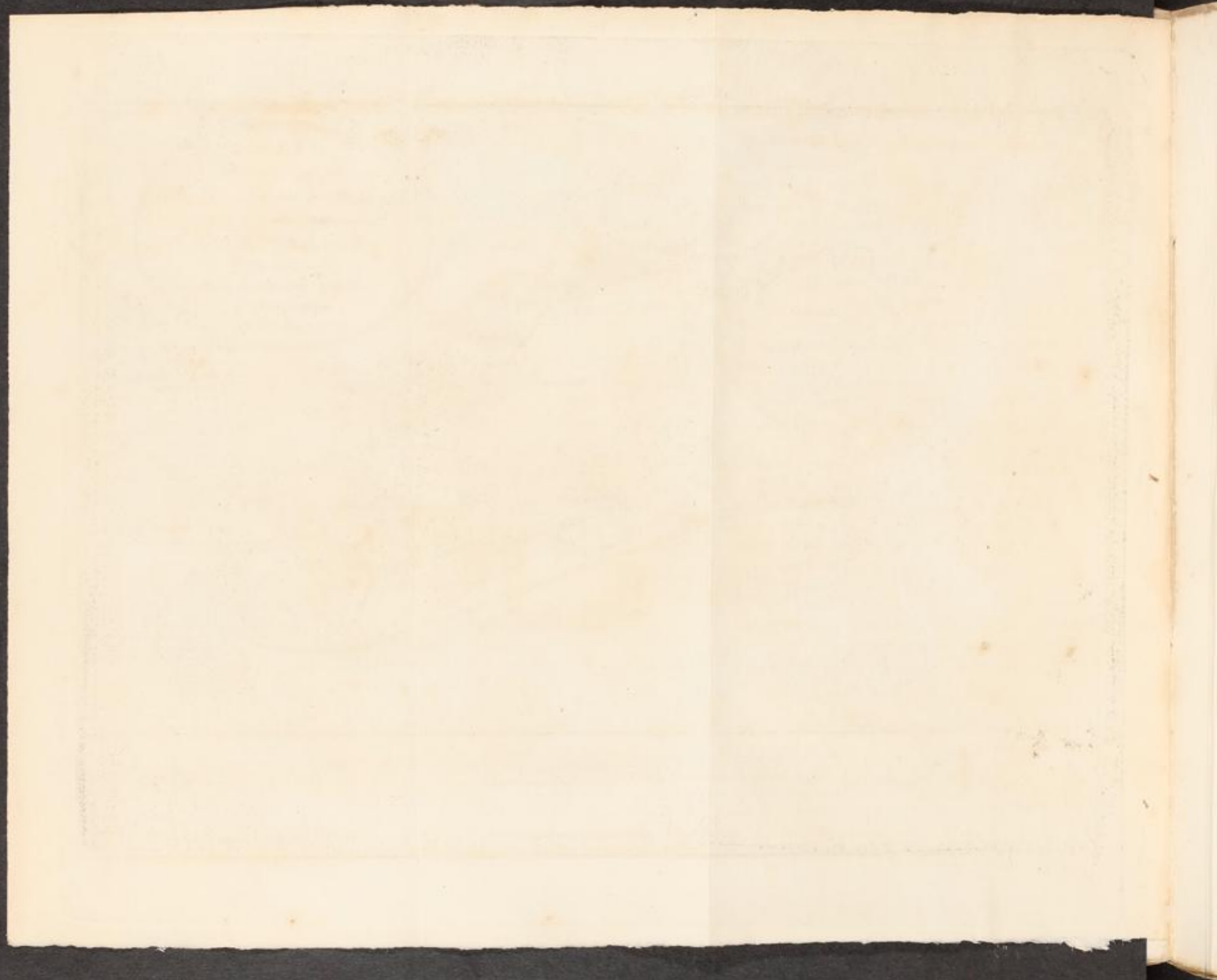
A PLAN
for more effectually
DRAINING the TURF BOGS
and
FLOODED LANDS,
near the Rivers
BRUE and AXE,
in the County of
SOMERSET.

EXPLANATION.

The black Lines denote present Rivers and Drains.
The red Lines denote the proposed Amendment.
The Turf Bogs show a light shade of blue.
The flooded Lands have a light shade of blue.
The brown shows the nature of the Soil.
Towns..... as..... GLAPTON.
Parishes..... as..... STREET.
Villages..... as..... ROAD.
Hills..... as.....
The new Outlet on the Brue, to be cut under the present, is upon a similar plan, as with the new Outlet for draining Kings Sedgemoor.
The new Outlet together with the old Brue, to be reduced to an inclined Plane of a Foot in a Mile.
A new Barrier with Sluice near Hudds Boat.
A new Cut from Lee Vio to White House, and the River reduced to an inclined Plane.



Scale for Length and Tide Plan



On these bogs scarce any pasturage at present grows.— They are a composition of porous substances, floating on water, and imbibing it like a sponge. They are observed to rise with much wet, and sink in dry weather. The principal use to which they are appropriated is that of fuel to the surrounding parishes. As it is an object of the first importance to the country to have these bogs perfectly drained and consolidated, I shall endeavour to suggest a plan whereby this desirable effect may, in my opinion, be attained.

The cause of the inundation and drowning of this level arises from the outfalls being choaked up either by the collection of sea-mud in the river, or by the elevated land lying between it and the Bristol Channel. Of course, nothing more is necessary than a removal of those obstructions to the outfalls, which will open a free passage and quick current to the land water; this being effected, the turf-bogs, which are now five or six feet higher than the adjacent land, would subside, and the porous earth become consolidated, and fit for all the purposes of vegetation.

The annexed plan, drawn by Mr. WHITE, the surveyor, will sufficiently explain the object in view, and excite the attention of all parties interested.

By the levels thus delineated, (the accuracy of which, I think, may be depended on) it appears, that the spring-tides are nearly on a level with the surface of the turf-bogs, and that by the proposed outlet an additional fall of ten feet will be acquired. Such a drain, reduced to an inclined plane of a foot in a mile, would, in all probability, discharge all its stagnant waters.

A farther explanation is unnecessary, as the plan will convey a more distinct idea of the general design than words.

The present outlet at Highbridge is not only of insufficient depth, but is situate so far *inland*, that the slime and mud
choak

choak up the river, and the current is not rapid enough to dislodge the same.

I am aware that many of the proprietors of land in Huntspill, Mark, &c. will object, under an idea that their lands will be made *too dry*, and that in the summer season their stock will be destitute of water. But this objection, and indeed every other drawn from the apprehension of a too liberal discharge of water, may be obviated, by *placing hatches at the different bridges*, which will be necessary both for publick and private accommodation.

An improvement of such magnitude cannot be effected without the authority of parliament; and all persons receiving benefit must be burthened with a rate proportionate to the advantages derived. This assessment may be made by commissioners duly appointed, but subject to an appeal to the court of quarter-sessions; and the drains, when finished, should be put under the view of the court of sewers.

I will now endeavour to give a hasty sketch of the probable cost, and subsequent improvement: but in this I do not pretend to accuracy; suffice it to say, that the apparent benefit so far exceeds the utmost latitude of expence, that no solid objection can lie on that head.

Brent-

Brent-Marsh and the River Axe Drainage.

DR.	£.
To act of parliament, gaining consents, &c. —	400
To sluice at letter <i>a</i> near the river Perrott —	600
To twelve miles of new drain, average depth fifteen feet —	12,000
To lowering river Brue three miles —	1,500
To purchase of land —	2,000
To bridges, hatches, &c. —	2,000
To sluice on the Axe near Hobb's boat —	500
To one mile and half of new drain —	1,500
To lowering the river Axe six miles —	1,000
To purchase of land —	1,000
To commissioners, surveyor, &c. —	2,500
	25,000
To balance of profit —	331,250
CR.	£.356,250
By 9000 acres turf bog improved, at the most moderate computation, 15s. per acre, making 6750l. per annum, twenty-five years purchase	168,750
By 15,000 acres of flooded land improved 10s. per acre, or 7500l. per annum, twenty-five years purchase —	187,500
	£.356,250

On the side of the river Axe, the expence of a compleat drainage would not exceed five thousand pounds; and there can be no doubt that the low lands near Axbridge, Cheddar, Nyland, Draycot, Rodney-Stoke, Westbury, &c. would be improved at least four thousand per annum. As a farther stimulus it might be urged, that the air would be rendered

dered more healthful, and the exhalations which now rise from so large a body of stagnant water, and are wafted by the winds to the high corn-lands of the Mendip-Hills, to their great detriment, would be unknown.

Were the turf-bogs reclaimed and made productive, I think this district might be considered as one of the most fertile in the kingdom. The vales are formed principally by mud, carried down by the rivers which flow through it, and deposited there by the tides opposing the current thereof. Many ages must have been required to effect this, but it is evident that the whole of this district is raised to a considerable height above its original level; and that the turf-bogs were in former days dry and firm land, not subject to inundation from the sea, or to the stagnation of the river waters; else, how can we account for timber trees of great dimensions, both oak, fir, and willow, being found at the depth of fifteen or twenty feet, standing in the same erect posture in which they grew; and reeds and other palustrine plants, at the same depth and in the same posture. Human bones, furze-bushes, and nut-trees with nuts, have been found at the same depth. Now it is manifest, that neither furze nor nut-trees will grow under water.

It appears therefore probable, that the whole of this level was at a former period dry, firm land; and that by some violent convulsion of nature it became of a sudden inundated.* This is in some degree confirmed by the extraordinary depth of the clay or found ground, on the verge of

* Some objections may be brought against this idea of sudden inundation, from the upright position of the sedge, as discovered in digging the Sedgmoor drains. Had this Moor been drowned by a sudden flood, it is reasonable to suppose the sedge would have been prostrated.

J. B.

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the *Highlands*; and it is well known, that in many parts of this kingdom the sea has gained on the land, and in other parts the land has gained on the sea.

The improvement of such a tract of unproductive land would impart the most pleasing sensations to the mind; and I verily think, that *two* grand drains, accompanied with proper lateral ditches, such as I have now suggested, would increase the rent of this district eight or ten thousand pounds per year.

The profit which has attended the improvement already practised during the last twenty years is, I should think, a sufficient incentive. Scarcely a farmer can now be found who does not possess a considerable landed property; and many whose fathers lived in idleness and sloth, on the precarious support of a few half-starved cows, or a few limping geese, are now in affluence, and blessed with every needful species of enjoyment. Disorders of the body, to which the stagnant waters heretofore subjected them, are now scarcely known: and the inhabitants for the most part arrive to a good old age.

SOIL.

The soil of these moors may be comprehended under four divisions:

1st. Strong, dry, and fertile clay, of a considerable depth.

2^{dly}. Red earth, of various depths, from one foot to six feet, covering the black moory earth of the heath.

3^{dly}. Black moory earth on the surface, with a substratum of clay at various depths.

4^{thly}, and lastly. The turf-bog.

The first of these descriptions of land may be considered as of the best quality, being highly productive, and particularly so in a wet summer. If shut up early in the spring, it will

will produce from two to three tons of hay per acre. Its value may be estimated from two to three pounds per acre, and it is for the most part devoted to grazing.

It is no less remarkable than true, that this land will fat sheep nearly as well in the winter as the summer, if not stocked more than one to an acre.

The vast advantage resulting from the inclosure of the waste lands in the parishes before enumerated, is so manifest, that whoever runs may read.

A moiety of the manor of Wedmoor might have been purchased, about twenty years ago, for twenty thousand pounds. It is now worth seven thousand pounds per annum. The improvements in Huntspill, Mark, Mere, Glastonbury, Eddington, &c. &c. are nearly similar. In the latter hamlet, single rights of common, when inclosed, have been sold for more than eight hundred pounds; and all this without any concomitant inconvenience. At first the scheme was highly unpopular, and its first promoters were on the eve of falling a sacrifice to popular fury and resentment, but by coolness and perseverance they weathered the storm: all parties are now satisfied, and acknowledge the wisdom of the measure. Nor has the advance of the poor's rate been in any degree equal to what has been experienced in neighbouring parishes, where no inclosure has taken place, as will be shewn by the following statement;

WEDMOOR.

Amount of poor-rate		Amount of poor-rate
seven years previous		7 years subsequent
to the inclosure	£2132	to the inclosure
		£2342

HUNTSPILL.

Ditto - - - -	1561		Ditto - - - -	2204
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MARK.

MARK.

Ditto - - - - - 1985 || Ditto - - - - - 2163

MERE.

Ditto - - - - - 2016 || Ditto - - - - - 2170

An increased population necessarily accompanying such an occupation of productive land, must inevitably be attended with a proportionate advance in the poor's levy; besides, men cannot, in an instant, by any, even the strongest incentives, be roused from a state of sloth to a life of labour and activity. To this may be added, that a great part of the extra levy arises *from the high demand for county stock*; and it is found that for several years past the rates are declining, notwithstanding the poor are treated with much more liberality than heretofore.

The division of property, on these lands, is effected by ditches eight feet wide at the top, three feet and half wide at the bottom, and five feet deep, which may be cut in the strongest clay for twenty-pence per rope; and on the black ground and red earth at sixteen-pence per rope, which is about one penny per cubic yard.

At these prices a good workman will, in the summer, earn three shillings per day, and in winter two shillings.*

These rhynes discharge their waters into the rivers; and sluices are occasionally made to keep back water, in times of drought, for the use of the stock.

The graziers, on these strong clays, are fond of large inclosures, and object to the planting any trees, or hedges; alledging as a reason, that they harbour flies, which tease the cattle, and check their progress in fattening: trees also prevent a free circulation of air. Experience confirms the wis-

* Can any excavating machine execute this work at a cheaper rate?
dom

dom of this theory. Many also are of opinion, that one piece of forty acres will sooner fat a given quantity of oxen, or sheep, than two pieces of twenty acres each. All, however, do not agree in this sentiment; and the opponents urge, that animals eat with greater relish, when frequently changed from one field to another, than when they are confined to one.

As no satisfactory experiments have ever (to my knowledge) been recorded on this subject, let us reason a few moments thereon.

It is difficult to decide in this case from *experiment*. Two pieces of land, perfectly alike in quality, or two sets of stock, exactly similar, cannot easily be found; we must, therefore, form our opinion from some other data. The argument made use of by the advocates for change is, "that of giving the food to the cattle *fresh* and *fresh*;" but this seems not to be conclusive. Independent of the division-fence (which occasions a loss of pasturage unfavourable to the small allotments) there must be an equal number of blades of grass in either case, and the cattle may vary their feeding as much in one instance as in the other; for in the large inclosures they will not be seen in the evening where they were feeding in the morning. The grand enquiry is, *do the cattle, or do they not, consume more grass in one way than the other?* I think they do, and shall not hesitate (though with great diffidence) to give my opinion in favour of a change of food; and this for the following reasons:

When an animal is turned into a piece of grass, he takes a survey of the whole field, for the purpose, I presume, of selecting that kind of herbage which best pleases his palate.

This perambulation does not much injure the grass, for if it be not very rank indeed (and graziers should be careful that it be not so) it will soon rise after the animal's tread.

He

He then becomes contented, and, during the time of his abode, feeds in the same manner as he would were the piece ever so large. After one or two months' residence in a large piece, the animal becomes disgusted with his situation, and tired with his food; the grass is tainted by his breath and by the effluvia of his dung; he bellows for change, and traverses the field, consuming, or rather destroying, more grass with his feet than with his mouth.

In ever so large an inclosure (properly stocked) every part of the field is tainted with the breath of the animal some time or other in the course of twenty-four hours, and it is astonishing how soon they become disgusted; in changing from field to field it is not so. Every fortnight or three weeks bring a supply of untainted food, which gratifies their palate, and a change of scene amuses them, and increases their comfort and enjoyment.

The only manure ever put on these lands, is the contents of the drains and ditches; and this, with judicious management in the method of grazing, is sufficient to keep them in unabating fertility.

Some of this clay land, when tilled, has been known to produce ten or twelve successive crops of wheat, without an intervening fallow or fallow crop. I was shewn a field in the parish of Mark, which had growing in it the *nineteenth* crop of wheat; and I verily think the produce was not less than fifty Winchester bushels per acre. No manure had been put on it during the whole time, save the contents arising from the cleansing of the ditches. The stubble was mown every year, and carried off; two ploughings only were given it, after which the wheat was sown in the months of November or December, under furrow, in eight-furrow ridges, after the rate of two bushels and half per acre, chopping the clods, and smoothing the surface of the ridge with a spade.

The average produce per year, for the whole eighteen years, was estimated to exceed thirty-five bushels per acre.

This astonishing fertility of soil can only be ascribed to the invigorating principle of the saline particles with which the land is impregnated. They enable it to produce a succession of crops, which in common land would reduce the soil to a mere *caput mortuum*.

Notwithstanding this encouragement to tillage, the plough lies idle, and nineteen parts out of twenty remain in grass, though it is apparent that the value of the land, in fee, might be gained in a few years.

The second description of soil found in this district, namely, a strong red earth over a pure clay, possesses also many good qualities; it is neither subject to injury from an excess of wet weather, nor does it burn in a drought.

This soil, formed by a deposit washed from the hills, may be considered as a fine vegetable mould, and, if tilled, is capable of bearing a variety of crops in the highest perfection. Its value is about forty-five shillings per acre, and its produce of hay about two tons.

Black moory earth is the third sort of soil found in this level, and on it extraordinary improvements have been effected, by covering the surface with a thick coat either of clay or red earth.

In its natural state it is in a great measure unproductive, yielding scarcely any herbage, save carnation grass, rushes, and other aquatic productions. The deficiency of this soil arises from the want of tenacity. The best means of improvement is *complete draining*, and after that a liberal covering with clay or red earth; these will freely incorporate with the soil, and make it sufficiently firm. After such improvement, no kind of land is more productive, particularly in a dry summer.

I have

I have this year seen land of this description, spring-fed till the 12th of May, yield by the 24th of June two tons of hay per acre; and Mr. LAX, on his farm at Godney, has, for five years past, kept twenty cows and a bull throughout the year on thirty-five acres of land. His plan is to winter *hayne** fifteen acres. This, on an average of seasons, is fit to be stocked the beginning of April, and is fed till the 12th of May. By this time the remaining twenty acres are in sufficient strength to take the cows, and will keep them till the after-grass of his mown ground is fit to receive them; then the unfed grass in the summer-leaze is *skimmed*, which yields from five to ten cwt. of hay per acre; this is given to the cows when they are dry, namely, in the months of December and January. After they have calved, which is from the beginning of February to Lady-Day, they are supplied with the best hay; here are more than thirty tons of hay produced, so that twenty cows cannot possibly want winter provender.

Not many years since this farm was part of an extensive moor, inclosed by Act of Parliament, and was purchased by Mr. LAX, of the Commissioners, at fifteen pounds per acre, to which add five pounds per acre for draining and claying, making in the whole twenty pounds per acre, at five per cent. the rent will be twenty shillings per acre.

* It is *old English*, and found in all books and laws relating to forests.

DEBTOR.				£.	s.	d.
To rent of thirty-five acres, at 20s. per acre				35	0	0
To taxes, highways, &c.	—	—	—	1	5	0
To dairy women, and all other incidental expences, twenty-five shillings per cow	—	—	—	25	0	0
To expences making fifteen acres of hay, at twelve shillings per acre	—	—	—	9	0	0
Ditto skimming and making summer-leaze hay				3	0	0
To fences	—	—	—	1	15	0
To interest of capital	—	—	—	7	10	0
				82	10	0
Profit				117	10	0
				£.	200	0

CREDITOR.					£.	s.	d.	
By sixty cwt. cheese, at fifty shillings per cwt.					150	0	0	
By twenty calves	—	—	—	—	15	0	0	
By butter	—	—	—	—	15	0	0	
By hogs	—	—	—	—	20	0	0	
					£	200	0	0

Though the produce of cheese, in comparison with the general produce of the county, was small, it must not be supposed that the deficiency arose from any want of food, but principally from the cows being young, and of a small breed.

The last species of soil is *the Turf Bog*.

The surface of this soil is of a light, spongy, tough texture, full of the fibrous roots of plants, and withal so matted together, that a spade or knife must be made very keen to penetrate

penetrate it. Immediately under the turf, or sward, is found the vein of black moory earth, so unlike in its nature to the peat which lies underneath, that when cut with it, and dried, it will fall off and separate from it.

This mould is of good quality, and will bear both natural and artificial grafs in great abundance. It is also an excellent manure for clay or any other heavy land. This black moory stratum is from one to two feet in thickness, and underneath is found the peat, which is from three to fifteen feet in depth.

Under the peat is a bed either of clay or sand; the peat is full of flaggy leaves and hollow stalks of rushes. These vegetable matters are accompanied with a substance like pitch, of a bituminous nature, which lies between the stalks of the rushes and the leafy remains, and constitutes the inflammable part thereof. It is used as the common fuel of the country, and makes a clean and pleasant fire, particularly well adapted to the purposes of the dairy. An acre of land will furnish an immense quantity, insomuch, that in the parish of Catcott it has been sold, for a term of twenty-one years, as high as thirty pounds.

There is no great difficulty in the mode of curing peat. In the months of May and June it is cut out with a keen instrument into the shape of bricks, left single on the ground for a few days to dry, by which time they lose part of their moisture, and become firm enough for piling in pyramidal heaps of about a waggon load each; in this state they are compleatly dried, and then sell for ten shillings per waggon load on the land where they are dug; and the price of digging and carrying is five shillings per load. Though the outer covering or sward of this boggy land will burn, yet it is not much esteemed as fuel, being soon consumed.

Before

Before I suggest a method of improving these bogs, let me advert to the probable cause of their present sterility. I conceive then, that stagnant water is the grand operative principle which has for ages kept the superstratum buoyant, and swimming as it were on its surface; this lifts up and swells the soil, making it shake and give way on treading. In confirmation of this idea, it is found, that at the depth of four or five feet the black earth becomes a mere pulp, in which an iron rod will descend with a trifling exertion to the surface of the clay; and it invariably happens, that the worse the bog the deeper the clay.

In the third description of land, stated at the beginning of this disquisition, the clay is found at the depth of three, four, or five feet, and gradually sinks thence to the lowest part of the peat bog, where it is found at the depth of eighteen or twenty feet. If, therefore, the surface of the two sorts of land were equal, one foot of stagnant water on the clay of the former would be accompanied with fourteen or fifteen feet on the clay of the latter. Such a body of water continually remaining at all seasons of the year, (for in the dryest summer I conceive its diminution does not exceed three or four feet) cannot fail of rendering the surface cold and unproductive.

Agreeably to this theory, the surface must rise in the winter, and subside in the summer months; and this is verified by fact, for certain fixed bodies are seen over the moor at certain seasons, which cannot be descried at others.*

* Some may say that another cause, beside that which is here given, might contribute to this phenomenon, viz. a copious fog at certain times hovering over the moor, by which some extraordinary refractions are known to take place, and exhibit the appearance of objects apparently *above* the horizon, which in reality are *below* it. A. C.

If these premises be admitted, it follows, that the only radical cure must be *complete draining*, and after that, *burning the matted surface*; the *former*, I think, may be effected in the manner before stated, and the *latter* in the following way, without any great difficulty or expence.

In the months of March or April, when the land is dry, let it be ploughed as deep as six strong horses can plough it; this will cost about twenty shillings per acre. In this state let it remain till the sod is dry enough to burn, then set fire to the plit as it lies, or else provide yourself with some keen cutting knives of about a foot in breadth, the cutting part of which should be of a semicircular form; with these, let the plit be cut into parts of about two feet and a half in length, and let your burners reduce them to ashes as fast as possible, which being spread equally on the surface and ploughed in, sow the ground about the middle of May with one bushel and a half of buck-wheat per acre, two bushels of ray-grass, and five pounds of white Dutch clover. The cost of all this will be nearly as follows per acre.

	£.	s.	d.
First ploughing	—	1	0 0
Cutting the plit and burning	—	0	12 0
Spreading the ashes	—	0	3 0
Second ploughing	—	0	5 0
Harrowing	—	0	1 0
One bushel and half of buck-wheat	—	0	6 0
Two bushels of ray-grass	—	0	5 0
Five pounds of Dutch clover	—	0	4 0
Tithe	—	0	3 0
		£	2 19 0

N. B. If the surface be very tough, it might be right to have *two* crops of buck-wheat.

Should

Should the subsequent summer be moist, it is probable that the produce of buck-wheat might be equal in value to the expenditure; but should it even entirely fail, the artificial grass will amply repay the expence and exertion of the husbandman.

After the buck-wheat is harvested, let lateral trenches be cut at the distance of thirty-five feet, emptying themselves into the great drains; these trenches should be twelve inches wide, and sixteen inches deep, and will cost about one penny per rope (twenty feet) or about five shillings per acre.

The contents of these trenches being for the most part black mould, will be excellent manure for the artificial grass, and should be spread thereon without delay. It might be adviseable for the first year or two, either to mow or feed with sheep, avoiding the tread of heavy cattle till the land has fully subsided; and if clay or red earth could be procured within a moderate distance, give it an occasional sprinkling therewith, after the rate of thirty or forty cart-loads per acre.

I have not the least doubt but with this management, or with something similar thereunto, the turf-bogs might be all reclaimed, and made worth twenty-five or thirty shillings per acre. And as a proof thereof, I need only instance the vast improvements already made, and still carrying on with unremitting assiduity, by Mr. MOXHAM, of Glastonbury, whose exertions in this way highly merit the warmest encomiums.

Without the assistance of the plough, he has, by draining and earthing, advanced land of the foregoing description from one shilling per acre to thirty shillings. His expences, it must be allowed, are great, for he puts one hundred cart-loads, nay, in some instances, one hundred and fifty cart-loads of red earth per acre, which being halled one mile and a half or two miles, the cost must be more than ten pounds per

per acre; yet notwithstanding this bountiful and expensive manuring, the advance in the value of the land amply compensates; for the original price of these bogs was two pounds per acre *in fee*, and many hundred acres may now be bought at that rate.

Mr. MOXHAM contends, that a covering of red earth, such as he bestows, is absolutely necessary to kill the old sward; and it must be admitted, that the end proposed is effectually obtained; but then the land is for some time unproductive, and the expence is also so enormous, that few farmers would have courage to go through so costly an experiment.

How far the plan of proceeding, which I have before suggested, is or is not more eligible, I shall leave to Mr. MOXHAM and to my readers to determine.

Mr. MOXHAM has planted firs and alder hedges on these bogs with great success, and has made various striking improvements, to the great astonishment of his neighbours, who could not conceive such things possible.

In short, he is justly entitled to the thanks not only of the labouring poor, but also of the community, for his persevering industry and activity.*

No

* This turbary-land, as it is called by the proprietors, is a portion of heath-moor appropriated for digging turf for fuel. It is dug out by the people of Glastonbury in pits of five or six feet deep, which are hollowed out on the sides as far as they can do it with safety, leaving a crust on top of the part hollowed, which makes it very dangerous to walk over it. The people of Mark (the adjoining parish) dig their turf in ditches, which I think a better method. I have levelled about 70 acres of this turbary-land, by taking the sward and sufficient of the uppermost earth to fill up those pits. This peat or turf earth, in its natural state, is very soft; and those pits, if not filled up, swell up from the bottom, and in twenty or thirty years will be sufficiently solid to be cut for turf again. When they are levelled, they sink down again
into

No country can afford greater encouragement either to the grazing, dairy, or corn farmer, than this; the salubrity and mildness of the climate, and the fertility and strength of the soil, enable the occupier to devote his land to either purpose with an almost certainty of success; and the annual profit, over and above his rent, cannot fail, as a source of wealth and independence. The dairy farms are small, seldom exceeding two hundred pounds per year; the grazing farms are large, and very detached.

It is obvious, that the profits of the dairy exceed those of the grazier nearly in the proportion of two to one; and as one hundred pounds per year will afford a comfortable subsistence to a family, small farms are best calculated to increase population, and to rear up an industrious race of independent yeomanry. Excepting the Bishop of Bath and Wells, there are few proprietors who stand seized of more than six or eight hundred pounds per annum, and for the most part from one hundred to two hundred pounds per annum; and more than nine-tenths of the land are employed in pasture,

into hollows, so that I have been obliged to level some of them again four, five, and sometimes six times, before I could venture to lay on good earth. I have then covered the land with from one to two hundred put-loads of rich sandy mould on an acre, such as is dug out of the rivers, or left by thick floods on the sides of the rivers, of a grey colour. This makes great improvement, produces a very good herbage, and by letting in on it from the river three, four, or five thick floods in the spring, on about fifty acres of it, (which I do by means of a double funnel or trunk of two feet square each, without injuring my neighbours, having made flood-banks to keep it in) I have been able to make very good heifer-beef without their feeding on any other ground. Some part of this turbary-land I cannot flood; on this, when it is properly settled, I propose to put some heavy earth. This heath-moor turbary-land has been sold in its original state from about forty shillings to eight pounds an acre; the Westhay turbary-land, in the adjoining parish of Meer, sells for about forty shillings an acre.

WILLIAM MOXHAM.

The old arable was found not to pay for ploughing, and has therefore been laid down.

Some few farmers, however, have enriched themselves by giving four pounds per acre for some rich dry and newly inclosed land, on which they have grown fifty bushels of wheat per acre for ten years successively, without fallow or manure of any kind.

Where there is so much to approve, I am sorry there should be any thing to condemn, but truth compels me to state, that a shameful inattention prevails as to their breed of cattle; and scarcely can an instance be produced of a farmer's giving more than ten pounds for a bull, or three pounds for a ram; yet, notwithstanding this general neglect, many are accustomed to sell their home-bred team of four oxen, when fat, for one hundred pounds; and sheep in great abundance, that weigh from twenty to thirty pounds per quarter. The elevated corn-lands were formerly in open common fields, but every effort has been made to divide and inclose them; the tenure, however, (great part being under the fee of Wells, and other churches, under charity endowments, and under queen ANNE's bounty) has operated as a check to the necessary exchanges. None of these common field lands will let for more than fifteen shillings per acre, whereas, if inclosed, they would let for twenty-five shillings.

Though there are many things in the practices of this district deserving both commendation and imitation, I cannot help observing, that the process of *making hay* is not among the number.

In this respect, they are the most egregious slovens I ever beheld. It is no unusual thing to see cocks of about a load each remain in the fields two months after they are made; and before the rivers were lowered, and the country drained, these

these cocks were frequently carried away by a sudden flood. When conveyed to a large mow, no care is taken either in making or securing it; it is seldom thatched; some indeed make their mows in a conical form, by which means they suffer but little injury, but for the most part they are left flat on the top, and the winter rains soak from the top to the bottom, without shame or regret on the part of the owner. In their summer pastures they are equally slothful; docks, thistles, nettles, and other weeds, cover nearly a quarter of the land, and, wafted by winds, the seed is disseminated on the lands of their more careful neighbours. Ofttimes have I observed, that where nature is most bountiful, her gifts are least prized. This is the case with the farmers here; so quick is vegetation, even in the winter season, that the cattle (unless it be unusually severe) scarce ever want a bite of grass; and a deficiency of winter provender is scarcely known.

I presume it is on the same principle that the Scotch gardeners excel the English; having more difficulties to encounter, their exertion and care are proportionate thereto,

THE SOUTH MARSH

Is bounded on the North-East by Polden-hills, on the South-West by the river Parrett, on the North-West by Bridgwater-bay, and on the South-East by Ham-hill, &c.

That part thereof which lies nearest the sea is higher than the interior part, owing to the great deposit of sea-mud left at the high spring-tides for ages past; and it is also better drained, in consequence of being near the outlet, where the greatest fall of draining exists. (This observation also extends to the lands of Brent-Marsh.)

The river Parret is the principal drain of this marsh. It has no *barrier*, and the tide flows up as far as Langport, filling

filling its banks, and frequently penning the land-floods over the moor, and meadows adjoining; so that near thirty thousand acres of fine land are frequently overflowed for a considerable time together, rendering the herbage unwholsome for the cattle, and the air unhealthy to the inhabitants. An act of parliament was lately obtained for draining a considerable part of this fenny plain called *King's-Sedgmoor*, which, together with the adjoining inclosed meadows now flooded, amount to about twenty thousand acres. This desirable end is nearly accomplished, by having the outlet or sluice many miles lower, in the river Parret, than formerly. Nothing could be more unpopular, at its outset, than this undertaking; and every obstacle, which prejudice and ignorance could suggest, the promoters thereof had to encounter.

About the year 1680, King JAMES laid claim to the soil of this moor, and formed the design of improving it by a compleat drainage; but so perverse were the owners of the adjacent lordships commoning with their cattle on it, that they opposed the scheme with all their might; and discerning that they could make no justifiable claim to the soil, offered to assign to the king four thousand acres, in lieu of his right thereto, and to lay out the residue, being nine thousand five hundred and twenty-two acres, among their lordships; which being accepted of by the king, there were allotments then made to each manor according to the following proportions:

Names

<i>Names of Manors.</i>		<i>Acres.</i>
Dunwear	To the heirs of Sir Robert Chichester, &c. —	346
Stawell	To Sir John Stawell —	274
Sutton-Mallett	To John Mallett, esq; —	234
Bawdrippe	To Walter Long, esq; —	218
Brogney	To Thomas Muttlebury, esq; —	70
Middlezoy	To R. Warr, esq; Sir R. Strode, &c. —	567
Moorlynch	To the heirs of Mr. Floyer —	354
Highham	To Henry Lord Gray —	708
Netherham	To the heirs of Sir Ed. Hext —	264
Beere	To Sir William Courtney, &c. —	229
Aishcotte	To Sir Thomas Cheeke —	526
Horsey	To Sir George Horsey —	370
Chedzoy	To Earl Pembroke —	411
Weston	To Sir Peter Van Lore, &c. —	582
Othery	To Sir Edward Trent, &c. —	428
Somerton	To Tho. Hill, esq; James Rife, esq; and Burgeffes, &c. —	1505
Graynton	To the heirs of Mr. Watts —	291
Pitteney	To Earl Northampton, and Sir J. Hanham —	569
Compton-Dunden	To Sir J. Strangway, and Baronet Portman —	548
Walton	To Sir Thomas Thynne —	540
Street	To Andrew Whittington, &c.* —	488
Total acres —		9522
Besides for the king —		4000

Memorandum. That these allotments are rated proportionably, after the rate of two hundred and eighty-two acres

* Dugdale.

of the moor (by the perch of fifteen feet) to every hundred acres of the severals.

In the reign of *King William*, a similar attempt was made. An act was obtained for draining it, but by some means or other its operation was entirely frustrated. This projected and useful improvement lay dormant till the year 1775, when it was revived by *Mr. Allen*, then member of parliament for Bridgwater. Sanguine of success, and highly impressed with the idea of its importance, he purchased a large number of rights, and having obtained a signature of consents, went to parliament; but not having interest enough in the house to stem the torrent of opposition, all his delusive prospects of profit vanished, and he found himself left in a small but respectable minority. Though *Mr. ALLEN* met with so warm an opposition, yet there were not wanting many lords of manors interested, who expressed their decided approbation of the measure, in a *general point of view*, but objected to the mode by which it was conducted, and to the men who were the ostensible movers in the business. After this defeat, nothing was done till the year 1788, when a meeting was held at Wells to take into consideration the propriety of draining the said moor, and dividing it into *parochial allotments*. At this meeting *Sir PHILIP HALES* presided; and after much abuse and opposition from the lower order of commoners, who openly threatened destruction to those who supported such a measure, the meeting was dissolved without coming to any final determination.

The leading idea was, however, afterwards pursued, with great assiduity, by *Sir PHILIP*, and his agent *Mr. SYMES* of Stowey; and by their persevering industry, and good management, matters were brought into such a train, that application was made to parliament in the session of 1790, for leave to bring in a bill for draining and dividing the
said

said moor into parochial allotments, among thirty parishes and hamlets therein stated; and also among such other parishes as may prove a right to feeding the same. In the spring of 1791, this bill passed into a law; and the commissioners, acting under the powers thereof, held their first meeting at Bridgwater in June 1791.

I have been thus particular in stating the progress of this business, merely to shew the impropriety of calling publick meetings, with a view of gaining signatures of consent, or taking the sense of the proprietors in that way. At all publick meetings of this nature, which I ever attended, noise and clamour have silenced sound sense and argument. A party generally attends with a professed design to oppose, and truth and propriety have a host of foes to combat.

Whoever, therefore, has an object of this kind in view, let him acquire consent by *private application*; for I have frequently seen the good effects thereof manifested, by the irresistible influence of truth, when coolly and quietly administered; and it has frequently happened, that men, hostile to your scheme, have, by dispassionate argument, not only changed their sentiment, but become warm partizans in that cause which at first they meant to oppose.

This never could have been done at a publick meeting; for after men have once joined the opposition, their pride will not permit them to retreat.

How far the commissioners appointed under this act have discharged their trust, time will shew; but the general opinion of their conduct seems to be flattering; and those who at first supposed that the act carried with it the seeds of its own dissolution, are brought to confess, that the present appearances are highly promising.

It cannot but be supposed, that in the investigation of four thousand and sixty-three claims, (of which only one thousand

land seven hundred and ninety-eight are allowed) and in making compensation for a large portion of land, necessarily cut through in making the great drain, many causes of offence must be given; but, I trust, neither partiality, negligence, nor corruption, can be imputed to them; and if they have erred, it has been an error of the head, and not of the heart.

Previous to the present drainage, this moor emptied itself into the river Parrett, some miles above Bridgwater, and the fall from the moor was very trifling. Hence it followed, that the least flood covered it with water, and in that state it frequently remained many months. It was at first suggested, by many people whose abilities the county held in high estimation, that nothing more was necessary for the purpose of draining the moor, than the opening and widening these old outlets; but it occurred to the commissioners, that such a partial and ineffectual mode of procedure could not produce a radical cure. They therefore set themselves about to discover a convenient place of discharge lower down in the river, by which a greater and more rapid descent might be gained.

An old sluice, called Dunbald-Clize, presented itself as the desired spot; and on levels being taken by Mr. WHITE, an eminent surveyor, it appeared that an extraordinary fall of nearly ten feet could be acquired; and that the descent from the upper part of the moor to this outlet, (a distance of about twelve miles) was nineteen feet, or about one foot and a half in a mile. The only objection which could be brought to the measure, arose from a consideration of the great expences which must be incurred by cutting through two miles and a half of elevated land.

No alternative, however, presented itself. It appeared that this plan must be adopted, or the work would be incomplete.

Justified therefore by the concurrent opinion of Mr. WHITE, and of Mr. JESSOP, (whose advice was taken) they proceeded boldly; and having erected at a great expence, and under numerous difficulties, (arising from the morassy nature of the ground on which it was built) a strong substantial sluice, they proceeded to make a channel or cut fifteen feet deep, ten feet wide at the bottom, and fifty-five feet wide at the top.

It is impossible to describe the ridicule which this undertaking excited. Some thought the commissioners mad; others, and by far the majority, ascribed the boldness of the plan to the liberality of the proprietors, in allowing the commissioners three guineas per day for attendance and management; and drew this sage conclusion, that the work would never be finished, but would be protracted till the expences *would equal* the value of the moor.

Uninfluenced by letters, or by menaces, the commissioners persevered; and they have the satisfaction of seeing the principal difficulties overcome; and of hearing those very men, who were most violent against the measure, acknowledge their error, and candidly confess that the work is well executed, and promises to be effectual.

It may be necessary, by way of instruction to others engaged in schemes of the like nature, to state, that had the drain been made less wide at the top (and the opponents insisted that it should have been only twenty six feet wide) it would have collapsed, or fallen together; as it was, there were numerous and alarming slides, the repairing of which cost a considerable sum, and there can be no doubt, but something of this kind will happen for years to come; for the substratum, at the depth of sixteen feet, is so soft and morassy, that it gives way to the superincumbent clay, and rises up in the middle of the drain.

This

This cut from the Dunbald sluice to the moor (a distance of about two miles and a half) cost four-pence per cubic yard, or in the whole about three thousand two hundred pounds; and the parochial drains, which were twelve feet wide at the top, four feet wide at the bottom, and six feet deep, cost on an average two shillings and seven-pence per rope (twenty progressive feet.) Expensive as this undertaking inevitably must be, yet the benefit resulting from it will most amply repay; for without saying any thing of the injury done to the health of the inhabitants in the circum-adjacent country, and which this drain, by rendering the air more salubrious, will totally remove; we may fairly state, that the probable improved value cannot be estimated at less than four hundred and fifty thousand pounds.*

The total amount of the expenditure is now ascertained; and it may give some satisfaction, if I inform my readers the sum total thereof. The following statement of the account *Dr.* and *Cr.* will approach pretty near the truth; but let it be understood, that this calculation is made under the idea of *parochial subdivisions*, without which little benefit will result either to the publick or individuals. The principles which I have, in my report on the North-East district, fixed as *data, incontrovertible, viz.* That all commons, however rich and fertile the soil, are unproductive of profit, in consequence of *overstocking*, must be here adhered to; and this argument is equally applicable to old inclosures. Let a farmer put *ten* head of cattle into a given piece of ground where only *five* should be depastured, and the cattle will be

* If we add to this the capital necessary to stock this moor, the publick utility and importance of the undertaking will be more strongly manifested. J. B.

of less worth after the grass is consumed, than they were before: Of what value then is the land?

KING'S-SEDGMOOR.

<i>Dr.</i>	<i>£.</i>	<i>s.</i>	<i>d.</i>
To act of parliament, and all other incidental expences	1,628	15	0
Interest of money borrowed	3,239	4	11
Commissioners	4,314	7	8
Clerk	1,215	19	0
Surveyor	908	12	6
Printers	362	6	3
Petty expences	575	11	1
Land purchased	2,801	4	11
Drains, sluices, bridges, and roads	15,418	2	8
Awards and incidentals	1,160	0	8
	31,624	4	8
To which add for subdividing in each parish	28,000	0	0
To original value of the moor, say 10s. per acre, at twenty-five years purchase	150,000	0	0
	209,624	4	8
Profit	365,375	15	4
	£. 575,000	0	0
<i>Cr.</i>			
By 12,000 acres, at 35s. per acre, and 25 years purchase	525,000	0	0
By improvement of 4000 acres of adjacent land, at 10s. per acre	50,000	0	0
	£. 575,000	0	0

The

The above is the real expenditure taken from the commissioners books, and about seven hundred acres have been sold to discharge the same.

N. B. Had the commissioners been empowered to sell land at the commencement of the business, the expenditure would have been reduced five thousand pounds by the difference in the interest accompt.

This is not the only improvement, for by the addition of such a quantity of rich and productive grass land, the upland inclosures, and common fields, may be greatly advanced in value. In short, it is difficult to point out all the benefits likely to accrue from this grand but arduous undertaking; beside, though the original value of the moor per acre is stated to be ten shillings, this is done merely with a view to give the arguments against the inclosure the greatest weight; and perhaps it would have been more just to have stated its value at five shillings per acre, or even less than that, for a right of stocking could be rented for half a guinea per year.

Nor is the improved value at all exaggerated. On the contrary, I am confident it will exceed thirty-five shillings per acre; for even in dry summers three tons of hay per acre have been cut on inclosed lands adjoining or near the moor, the soil of which lands is in no respect better than that of the moor.

Besides King's-Sedgmoor, there are other similar tracts of land on the adjacent rivers Tone and Yeo, on which no improvement has yet been attempted, namely, Normoor, near North-Petherton; Stanmoor, Currymoor, West-Sedgmoor, &c. near North-Curry; West-Moor, near Kingfbury; Wet-Moor, near Muchelny;* amounting in the

* Most of these moors are now (1797) inclosed or inclosing.

whole to about ten thousand acres, independent of many thousand acres of low flooded inclosed lands, which might be greatly improved by judicious draining.

Many of these moors are superior in their quality to King's-Sedgmoor; and the example now set before them will, I trust, remove the mist from the proprietors' eyes, and make them see, in a true light, their own and the publick interest.

These lands would be fairly worth forty shillings per acre the moment they were drained and divided; and if taken from the tenants, the original estates would not be reduced in their annual value one farthing.

But on this subject, I have before enlarged very fully, and shall, therefore, only remark, to those who are influenced by a humane regard to the right and comfort of the cottager, that very few habitations of that description are to be found near these moors; and a great part of those which do exist, possess rights, which, when divided, may be worth two or three hundred pounds; and if sold, will enable a man to rent an estate of one hundred pounds per annum, and to keep twenty or thirty cows, in the management whereof his whole family would become useful; and habits of industry, care, and œconomy, would by degrees be established.

Adjoining this extensive plain on the South side, lies a tract of elevated land, composed principally of sea sand and shells, well adapted to the purposes of tillage, and in its nature so fertile, that potatoes, turnips, carrots, hops, madder, liquorice, and indeed almost every root or plant useful in husbandry, might be grown on it in high perfection.

The arable is for the most part in common fields, and though exhausted by constant cropping, lets for near thirty shillings per acre. The wheat produced is of prime quality; and as to barley, it is supposed that Chedzoy, Weston-Zoyland,

land, Middlezoy, and Othery, produce the best in the county. Were the common field lands of these parishes divided into separate property,* a portion of the new allotments in Sedgmoor annexed, and the whole comprized in farms of four or five hundred pounds per year, and let to some enlightened sheep and turnip farmers, these parishes might vie with any in the kingdom, both as to the *quantity* and *quality* of produce; but this cannot be effected whilst the lands are held by the present tenure. They are now occupied by small farmers holding under lives, some one life, some two, and a few three, and in some instances without any power or prospect of renewing.

The declivities of the hills, North and East of Sedgmoor, are as barren as those before stated are productive. The finer particles of the soil have for ages been washed into the moor by heavy rains; and the remaining mould is shallow and sterile. When the moor is drained and made productive, this lost fertility may be in some degree restored, by carrying the produce of the moor to the uplands, either by the sheep-fold, or by consuming the hay thereon.

A great part of these high lands are in tillage, but the expence of ploughing is so great, and the produce so small, that it is matter of astonishment to me how the farmer can gain a livelihood. Somerton and Compton-Dundon, two considerable parishes to the Eastward of Sedgmoor, are for the

* An attempt was lately made by the inhabitants of Weston-Zoyland to divide and inclose their common arable fields by act of parliament, but the same was violently opposed by the bishop of Bath and Wells, under the idea that the tithes would be reduced by the application of the land to grass instead of corn. To subvert this doctrine, which I conceive to be illiberal and oppressive, I will be bold to assert, that *one half* the quantity would, under a system of improvement, produce *more* than the *whole* does now.

most part the property of the Earl of Ilchester; and I know no parishes in the county so susceptible of improvement. The arable lands in common field lie so detached and divided, and the estates, farm-houses, &c. are on the whole so badly disposed, that vast improvements might be made by judicious exchanges, and by a proper arrangement of the property. The soil is naturally good, and around the town of Somerton is a multitude of gardens, which supply the adjacent markets, even so far as Wells and Shepton-Mallett, with early pease, beans, potatoes, &c. and in the month of August with cucumbers by cart-loads; these they raise on hillocks, under which is placed about two bushels of *horfe-dung*, collected in King's-Sedgmoor by children, and brought to their gardens on the backs of, or drawn in carts by, asses.

There is a large market held every three weeks at Somerton during the summer months, and to it is brought an immense number of sheep, principally of the Dorset breed, together with oxen and other cattle; these are purchased by graziers occupying the rich grass land of the county.

On the summit of Polden-hill the corn land is for the most part in common fields, and under the following course of husbandry: wheat, beans, fallow. The general produce of wheat twelve bushels per acre, and of beans the same; very little barley or oats; but in the inclosed fields clover and vetches thrive exceedingly; and if the farmers were to have more of these articles, and plough less, they would find their account in so doing; for nothing will bring a farmer to poverty so soon as *poor corn land*.

From the nature of the stone on the surface, as well as from some trials lately made with the borer, I have reason to think, that on the Northern declivity of Polden-Hill may be found a vein of marl which passes through the parishes of Cossington, Chilton, Eddington, Catcott, Shapwick, and Ashcott,

Ashcott, and from thence extends to Butleigh and Kingweston.* Should it prove of good quality, the discovery will be highly important, and be the means of advancing the lands to treble their present value. This marl has been tried at Butleigh and Kingweston, and I believe with success.

It is not improbable that the same vein extends to Yarlinton near Castle-Cary, where it has been dug and used with great advantage by J. ROGERS, esq; whose improvements both in agriculture and planting are very meritorious.

I cannot pass over this neighbourhood without noticing the pleasant and fertile parish of Castle-Cary, which, both in respect to soil and climate, cannot well be excelled. I could wish some spirited agriculturist would here try, whether the exclusive power of growing hops is confined to Hants, Kent, Worcester, and a few other counties. The luxuriance of the wild hop, the richness and depth of the soil, the mildness of the climate, and the security from violent winds, all conspire to render such a speculation promising. The consumption of the county in this article is immense, and I have no doubt but I could select in different parts of it many hundred acres, as well adapted to this culture as any lands at Farnham, and at one-fourth the price which is there given; besides a much easier access to manure of all kinds, and a greater and cheaper supply of poles.

In Castle-Cary potatoes are grown on a very large scale, and it is no unusual thing to get one hundred and sixty facks (two hundred and forty pounds each) per acre, the average price about five shillings per fack.

* There is likewise marl (but never much worked) about Doultong and Cranmore, and perhaps in various other parts of this district.

MINERALS, &c.

Many attempts have been made in different parts of this district to find *coal*, and pits to a considerable depth have been sunk at Glastonbury, Chard, and other places, but no regular vein can be found; and it is the universal opinion of intelligent colliers, that there is no coal South of Mendip-Hills. Indeed some will say, that the strata run in a regular direction from South to North, through the whole kingdom of Britain.

WATER.

Irrigation is but little practised in this district; there is, indeed, near the town of Ilminster, some land watered with the wash of the town, the good effects of which are manifest.

Some of the marsh-farmers also, on the river Brue, cut openings in the banks of the river in the winter months, and overflow their land with the thick water descending from the hills.

This practice is certainly right.



CHAPTER III.

BUILDINGS.

THE old farm-houses are ill-constructed and improperly situated, but *new* ones are much improved in point of uniformity, regularity, and convenience. Too much attention cannot be paid to this branch of rural management. Instead of being placed in vales, and at some extreme part of the estate, the farm buildings should be situated on some high and central spot, so that the produce of the manure arising therefrom, may be conveyed to and fro at the least possible expence and trouble. So situated, the running of the yard, stables, &c. might be collected in a reservoir, and discharged from thence over the pastures with great ease and advantage. Lime also might be occasionally thrown into the reservoir, stirring it well previously to its being discharged on the land. The benefit to be derived from such a practice is inconceivable.

Convenience in the disposing and connecting of the buildings is also of material consequence. The straw-yards should be placed at the front and backside of the barn, and the stack-yards at each end. The barn should be filled through an aperture or sheaf-hole, and not in the usual way by waggons drawn on the floor to the great injury of the same. Granary (if any be necessary, which I much doubt, as all corn should go to market as soon as threshed) should be over the waggon-house. The hog-sties and poultry-yard as near as possible to the dairy. The stable detached from the other buildings for fear of fire. In short, every thing about the farm should be so contrived and disposed that the business may be done with the greatest possible ease and dispatch.

CHAPTER

CHAPTER IV.

MODE OF OCCUPATION.

THE greatest part of that rich tract of land, called Brent-Marsh, was, a few centuries ago, either the property of the Crown, or of the Abbey of Glastonbury. Many of these manors have been since dismembered, and I believe we may now say, that half this country is occupied by the owners.

The following tables of Mr. RICHARD LOCKE, of Burnham, will shew the great advance in the value of the land in the course of forty years.

No. I.				No. II.			
Valuation in 1755.				Valuation in 1796.			
Quality of the Land.	Price per Acre.			Quality of the Land.	Price per Acre.		
	£.	s.	d.		£.	s.	d.
No. 1 —	1	5	0	No. 1 —	3	10	0
2 —	1	2	6	2 —	3	5	0
3 —	1	0	0	3 —	3	0	0
4 —	0	17	6	4 —	2	15	0
5 —	0	15	0	5 —	2	10	0
6 —	0	12	6	6 —	2	5	0
7 —	0	10	0	7 —	2	0	0
8 —	0	5	0	8 —	1	15	0
9 —	0	2	6	9 —	0	10	0

The same Mr. LOCKE adds, that every marsh farmer, occupying two hundred acres of land, does, or at least ought to grow, twenty acres of wheat, milk twenty cows, and feed twenty oxen and heifers, besides sheep and other cattle. And to shew the vast influx of wealth to this country, he engages
to

to name fifty farmers, within the distance of a few miles, worth ten thousand pounds each, on an average, of their own or their father's getting, within the space of fifty years past.

In the middle part of this district there are many large proprietors, and rent is universally paid in money, without any personal service: great confidence exists in the Eastern part of this district, viz. about Wincanton, Horfington, &c. between the landlords and tenants. Estates are there principally held on mere *verbal* engagements, and scarce an instance can be produced of a breach of faith on part of the landlord, or suspicion on the part of the tenant.

Between Yeovil and Taunton, including the parishes of Martock, Puckington, Barrington, Kingsbury-Episcopi, Lambrook, South-Petherton, Ilminster, Hinton St. George, and the adjacent places, lies a tract of strong loamy land, from sixteen to thirty inches deep, on a substance of clay: a more pleasant country can rarely be found. The proprietaries are large, and the estates are mostly held by lives, under the lords of the fee: there are, however, many freeholders who possess from one hundred to seven hundred pounds per annum.

The farms are from forty to six hundred pounds per annum, and are composed partly of rich grazing and dairy land, worth from thirty to forty shillings per acre; partly orchard, from two pounds to three pounds ten shillings per acre. Sheep-walks, from fifteen shillings to twenty-five per acre; and the arable, from twenty shillings to twenty-five shillings per acre.

The rich pasture land is partly grazed with heifers, and partly devoted to the dairy. Few farmers milk their own cows, but let them out to a class of people, scarcely known in other counties, called *dairy-men*. A herd, of a good breed,

breed, will now let for seven or eight pounds per cow; a certain portion of land is devoted to their summer keeping, and a sufficient quantity of hay is provided by the farmer for their winter sustenance.

This practice of letting dairies must have originated either from *pride* or *indolence* on the part of the farmer's household, and ought, in my opinion, to be checked by the landlord.

When the female part of a farmer's family is unemployed, (and, without a dairy, that must be the case throughout great part of the year) dissipation, folly, and extravagance, take the lead, and domestick care and industry are entirely forgotten. Gentlemen of fortune should therefore set their faces against the practice, and resolve never to let an estate to a farmer whose family was too proud, or too indolent, to undertake the management of the different departments thereof.

LEASES.

The rack-rent leases are generally for seven years, and the covenants confine the quantity of land in actual tillage, the number of crops, the mode of feeding, to spend the produce on the premises, to sell no hay, not to plough the meadow or pasture land, not to relet without consent, and for want of assets to re-enter.

There are few things that operate as a more powerful check to an improved agriculture than *short leases*; and it were to be wished, that all lords of manors, possessing estates leased out on lives, would continue to grant renewals; and by so doing, I verily think, they would promote their own interest; for though it must be acknowledged, that the leasing out a property upon three lives, at the usual price of fourteen or fifteen years purchase, is unfavourable to the interest of the *grantor*, yet I think, that when an estate has been so leased out, it is more his interest to renew, than to run
against

against the lives; for if compound interest of money be set against the reversionary income, the latter is soon swallowed up. Great advantages would also result to society from the general adoption of such a measure; for it is well known, that estates falling into hand, are greatly reduced in value, let the restrictions in the lease be ever so judicious. In confirmation of this idea, do we not see that lands held under the church, under corporations, and under charity endowments, &c. *where renewal is certain*, are nearly in as good a state as freehold property, and easily to be distinguished from lands held under private lords, where such renewal is frequently withheld. Various are the opinions respecting the comparative advantage attending the purchase of freehold and leasehold property. In favour of the former, the natural, and indeed laudable pride of man steps in, and decidedly determines. Most men wish to possess property independent of all controul; and the suits and services exacted under many leases, are a relic of feudal tyranny, highly disgusting to men fond of freedom and independence; but let us have recourse to figures, and we shall find that two men starting together *with one thousand four hundred pounds each*, and purchasing, the one a freehold estate, of fifty-six pounds per annum, at twenty-five years purchase, and the other a leasehold for three lives, of one hundred pounds per annum, at fourteen years purchase, would be in very different situations at the end of twenty-one years. Calculating the interest of each at five per cent. and allowing *three* renewals, at two years purchase, (clear income) the leaseholders estate, of one hundred pounds per annum, (nett) would, at the expiration of twenty-one years, cost him 1205l. 18s. and the freeholders estate, of fifty-six pounds per annum, (nett) would, at the expiration of the same term, cost him 1900l. 1s. as the following calculation will confirm.

FREE-

FREEHOLD, 56*l.* per annum, (net) and 25 years purchase.

£.		Brought up	1513 19
1400 0		Add Interest	75 14
Add Interest	70 5 per cent.		
			1589 13
1470 0		Deduct rent	56 0
Deduct rent	56 0		
			1533 13 8th yr.
1414 0 1st yr.		Add Int.	76 14
Add Int.	70 14		
			1610 7
1484 14		Deduct rent	56 0
Deduct rent	56 0		
			1554 7 9th yr.
1428 14 2d yr.		Add Int.	77 14
Add Int.	71 9		
			1632 1
1500 3		Deduct rent	56 0
Deduct rent	56 0		
			1576 1 10th yr.
1444 3 3d yr.		Add Int.	78 16
Add Int.	72 4		
			1654 17
1516 7		Deduct. rent	56 0
Deduct rent	56 0		
			1598 17 11th yr.
1460 7 4th yr.		Add Int.	79 19
Add Int.	73 0		
			1678 16
1533 7		Deduct rent	56 0
Deduct rent	56 0		
			1622 16 12th yr.
1477 7 5th yr.		Add Int.	81 3
Add Int.	73 17		
			1703 19
1551 4		Deduct rent	56 0
Deduct rent	56 0		
			1647 19 13th yr.
1495 4 6th yr.		Add Int.	82 8
Add Int.	74 15		
			1730 7
1569 19		Deduct rent	56 0
Deduct rent	56 0		
			1674 7 14th yr.
1513 19 7th yr.		Brought	

<i>Brought up</i>	£.	s.		<i>Brought up</i>	£.	s.
	1674	7	14th yr.		1849	16
Add Int.	83	14		Deduct rent	56	0
	<u>1758</u>	1			<u>1793</u>	16
Deduct rent	56	0		Add Int.	89	14
	<u>1702</u>	1	15th yr.		<u>1883</u>	10
Add Int.	85	2		Deduct rent	56	0
	<u>1787</u>	3			<u>1827</u>	10
Deduct rent	56	0		Add Int.	91	7
	<u>1731</u>	3	16th yr.		<u>1918</u>	17
Add Int.	86	11		Deduct rent	56	0
	<u>1817</u>	14			<u>1862</u>	17
Deduct rent	56	0		Add Int.	93	4
	<u>1761</u>	14	17th yr.		<u>1956</u>	1
Add Int.	88	2		Deduct rent	56	0
	<u>1849</u>	16			<u>1900</u>	1
					<u>1</u>	21st yr.

Freeholder's purchase of fifty-six pounds per annum, nett,
allowing five per cent. compound interest, stands him at the
end of twenty-one years in £1900 1 0

First purchase - - - 1400 0 0

Loss 500 1 0

LEASEHOLD, 100*l.* per annum, nett, and 14 years purchase.

£.	s.		£.	s.	
1400	0		Brought up	1155	15 7th yr.
Add Interest	70	0	Add renewal		
			2 yrs. purch.		
	1470	0	nett rent	200	0
Deduct rent	100	0			
	1370	0	Add Int.	1355	15
Add Int.	68	10		67	16
	1438	10	Deduct rent	1423	11
Deduct rent	100	0		100	0
	1338	10	Add Int.	1323	11 8th yr.
Add Int.	66	19		66	4
	1405	9	Deduct rent	1389	15
Deduct rent	100	0		100	0
	1305	9	Add Int.	1289	15 9th yr.
Add Int.	65	5		64	10
	1370	14	Deduct rent	1354	5
Deduct rent	100	0		100	0
	1270	14	Add Int.	1254	5 10th yr.
Add Int.	63	11		62	14
	1334	5	Deduct rent	1316	19
Deduct rent	100	0		100	0
	1234	5	Add Int.	1216	19 11th yr.
Add. Int.	61	14		60	17
	1295	19	Deduct rent	1277	16
Deduct rent	100	0		100	0
	1195	19	Add Int.	1177	16 12th yr.
Add Int.	59	16		58	18
	1255	15	Deduct rent	1236	14
Deduct rent	100	0		100	0
	1155	15		1136	14 13th yr.
					Brought

<i>Brought up</i>	£.	s.		<i>Brought up</i>	£.	s.
	1136	14	13th yr.		1241	6
Add Int.	56	17		Deduct rent	100	0
	<u>1193</u>	<u>11</u>			<u>1141</u>	<u>6</u>
Deduct rent	100	0		Add Int.	57	1
	<u>1093</u>	<u>11</u>	14th yr.		<u>1198</u>	<u>7</u>
Add renewal	200	0		Deduct rent	100	0
	<u>1293</u>	<u>11</u>			<u>1098</u>	<u>7</u>
Add Int.	64	14		Add Int.	54	18
	<u>1358</u>	<u>5</u>			<u>1153</u>	<u>5</u>
Deduct rent	100	0		Deduct rent	100	0
	<u>1258</u>	<u>5</u>	15th yr.		<u>1053</u>	<u>5</u>
Add Int.	62	18		Add Int.	52	13
	<u>1321</u>	<u>3</u>			<u>1105</u>	<u>18</u>
Deduct rent	100	0		Deduct rent	100	0
	<u>1221</u>	<u>3</u>	16th yr.		<u>1005</u>	<u>18</u>
Add Int.	61	1		Add another		
	<u>1282</u>	<u>4</u>		renewal	200	0
Deduct rent	100	0			<u>1205</u>	<u>18</u>
	<u>1182</u>	<u>4</u>	17th yr.			
Add Int.	59	2				
	<u>1241</u>	<u>6</u>				

Leaseholder's purchase of one hundred pounds per annum, (nett) allowing five per cent. compound interest, stands him at the end of twenty-one years (admitting three renewals at two years purchase nett income) in the sum of £1205 18

Profit	—	—	194	2
First purchase	—	—	1400	0

Free-

	£.	s.	d.
Freeholder's loss at five per cent. ———	500	1	0
Leaseholder's profit at ditto ———	194	2	0
Difference ———	£.694	3	0

N.B. A deduction should be made from Leaseholder's profit, for lord's rent and heriots, and something from freeholder's loss, for increasing value of timber; but these will not be sufficient to invalidate the general conclusions.

The great cause why leaseholds are held in low estimation by the commonality, arises from the improvidence of the general holders, who for the most part expend the whole income of their estates, without laying by a fund for the purpose of renewal; hence it follows, that their estates fall into hand, and the owners are reduced from a state of comparative affluence to beggary; at which event, the general exclamation is, *Who would have leasehold property?*



CHAPTER VII.

ARABLE LAND.

Flax and Hemp.

FLAX.

IN the rich fertile country, extending from Wincanton, through Yeovil, to Crewkerne, flax and hemp are cultivated in great abundance, the value of which is in proportion to the skill and spirit with which it is cultivated.

A crop of flax greatly depends both on the management of the land previous to sowing, and on the goodness of the seed.

To raise it to advantage, it should be sown on new broke-up ground, ploughed once, and the surface hacked. It should be harrowed once before sowing, and twice after. Seed imported from Riga, and sold at about fourteen shillings the bushel, is to be preferred; and the produce for two or three years may, without change, be sown again; April and the beginning of May are the months for sowing, and the quantity two bushels and a half per acre.

The great damage done to flax in its growth is by weeds; and if those people you employ to weed it be not careful, they may do more harm with their feet, than their hands can do good. At any rate, the weeds must not be suffered to get head of the flax, for if they do, it will become stunted in its growth, and get to no height.

When the plant is arrived at its growth, and is in full blossom, which in common seasons will be about the beginning of July, it is fit to be pulled, if the grower has a greater regard to the produce of the stalk, than to the seed.

However,

However, it is a common practice to injure the whole crop for the sake of the seed; and to let it remain till the seed begins to ripen, so as to have both flax and seed. In this case, the land suffers greatly; for flax seeded is a great impoverisher, but if pulled whilst in blossom, is an excellent preparative for turnips, which should always follow a flax crop instead of wheat. The great reason why the Irish, and indeed most foreign flax is finer than the English, is, because they pull it early, and sow particular spots purposely for seed; and, perhaps, it would be politick in government to grant a bounty on all foreign flax seed sown in this kingdom, so as to reduce the price of foreign seed nearly to a level with our own; by this, the growth of flax (and with it the linen trade) would be encouraged, which has of late suffered considerable diminution by the restrictions to its cultivation imposed by land-owners, under the idea of great injury done to the land by the culture of this plant.

After the flax is pulled, there are two methods of working it; the first is called *rating of it*, that is, steeping it in water in order to loosen the rind, and separate it from the stalk; and the other is called *dew-ripening*, which is the spreading it on grass land, and by rain and dew producing the same effect. The early flax is mostly watered, which is done by laying the bundles in a pond or reservoir of soft water, and keeping them down by stones, or any other heavy bodies. In the course of seven or eight days the rind will be sufficiently loosened, and they must be taken out of the water, spread abroad, and dried. In this part of the operation, great skill and attention are necessary; for if it be left in the water too long, the threads become rotten and useless to the manufacturer; it is, therefore, more adviseable to take it out *too soon*, than to leave it *too long* in the pits. Those who raise flax for the seed and stalk both, go through an operation

tion called ripling; this is, separating the seed from the stalk, by passing the flax through a kind of comb before it is watered. These combs are made of iron, and the teeth are so close that the heads cannot pass through, and are consequently pulled off.

It is observable, that the land on which rated flax is spread to prepare it for housing, is greatly improved thereby; and if it be spread on a coarse sward pasture, the herbage will be totally changed, and the best sorts of grasses will make their appearance. Having myself cultivated flax on a large scale, and observing the almost instantaneous effect produced by the water in which the flax was immersed, I was induced some years ago to apply it to some pasture land, by means of watering carts, similar to those used near London in watering the roads. The effect was astonishing, and advanced the land in value ten shillings per acre. This liquid is much superior to animal urine. The practice I therefore strongly recommend to the cultivators of flax; possibly it may not be a new idea, but I believe it is seldom so applied.

The second method, namely, dew ripening, may be carried on immediately after the flax is pulled, or it may be dried and mowed; and in the months of February or March the seed may be stamped from the stalk, and the latter spread on the grass land to ripen.

The principal manures made use of by the growers of flax are, the sheepfold, woollen rags, horn shavings, and lime; and it is no unusual thing for the farmer to find ground, manure, ploughing, and all team work; and the labourer to find seed, and all manual labour, dividing at the conclusion the produce, in a way similar to that before stated in the *teazel* account. The expence and produce of an acre of watered flax may be thus estimated:

Dr.

<i>Dr.</i>	<i>£.</i>	<i>s.</i>	<i>d.</i>	<i>Cr.</i>
To rent of land, &c.	2	0	0	
To manure —	2	10	0	
To ploughing —	0	8	0	
To hacking —	0	5	0	
To harrowing and rolling —	1	4	0	
To seed and sowing (Riga) —	1	15	0	
To weeding —	0	10	0	
To pulling —	0	6	0	
To halling to pits and watering. [N. B. The price of this depends on the dis- tance] —	0	10	0	
To taking out of pits, halling, spreading, drying, and housing	0	14	0	
To braking, swing- ling, and dressing 40 dozen, at 1s. 4d.	2	13	4	
To tithe —	0	5	0	
		12	0	
Profit —	2	10	0	
	<u>£</u>	<u>14</u>	<u>10</u>	
				<u>£</u>
				<u>14</u>
				<u>10</u>
				<u>4</u>

By 40 dozen of
flax, at 7s. 14 0 0
By bounty 4d.
per stone - 0 10 4
(allowing 1s.
for expences)

To this profit may be added the succeeding turnip crop, and the improvement of the land by the manure; without these, it cannot be considered as very lucrative, for it is precarious; and if a dry season follow the sowing, it frequently happens

Gr. happens that the flax does not get to any height, and is scarcely worth pulling. Some people may think the expences over rated; but if they consider that the calculation is made under the idea of an acre *statute measure*, and also that it includes beer, tools, and many other trifling articles of expence, they will be disposed to acknowledge it to be correct—at least, I can say, that it is drawn from my own experience of its truth.

HEMP.

THE culture of Hemp and Flax agrees in many respects; but in their nature and form they are widely different. In flax, the male and female embryo are lodged in the same flower; but in hemp the male is found on some plants, and the female on others; they are, therefore, called *male* and *female* hemp; that which has only flowers is the *male*, and that which has seeds is the *female* hemp. The male is ripe five or six weeks before the female, and they both arise from the same seed.

Hemp likes a deep, rich, dry, sandy loam, and abhors a cold wet clay; a piece of woodland, grubbed up, generally answers well. It requires fresh land, good tillage, but seldom dung: even land exhausted with other crops, *if well tilled*, will produce good hemp, and if properly managed, will leave the land as clean as a garden.

10 4 The quantity of seed per acre about three bushels, and time of sowing April or May; great care must be taken to keep off the birds, for they are very fond of the seed, and their time of feeding is principally before sun-rise, and within half an hour of sun-set. Compleat weeding is as necessary for hemp as for flax.

About the beginning of August the male hemp will be ripe, and great care should be taken that the pullers do not trample

trample and injure the female hemp left standing. It must be gathered into small bundles, and nothing more is necessary than to dry it in a proper manner, so as to make it fit for working.

In managing the female hemp, particular regard is to be had to the seed; care, therefore, must be taken in drying it. After it is tied up in bundles about the size of a yard round, it should be set up in the sun for three or four days; but if the weather be difficult, it may be stacked in small mows of about a waggon-load each, where it may remain till it is thoroughly dry, and fit to be housed; a little wet does not injure the *stalk*, but it greatly damages the seed. An acre of land will produce from twenty to thirty bushels of seed; and the stalk of the female hemp is more valuable than the stalk of the male. The watering, braking, and dressing of hemp, is so nearly like those operations on flax, that I shall not detain my reader any longer on this article, and shall only add, that in many cases the crop is more profitable than that of flax.

TURNIPS.

In this part of the county turnips are also grown on a large scale. They are universally sown broadcast, once hoed, and for the most part fed on the land as a preparation for barley.*

Wheat, barley, oats, beans, and pease, are in general culture; but there is nothing in the mode of management worthy of notice.

Clover is the grass generally sown; and their course of husbandry,—1st. Wheat;—2d. Turnips;—3d. Barley;—4th. Clover, Vetches, Flax, Hemp, Pease, or Beans;—and 5th. Wheat again.

* When working oxen are fed with turnips they should not have water. J. B.

The crops of the *large* farmers are greater than those of the *small*, owing to their sowing more turnips and vetches, and consequently keeping a larger folding stock. Some of the arable land, being in common field, is in the following course, 1st. Wheat;—2d. Barley;—3d. Clover, Vetches, Potatoes, &c. and then Wheat again. These crops are comparatively small; wheat is found to succeed better after flax or hemp, (*provided they be not seeded*) than after potatoes or beans.

Fallowing is not practised; the prevailing opinion is, that corn crops, equally good, may be obtained after turnips, clover, potatoes, pease, vetches, beans, hemp, flax, &c. (if well manured and kept clean) with those after a compleat *summer fallow*. “These are enlightened farmers!”

Let any man visit this country, view their crops, and the condition of the land, and many arguments will not be necessary to make him an *antifallowist*, at least, on soils like these.

The large farmers carry all their dung on their *pasture* land, (excellent!) and support their arable by folding, lime, horn-shavings, rags, &c.; but the small farmers act directly the reverse. The large farmers all plough with oxen; the small farmers with horses. A renter of sixty pounds per year must keep *three* horses, for he cannot plough with less; and one of five hundred pounds per year will not keep more than *eight*; here is a comparative saving of twenty horses, and justifies my former predilection for large *corn* farms.

CHAPTER VIII.

GRASS.

THE Natural Meadows and Pastures of this division are kept in high condition; and their Artificial Grasses may vie with any in the kingdom.

CHAPTER IX.

GARDENS AND ORCHARDS.

BEFORE I take my leave of this rich district, it may not be amiss to say something of their orchards, to the production of which the land is peculiarly adapted. Permit me, therefore, to state, by way of encouragement to planting, that there is scarcely an orchard that will not let for four or five pounds per acre; and if the trees are planted at proper distances, viz. sixty feet every way, the pasture suffers but little injury; the strength of the soil enables the trees to throw forth a multitude of roots sideways, near the surface; it is, therefore, of the utmost importance that they should be placed at proper distances. In confirmation of this idea, a tree thus placed in an orchard belonging to Mr. BATH, of Mark, has frequently produced four hogsheds of cyder; and the tenant told me, that he would give for it one guinea per year for a term of twenty-one years. The tree is not more than forty years old. Most orchards are planted *too close*. The desire of having a great deal of fruit upon a little ground, is the cause of so doing; but the method defeats the purpose. When an orchard is first planted, sixty feet

feet appear an immense distance; and I have known many, who, acknowledging the advantage of distance, feel loth to admit so great a vacancy, and have planted at thirty feet, with a full resolution of rooting up every other tree at fifteen or twenty years old; but alas! this is scarcely practicable; after a tree is brought to full bearing, an insurmountable reluctance to eradicate it occurs, which arguments, however powerful, cannot overcome; and after all, many rational farmers are of opinion, that orchards planted at great distances seldom bear well.

The sorts of apple in best estimation are, Royal Wilding, White-Styre, Court of Week Pippin, Pounset or Cadbury, Flood-Hatch, Black Pit Crab, Buckland, Mediate or Southham, Royal-Jersey, Woodcock, Red-Hedge Pip, Old-Jersey, and Redstreak.* They are grafted on crab stocks in the nursery, with any gross growing fruit.

As soon as the ground for the orchard is ready, plant your trees, and be particularly careful not to plant them deep in the ground. After about four years, lop their heads and graft them with the fruit you most esteem, taking care to adapt your grafts to the stock. In other words, let your grafts, and the trees on whose heads you graft, be as similar in respect to luxuriance as you can; on this a great deal depends.

It is found, that a luxuriant gross-growing graft will never succeed on a slow-growing stock, and so *vice versa*. It may also be observed, that some excellent sorts of fruit are naturally so slow of growth, that a man, instead of planting for himself, plants for his grandchildren; and if you endeavour to force them (which is often injudiciously done) with

* A four yellow apple, streaked with red on the sun-side, be its name what it may, is undoubtedly a good cyder fruit. A. C.

luxuriant

luxuriant stocks, you occasion disease. The tree never becomes large or lasting, and the fruit will be tasteless and insipid.

Great care should be taken to secure the trees whilst young from the nabbing and rubbing of cattle, and more especially sheep; but in this respect the planters in this county are not very attentive, nor is there any thing worth notice in their management of the fruit.—The average price of the article is about thirty shillings per hoghead.

CYDER-MAKING PROCESS.

The fruit being properly matured, every necessary utensil ought to be set in order for cyder-making; the mill, press, tubs, casks, and pails, clean washed, and suffered to dry before they are used.

Several methods are practised for converting apples to pommage; but the two most chiefly in use are, the bruising stone with a circular trough, and the apple-mill. The best internal construction of a mill seems to be that which has two pair of rollers, the upper pair being stuck with *coggs* and *dags*; and the under pair being of very hard wood, turned smooth, and worked with coggs only. The upper rollers grinding the apples to a coarse pommage, and the under ones squeezing it to a very fine pulp.

The apples being, by either of the foregoing methods, properly bruised, the pommage is carried to the press, and a square cheese made thereof, by placing very clean sweet straw or reed between the various layers of pommage, or else by putting the same into hair-cloths and placing them one on another.* To this cheese, after standing a while, a

* It is of importance, that the straw or reed be sweet and perfectly free from any mustiness, lest the cyder be impregnated therewith.—Particular care ought also to be taken to keep hair-cloths sweet, by frequent washing and drying, else the ill effects of their acidity will be communicated to the cyder.

slight pressure is at first given, which is gradually increased, until all the juice or *must* be expressed; after which, this *must* is strained through a sieve and put into vessels.

Thus far cyder-making is a mere manual operation, performed with very little skill in the operator; but here the great art of making *good cyder* commences. Nature soon begins to work a wonderful change in this turbid liquor; and by fermentation converts it into a wholesome, vinous, heart-cheering beverage, nearly equal to the juice of the grape itself.

It is well known, that there are various stages of fermentation in these juices, each of which changes the very quality and nature of this fluid; but the principal, which are to be particularly attended to in the instance now under consideration, are three; namely, the *vinous*, the *acetous*, and the *putrefactive*. The first converts the *must* from its turbid fulsome state, to a transparent spiritous liquor.

If the juice be expressed from *sour* apples, this fermentation is perfected in two or three days; but if from *sweet* apples, not under a week or ten days.

The next stage of fermentation gives an acidity to the vinous liquor before spoken of, converting it to vinegar.

This fermentation begins soon (frequently in few hours) after the vinous is ended; and, if the fermentation be improperly hastened by heat, *before* the vinous is perfected. The third (and all succeeding fermentations) disengages an alkali from the liquor, and gives it a tendency to putrefaction.

To regulate the first, and to check the others, is then the great business of that cyder-maker who would attach to himself the satisfaction and fame every one is emulous of.

Let us, therefore, consider how these ends are best attained.

It

It is well known, that fermentation should not by too much heat be carried on rapidly, nor by extreme cold too slowly; as in each case the fermenting body will be injured.

Hence it appears, that a certain degree of warmth, or rather imperceptible heat, conduces best to regulate this operation. This degree of warmth may be understood to rest between thirty-eight and forty-six degrees of Fahrenheit's thermometer. If then the warmth of the cellar in which new-made cyder is placed be between these points, we may expect (no adventitious cause interrupting) that the vinous fermentation will commence and go on with due regularity.

It has been observed above, that fermentation is an intestine motion of the parts of a fermentable body; this motion, in the present case, is always accompanied with a small hissing noise and evident ebullition; the bubbles rising to the surface, and there forming a scum or soft spongy crust over the whole liquor. This crust is frequently raised and broken by the air as it disengages itself from the liquor, and forces its way through it. These effects continue while the fermentation is brisk, and at last gradually cease. The liquor now appears clear to the eye, and has a pungent vinous sharpness upon the tongue.

Now is the critical moment which the cyder-maker ought not to lose sight of; for if he would have a strong and generous liquor, all further sensible fermentation must be stopt. This is best done by racking off the pure part into open vessels, and placing them in a more cool situation for a day or two: after which, it may again be barrelled and placed in some cool place for the winter.

It is possible, however, that a variety of avocations at the season of cyder-making may take off too much of the farmer's attention from this branch of œconomics, and give opportunity to the acetous fermentation to come on, ere he

is

is aware of it. What remedy (it may be asked) has he to prevent the ill effects thereof running to full extent?—Several have been tried; sometimes with a degree of success, at other times wholly unavailable.

The most popular ones are the following:—a bottle of French brandy, half a gallon of spirit extracted from the lees of cyder, or a pailful of old cyder poured into the cask, soon after the acetous fermentation is begun; but no wonder if all these should fail if the cyder be still continued in a close warm cellar. To give effect to either, it is necessary that the liquor be as much exposed to a colder atmosphere as conveniently may be, and that for a considerable length of time. By such means, it is possible to repress the second fermentation in a great measure; and if a cask of *good* cyder cannot from thence be obtained, a *tolerable* one may.—These remedies are innocent; but if the farmer or cyder-merchant attempt to cover the accident occasioned by negligence or inattention, by applying *any preparation of lead*, let him reflect that *he is about to commit an absolute and unqualified murder on those whose hap it may be to drink his poisonous draught.**

* Should, however, any one be wicked enough thus to sophisticate a cask of cyder, his villainy may be detected in the following manner: Make a decoction of orpiment in lime water, drop a small quantity hereof into a glass of suspected cyder, and if it has been impregnated with any preparation of lead, its colour will soon change to a brown, dirty red, or black; but if it be genuine, its colour will remain nearly the same. Some liquid liver of sulphur will have a similar effect. Bishop WATSON directs us to boil together, in a pint of water, an ounce of quick lime and half an ounce of flowers of brimstone; a few drops of this liquor being let fall into a glass of cyder containing lead, will change the whole into a colour more or less brown. *Essays*, vol. iii. p. 371.

In the 4th and 5th vol. of the Bath Society's Papers, there are several valuable papers on the pernicious effects of lead vessels in dairies, which deserve publick notice and attention.

Stumming of cyder is a provincial phrase, signifying the fuming a cask with burning sulphur; and is thus performed: take a strip of canvas cloth about twelve inches long and two broad, let it be dipped in melted brimstone. When this match is dry, let it be lighted and suspended from the bung of a cask (in which there are a few gallons of cyder) until it is burnt out: the cask must remain stopped for an hour or more, and then be rolled to and fro, to incorporate the fumes of the match with the cyder, after which it may be filled. If the stumming be designed only to suppress some slight improper fermentation, the brimstone match is sufficient; but if it be required to give any additional flavour to the cyder, some powdered ginger, cloves, or cinnamon, &c. may be strewed on the match when it is made:—the burning these ingredients with the sulphur will convey somewhat of their fragrance to the whole cask of cyder; but to do it to the best advantage, it must be performed before the vinous fermentation be fully perfected.

To perfect a vessel of cyder, after the foregoing steps have been taken, it will be found necessary now and then to supply the waste occasioned by evaporation and insensible fermentation with fresh cyder; and about the beginning of April following to give it a final racking. At this time a commixture of cyder made from the Jersey or any other luscious and sweet apple, with that of the sour apples, may be recommended, to give it a general regular colouring.—Should, however, a higher colour be required than what results from such commixture, a small quantity of burnt or melted sugar, prepared in the following manner, will produce the desired effect: Take a pound of sugar, and put it into a stew-pan with a little water, and place it over a clear fire, stirring it frequently till it turns black; take it off the fire, and as it cools apply some cyder thereto, by little and little,

little, and continue stirring it till it be thoroughly mixed. This colouring tinges to perfection, is very cheap, gives no luscious sweetness, but rather an agreeable bitterness, and thus recommends itself to the nicer palates.

Soon after this, in the same month, the cyder may be bottled; and by the month of June the owner may expect to find himself possessed of a rich, pleasant, and wholesome liquor.

“ If there be a general characteristick of good cyder fruit, “ it seems to be this: that the apple be of a yellow or light “ red ground, tinged with red streaks on the sun side, of a “ smart acid flavour, with firm but juicy parenchyma;—if “ it possess these criteria, be it called by what name soever “ it may, it will, doubtlessly, make good cyder.”



CHAPTER X.

WOODS and PLANTATIONS.

THE low lands are badly wooded, and planting in general shamefully neglected, particularly a very profitable part of it, viz. the elm and the willow, both of which thrive in this soil, and the latter is much wanted for the purposes both of the thatcher and fisherman.

There is, in the eastern part, an extensive chain of wood from the parish of East-Cranmore through Downhead, Clotford, Whatley, Elm, &c. several miles in length, besides other woods of considerable importance. On the borders of Wiltshire is a large forest, which extends from Penselwood to within three miles of Frome.

This forest was disafforested about the seventh of Charles I. and divided into three portions, one whereof was allotted to the lords of manors, another to the commoners, and a third to the crown. The latter was sold off to the adjoining landholders. Sir Richard Hoare, bart. Thomas Southcote, esq; the Duke of Somerset, William Beckford, esq; the Earl of Corke, and the Marquis of Bath, are the owners of the greater part of the woods now remaining. No great quantity of woodland, in this tract of country, has been grubbed within the last forty years, but much new ground has been planted during that period, particularly on the hills belonging to the Marquis of Bath, Mr. Beckford, and Sir Richard Hoare, very much to the profit of the owners, as well as to the ornament and convenience of the country.

These woodlands are, in general, in a state of coppice wood, with an intermixture of timber, chiefly oak; but the soil,

foil, particularly in the vallies, being in general of a strong yellow clay, is of so cold and retentive a nature, that vegetation is exceedingly slow; and the oak trees, though springing up spontaneously, in great abundance, are so apt to get mossy and dead topped, that few of them come to a large size; and yet, on account of its vicinity to good inland markets, which are never overstocked with underwood or timber, the profit from woodland, under any tolerable degree of management, may be fairly taken at nearly double the value of the adjoining land in an arable or pasture state; and the profit arising from the new-planted hills, particularly the sandy parts of them, has been, in many instances, near ten per cent. on the original expence of planting and fencing.

Surely no greater inducement can be held out to the owners to preserve the old woods, or to plant new ones, in soils and situations so favourable to their growth, and in a country that would suffer very materially for want of wood, if deprived of this resource.

But as the profit arising from these woods depends very much on the mode of management, it will not be thought improper to give a few general rules, taken from the appearance of such of those woods as are *well managed*, to the owners of those woods that have a very different appearance, and that appearance not occasioned by any apparent disadvantages of soil or situation.

The natural defect of these woods, particularly that part of them which abounds with oak timber, has already been stated to be the slowness of their growth. This proceeds from three causes:

- 1st. The native coldness of the soil.
- 2^{dly}. The exposure of a great part of the woods to the south-west wind.—And,
- 3^{dly}. The injury the woods receive from cattle.

In

In proportion as these defects have been obviated by art, the woods may be said to be well or ill managed. Draining the cold wet parts of them is the obvious remedy of the first-mentioned defect. Screening them from winds, by skirting with Scotch fir and other hardy plants, and keeping them moderately thick of timber, are the best remedies for the second. But both these remedies will be useless, unless a strict attention be paid to the fences, so as to keep the woods from being cropped by cattle. This is particularly hurtful to slow growing timber, and by it these woods (though in very few instances subject to common rights) are very materially injured.

Wherever, as is the case in the greatest part of the woods, oak timber is the natural produce of the soil, it should, by all means, be encouraged; and as its growth to a certain period is usually very rapid, and afterwards altogether as slow, it should be cut when that period of stagnation commences, and a fresh set let up to supply the deficiency.

There are many instances in these woods, where, although the underwood cannot by the best management be made worth more than eight pounds per acre at sixteen years growth, yet at least twelve small oaks, worth twenty shillings a-piece, may be cut regularly at every round of the wood, from every acre, and that without injury to the underwood.

No system will pay equal to this; the underwood, instead of suffering from the multiplicity of trees, will absolutely be better than without any. The shelter afforded by these trees making amends for the damage done by the dropping from them; especially as ash underwood, on which the value of coppice wood greatly depends in this country, (and which does not grow well under the dropping of timber) does not in general thrive well in these cold soils.

The

The underwood that thrives best in them is oak, willow, alder, and above all *birch*. These kinds of wood will, if proper attention be paid to them, be fit to cut at sixteen years growth; if cut oftener, the wood will scarcely be large enough for the purposes of the country; and if suffered to stand much longer, the timber is apt to receive a check from the cold winds, when deprived of the shelter of the underwood. The coal-pits near Mendip furnish a never-failing market for the poles of this underwood, and the demand for the domestick uses of the country is fully sufficient for the residue; and as not only this end of the county of Somerset, but also the adjoining part of Wiltshire, depend on these woods for oak timber, the demand is, and always will be, equal to the supply.

From the produce of these woods charcoal is sometimes burnt for the use of the manufacturers. The wood is then cleaved and heaped into what is called a cord of wood, the dimensions of which are,

8 feet 4 inches long,

4 do. 4 do. high,

2 do. 2 do. broad.

The price of cleaving and heaping from 1s. 10d. to 2s. 3d. per cord. The expences of burning one hundred cord of wood, the value of which for fuel is six shillings per cord, may be thus estimated:

	£.	s.	d.
Cabin for the man — — — —	0	5	0
Burning 263 sacks of charcoal, at 6d. per sack	6	11	6
Halling ditto, at 6d. per sack — —	6	11	6
Unloading — — — —	0	12	0
Wear and tear of sacks — — —	3	10	0
	17	10	0
One hundred cord of wood, as fuel, at 6s.	30	0	0
	47	10	0

PRODUCE.

Two hundred and sixty-three sacks, of nine bushels				
each, at 4s. 10½d. per sack	—	—	64	2 1½
From which deduct	—	—	47	10 0
Balance in favour of charcoal in comparison with				
fire-wood	—	—	—	£.16 12 1½

As to the new-planted woods, particularly those on the high parts of Rodenbury-hill, Witham-park, and Kingstettle-hill, although all kinds of wood grow well upon them, (and especially upon the sandy parts of them) provided they are planted in masses sufficiently large to shelter themselves from the winds, yet nothing appears to grow so well as fir, and particularly *Scots fir*. An occasional mixture of silver fir, spruce fir, and larch, on some of the best and most sheltered spots, and a general thin mixture of beech and other forest trees, add certainly very much to the *variety* and *beauty* of the plantations in which they have been introduced; but in point of *profit* the Scots fir stands unequalled, for rapidity of growth, for superiority in value when grown, and above all, for its ability to bear the cold exposure of the country.

There are instances on these hills, on land not worth, in a state of pasturage, three shillings per acre, that plantations of Scots firs, of thirty years old, are now worth eighty pounds per acre,* and the demand for this kind of wood increases as fast as its uses, because more and more known. A great encouragement surely to cover the residue of the land, of this description, with plantations; especially when

* This is proved by stating, that at eight feet and a half distance, six hundred and forty trees stand on an acre; and that they are worth, at a low computation, two shillings and six-pence each.

it is considered that this kind of application of the land not only contributes so wonderfully to the improvement of the estate on which it is made, and to the employment of the poor of the neighbourhood, but that it also adds so much to the beauty, the comfort, and the convenience of the country for many miles round.

The coldness and founess of the soil of this part of the country, and particularly of those parts that were once in wood-land, tend much to depreciate its value in cultivation, either as arable or pasture land.

In an arable state it produces few sorts of grain kindly. It will not at all do for barley; it is in general too poor and stubborn for beans, and only a very favourable season can insure a good crop of oats; wheat is its favourite crop, and this is sometimes late in ripening, and is frequently purchased at the loss of two or three years rent, and of more dung than the pasture part of the country can afford to lose. And the peculiar inaptitude of this soil to return to grass, after it has been once ploughed, (and more especially, as is too often the case where it has been burn-beaked) is an insuperable objection to its being used in any kind of convertible husbandry. In a state of grass land, the lateness of the spring, and consequent length of the winter, reduce its value very much, even in the only mode of application to which it is at all adapted, viz. "the dairy."

The great improvement of which the cold part of this country is capable, may be expressed in a few words, "Shorten the winter." This is to be done principally by draining off the superfluous water; as the springs of so many principal rivers, viz. the *Frome*, the *Cale*, and the *Brew*, rise in this neighbourhood, the land must every where be full of it; and secondly, by treading the wet land as little as possible in the winter; but, on the contrary, winter hayning, wherever

wherever it is practicable, and of course mowing early in the summer, and endeavouring as much as possible to mow and feed every piece of land alternately.

Nothing has contributed more to the improvement of the cold wet parts of this country, than the plan which seems daily to gain ground, of building sheds for housing cattle in the winter. This not only prevents the land from being poached out in wet seasons, whereby the sward is frequently trod out of sight, but also produces dung, of which the land is so much in want, and of which it has hitherto had so little; it being a well-known fact, that many pieces of land have been constantly mown *every year* within the memory of man, and that frequently not earlier than August, without the least return of dung, or any other manure whatever, save only the assistance supposed to have been given them by the foddering of cattle thereon in the winter, and which, in wet seasons, has certainly done more harm than good.*

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* The remark, p. 77, that nature has wisely provided a manure within itself, which in moist soils may be found near at hand, and congenial thereto, is applicable to these cold unprofitable lands. It is presumed that these also may from themselves be supplied with a plentiful and permanent manure, so as to make them convertible to tillage or pasture. The means of effecting this is, by burning the clay of the same lands in such manner as to reduce it to a state of pulverization fit for spreading on the land, which, as an indispensable preliminary, must first be properly drained. This was practised many years ago by Mr. PARSONS, of West-Camel, on a pretty large scale, and with remarkable improvement of a wet clayey soil. His method was, to carry all the earth and clay from his drains, (which were open ones) ditches, &c. to one place, where letting it remain some time to dry, he made a fire with wood on the ground, gradually adding thereto his materials till the whole was sufficiently burnt; and he was so great an adept, that (as he said) he knew by the smoke when the fire was of a proper degree of heat for pulverising the clay without burning it to brick. At the time of his saying this, he had a very good specimen of his skill, a

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Those parts of this district which have a covering of red loam, particularly in Witham-park, and those which lie on the deep sand vein which runs through Kilmington and Yarnfield, have been much improved by chalk, from Bradley, Long-Knowl, &c. and by this assistance may be very profitably kept in tillage; but the want of a permanent manure for the cold clays, which comprise the greatest part of this district, is a very great objection to the ploughing them at all, and a strong recommendation to the keeping them in a state of pasturage.

Wherever there is, in this cold country, an appendage of arable land to a dairy farm, and which is certainly not only useful, but absolutely necessary, on account of straw for making dung; care should be taken to prevent the tenant from using any part of the stall-dung on the arable land, so as to oblige him to buy lime, rags, ashes, and such like, for

very large heap as finely pulverised as the burnbake from earth and weeds in a garden. With this he mixed any other sort of manure which he could get, and carried out all together, either on his pasture or arable land, to the very great improvement of both. As there is, in different parts of the kingdom, an immense quantity of this sort of land, the subject merits a serious consideration; and if by a kiln, or any other contrivance, clay could be burnt at an easy expence, with certainty and dispatch, the improvement of these lands would, or might, be such as nearly to double their present value, to the great increase of private property and national riches. Materials for this can never be wanting, as the drains, whether open, or stoned, parings of the ditches, &c. will afford a considerable supply; and if more be desired, a small portion of the field may well be spared, with a view to the melioration of the remainder.

The present is said to be an enlightened age. It certainly is an age of experiments, which, in some instances, are prosecuted with the greatest ardour, though, at the same time, to the question, *cui bono?* no satisfactory answer can be given. In this case the *bonum* is obvious and extensive, and the best way of accomplishing it is an object highly deserving the attention of the Board. R. P.

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the latter, and to reserve the whole of the stall dung for the grafs land.

Every encouragement should also be given to induce the tenant to underdrain the land, or, if the landlord has already made the drains, to preserve them. He should also be obliged to mow and feed the land alternately, and induced, by proper cattle-sheds, to take his cattle off the wet lands some time in November, whereby he would not only save treading out his land, but also be enabled to get early grafs; he would by that means also be enabled to mow early in the summer, and of course to get a good crop of after-grafs, which he might preserve till a late period in autumn, and by thus shortening the winter *at both ends*, he may be enabled by *art* to reduce it nearly to the length it generally is, in more favoured situations, and thereby, in a great measure, cure the *great natural defect of the country*.



CHAPTER XI.

WASTES.

THE largest uninclosed (*upland*) common in this district, is the forest of *Neroche*, containing about eight or nine hundred acres.

The right of stocking on this common belongs to the parishes of Ilminster, White-Lackington, Donyat, Broadway, and others; and in regard to quantity is unlimited. For want of proper draining, this common rots the sheep, and is of very little value. If inclosed, drained, and cultivated, it might be made worth from twelve to twenty-five shillings per acre. Next in size is White-down, near Chard. There are a few other small uninclosed commons in different parishes; but their total amount does not exceed four or five hundred acres.

Of the moor, or low marshy lands, there cannot be less than eight thousand acres.

The land in open field, is, for the most part, in small pieces of one, two, and three acres each. Were proper exchanges made, and the same divided into pieces of ten or twelve acres, it would be advanced in value eight or ten shillings per acre.



CHAPTER XII.

IMPROVEMENTS.

GREAT attention is paid to draining by all the sheep farmers. The common drains are sixteen inches wide, from twenty to thirty deep, and are for the most part *turf drains*; and when the turf is strong they are found very durable.

Paring and burning but little practised.

CHAPTER XIII.

LIVE STOCK.

OXEN.

GRAZING MANAGEMENT.

THERE are two methods of fattening oxen, the one called summer, the other winter fattening; the first is thought the most profitable, and accompanied with the least risk.

In the first method, they are purchased in February, and are for the most part of the Devon sort, bred either in the Northern part of that county, or in the lower part of Somersetshire. They are bought in good condition, and cost from eight pounds to fifteen pounds each; during the interval between February and grass time, they consume each about ten hundred or twelve hundred of *inferior* hay, viz. the skimming of their summer leaze. When at grass, they are

are allowed from one acre to one acre and a half each ox, and some add one sheep to each ox. Horses, if any, are kept very sparingly, not at any rate to exceed one to twenty acres of grazing ground. These oxen will be fat, some before and some soon after Michaelmas, paying for their keep from three shillings and six-pence to four shillings per week.

Frequent bleeding, in small quantities, is found to accelerate their fattening.

The next stock are bought in June, July, and August, and are not of so good a sort, being either home-bred or Welsh, and cost from six to eight pounds. These follow the stock purchased in February, and are sometimes stall-fed in the winter, and sometimes fatted in the field; in either case they have the best hay, and good attendance.

They are fat in April and May, and sell from twelve pounds to fourteen pounds each.

A grazier occupying two hundred acres of land may fat yearly one hundred head of oxen, to which add two hundred and seventy sheep and ten colts, constituting altogether a profit comfortable, but by no means *exorbitant*.

The account may be thus stated:

GRAZING.

<i>Dr.</i>	£.	s.	d.
To rent of 200 acres, average value 40s. an acre	400	0	0
To tithe and taxes, say	50	0	0
<i>Feb.</i> To fifty oxen, at 11l.	550	0	0
<i>July.</i> To fifty oxen, at 7l.	350	0	0
To mowing and making fifty acres of hay, at 10s.	25	0	0
To skimming and making fifty acres of sum- mer-leaze, at 3s.	7	10	0
To wages throughout the year, besides the farmer's labour	50	0	0
To accidents	20	0	0
	1452	10	0
To profit (interest of capital and accidents in- cluded)	277	10	0
	<u>*£1730</u>	<u>0</u>	<u>0</u>
<i>Cr.</i>			
<i>Oct.</i> By fifty oxen, at 18l.	900	0	0
<i>May.</i> By fifty oxen at 13l.	650	0	0
By profit on seventy sheep, summer kept	40	0	0
By profit on ten colts	40	0	0
By profit on two hundred sheep winter fatted, and fold in April unshorn	100	0	0
	<u>£.1730</u>	<u>0</u>	<u>0</u>

* Nothing can be more pleasing and satisfactory, to a farmer engaged in the department of grazing, than a power of ascertaining the separate pay of each particular ox, sheep, pig, &c.; this may easily be accomplished by means of a weighing engine. For the weight of the ox, &c. when bought, being thereby exactly determined, the animal should be then numbered in the horn, a book correspondent to such number being opened, in which the weight should be then inserted, and a column opened for the purpose of inserting remarks made during the progress of the animal's fattening.

The oxen, when fat, are driven to the London, the Salisbury, and the Bristol markets, at the following expences, (salesman's commission included:)

London, 12s. per head

Sarum, 5s. ditto

Bristol, 3s. ditto.

They are nine days travelling to London, a distance of one hundred and thirty miles. It is difficult to say which may be considered as the best market; but the general opinion seems to be, that the London market is calculated for those only who attend it regularly every week, the price of beef per stone greatly varying according to the plenty or scarcity in the market.

Some farmers graze heifers in preference to oxen, buying them in about the months of March and April, and selling them in October and November. The profit amounts to forty shillings or fifty shillings each for their summer food; and the land is stocked after the rate of one heifer to each acre, together with a considerable number of sheep both in summer and winter; and it is thought by many, that this method of occupation is more profitable than the former.

Others fat two-years old wedders of the Dorsetshire and Somersetshire breed. The Dorset sort are purchased about Michaelmas, at Sherborne and Stolford fairs, price from twenty shillings to thirty shillings. No hay is given in the winter, unless the weather be uncommonly severe, or the ground covered with snow. They are sold fat between February and May, and weigh from twenty to thirty pounds per quarter. A few oxen accompany the sheep, which are bought in the spring, and fatted the ensuing winter. It is the universal opinion, that sheep are not so profitable stock as oxen.

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It is no unusual thing for some of the graziers to give their prime oxen a *second* summer's grafs. In this case they are brought to a high state of perfection, and in all probability they pay more the *second* year than the *first*; for it is well known, that an animal nearly fat will consume much less food than a poor one.

Ewes and lambs are also the stock of some farmers; they are purchased partly in the autumn in lamb, and partly in the spring with the lamb by their sides, and are mostly of the Dorsetshire or Mendip breed.

All the graziers of this county are partial to the red oxen of Somerset and Devon; and you seldom see a North-country ox in their possession. They will not allow that the Northern oxen possess any comparative merit, either for labour or slaughter; perhaps some allowance should be made for long-established prejudices; but it must be admitted, that in the London market, to which fat oxen are brought from all parts of the kingdom, the Somersetshire (next to the Galloway Scot fatted in Norfolk and Suffolk) appear to bear the belle, both in respect to fineness of grain and internal fatness; and there cannot be a stronger proof of their merit than the increasing demand for them with the most eminent graziers of Leicestershire, Oxfordshire, Warwickshire, &c. many of whom regularly attend the fairs both of Devon and Somerset, as purchasers of them lean; and I have been credibly informed they find a good account in so doing. As to myself, it is with reluctance that I hazard an opinion on this subject; respecting which, men of long-established experience are so much divided, and on which such various opinions exist. But I cannot help remarking, that if the superiority of the Northern sort were so conspicuous as the great breeders of the North affirm, how is it that some of their best friends and most strenuous supporters

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in the *sheep line* desert them here, and give an unqualified preference to the Western breed? It is not likely that a wary and considerate farmer would travel one hundred and fifty or two hundred miles to purchase stock, with all the manifold inconveniencies and risque which must attend the driving so far, if he could purchase equally cheap and good at home.

Nothing is more censurable than an injudicious partiality; and this principle oftentimes leads men hastily to run away with ideas unsupported by fact; but when long experience and frequent trial have produced conviction, a farmer would be equally inexcusable, were he to resist the influence naturally produced in his mind thereby.

The red breeds of Devon and Somerset have been progressively increasing, and they are now partially dispersed over great part of the kingdom; and in respect to their qualities as a *labouring* animal, I never heard but one opinion, and that opinion I can myself confirm from large and long experience, namely, that they are *the best in the kingdom*. In respect to their qualities as a *fattening* animal, I will not speak so decidedly, for I verily believe they have many rivals; the French, the Galloway Scot, the Leicester and Oxfordshire, the Herefordshire, the Glamorganshire, the Suffolk polled, are all good grazing cattle; and in almost every county may be found in the hands of the most spirited and attentive farmers, a valuable sort highly superior to the general run of the county; and I must again repeat, that the safest plan which a farmer can adopt is that of improving his breed by a judicious selection of his best females, and by procuring such males as are eminently distinguished for perfection in those points wherein his females may be found deficient. A total change of stock is frequently accompanied with loss and disappointment; and if the attempt succeed, you are for

a considerable time driven to the necessity of fattening all your breed; for the rooted prejudice of the graziers in favour of the prevailing sort of the county, whatever they may be, cannot easily be overcome; and you may in vain expect at market a price adequate to your care and exertion.

Notwithstanding what has been said, there are certain well-founded axioms in the grazing system relating to the shape of the animal, which cannot justly be disputed. Delicacy in the horn, head, and neck; deepness and roundness of the carcase, wideness of the loins, elasticity in the flesh, small bones, accompanied with a thin skin: these, with many other points which might be enumerated, are considered as essentials, and are seldom unaccompanied with an aptitude to fat.

The same partiality which I have here stated to exist among the Marsh farmers in favour of the red oxen, was, a few years since, as strongly manifested in favour of the Dorsetshire sheep; but of late the *polled* breed of the lower part of the county gain ground, and are in high esteem.

These sheep are bred in the neighbourhood of Dulverton, Bampton, Wiveliscombe, &c. they are well made, yield a large shear of wool, and fat quickly; but they might, in my opinion, be greatly improved by a cross with the Leicester, to which they have in size and shape some degree of affinity. The objection made by the breeders in that district to a cross with Leicester is, that what they might gain *externally*, they should lose *internally*; and that the deficiency in the fat of the inside would so disgrace their sheep in the eye of the butcher, that they would lose their old customers.— Surely this reasoning is fallacious; for, on a supposition that the inside fat of a sheep were by this intermixture to be reduced six pounds per sheep, (and I think this as much as it possibly could be) the deficiency, at four-pence per pound, would

would amount to only two shillings; five pounds extra weight of the carcase would pay this; and if the buyer were to allow the butcher for this defect, all reasonable objection on his part is done away; and, on the other hand, the grazier need not be alarmed, for he may rest assured, that the increase of the carcase will amply repay the want of inside fat.*

A list of FAIRS to which the SOMERSET GRAZIERS resort to buy LEAN STOCK.

SOMERSET.

Binegar, Whit Wednesday and Thursday
 Bishop's-Lidiard, April 5
 Bridgwater, June 24, Oct. 2, and Dec. 28
 Broomfield, Nov. 13
 Bagborow, May 23
 Bristol, March 1, and Sept. 1
 Castle-Cary, Tuesday before Palm Sunday, May 1, and Whit-Tuesday
 Chard, first Wednesday in May, and in November
 Comb St. Nicholas, Wednesday sen'night before Christmas-day
 Dulverton, July
 Frome, Feb. 24, and Nov. 24
 Lansdown, August 10
 Milverton, October
 North-Petherton, May 1
 Pensford, May 6, and Nov. 8
 Priddy, August 21
 Somerton, Monday before the 30th of January, Oct. 30, Nov. 2, and the first great market the Tuesday before Easter, and four other markets every three weeks after
 Taunton, June 17, and July 7

* The foregoing account of grazing was written in the year 1794, since which a great advance has taken place, both in the price per acre, and the value of the land. J. B.

Ubley, September 4
 Wellington, Thursday before Easter
 Wells, May 14, July 5, Oct. 25, Nov. 30
 Weston-Zoyland, Sept. 9
 Wiveliscombe, May 11 and 12
 Yeovil, June 28, and Nov. 17
 Shipham, Nov. 17.

DEVON.

Ashbrittle, February 25
 Axminster, Wednesday after Pack-Monday
 Barnstable, September
 Chudleigh, Easter Tuesday
 Churchinford, January 25, 26
 Crediton, April , May 11, August 21
 Exeter, Ash-Wednesday, Whit-Monday, Lammas-day, and Dec. 6
 Hatherly, May 21
 Honiton, July
 Oakhampton, Tuesday before Lady-day
 Ottery St. Mary, Tuesday before Palm-Sunday, and the Wednesday se'nnight after Whitsunday
 Sandford-Peverel, April
 South-Molton, April 12
 Tiverton, Trinity-Tuesday, and Oct.
 Great-Torrington, third Saturday in March, May 4, and Midsummer
 Witheridge, April

Fairs at which Fat Cattle are sold,

Axbridge, February 3, and March 25
 Backwell, September 21
 Banwell, January 18
 Bridgwater, second Thursday in Lent, Oct. 2, and Dec. 28
 Bristol, March 1, Sept. 1
 Burnham, Trinity-Monday
 East-Brent, August 26
 Huntspill, June 29
 Priddy, August 21
 Wedmore, August 2

Wells,

Wells, October 25, November 30
 Somerton, Tuesday before Easter, and every Tuesday three weeks
 till Midsummer
 Weston-Zoyland, September 9
 Mark, Tuesday before Whitsuntide, and September 15
 Wollavington, October 18
 Langport, second Monday in Lent.

COWS.

The cows of this district being intended chiefly for the purposes of cheese-making, the profit arising is in proportion to the quantity and quality of the milk; size, therefore, is not attended to, but principal regard is paid to the breed whence she sprung. The dairy-men think it more profitable to have a small breed *well fed*, than the best breed in the world *scantily kept*; and the cow that gives milk the longest is most esteemed.* The time of calving is from
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* The cheese of this district is much admired, particularly that made in the parishes of Mear and Cheddar.

It is for the most part purchased by jobbers, and sent through the medium of Weyhill, Giles's-hill, Reading, and other fairs, to the London market, where it is sold under the name of *double Gloucester*.

The method of making has been so often described, that I shall not trouble my readers with a minute detail thereof. The annexed short account of the process I shall only premise, with observing, that cleanliness, sweet rennet, and attention to breaking the curd, are the principal requisites in cheese-making.

PROCESS OF CHEESE-MAKING.

When the milk is brought home, it is strained into a tub, and about three table-spoonfuls of good rennet put therein, (supposing the quantity of milk sufficient to make a cheese of twenty-eight pounds) which remains undisturbed about two hours, then it becomes curd, and is properly broken; when done, three parts of the whey is taken therefrom and warmed, and then put into the tub again, where it remains about twenty minutes; the whey is again put over the fire, made nearly scald hot, and put into the tub to scald the curd about half an
 hour,

the beginning of February to Lady day, and they take great care to keep their cows well three weeks or a month before they calve; the milk will rise in proportion to the goodness of their keeping; very little attention is paid to the nature or sort of the bull. The calves (those few excepted which are reared to keep up the stock) seldom live a month ere the butcher's knife cuts the thread of their existence; and cheese-making begins in March, from which time it continues till December.†

The calves which are reared are fed principally with cheese-whey, and in May they are turned to graze and left to shift for themselves;‡ some careful dairy-women have tried

hour, and then part of the whey is taken away, and the remainder remains with the curd till it is nearly cold; the whey is then poured off, the curd broken very small, put into the vat and pressed, where it remains nearly an hour; and then is taken out, turned, and put in again and pressed till the evening, when it is taken out again, turned, and pressed till the next morning: it is then taken out of the vat, salted, put into it again with a clean dry cloth round it, and remains in the press till the next evening, when it is taken out again, salted, put into the vat without a cloth, and pressed till the next morning; and then it finally leaves the press, and is salted once a day for twelve days.

‡ The number of calves fattened in this district is immense—four hundred fat calves have been sold in Shepton-Mallet market in one day. To this market, butchers from the neighbourhood of Bath and Bristol resort, and convey the carcases (whole) to those cities in one-horse carts. The veal is delicately white—small in size, viz. from sixteen to twenty-four pounds per quarter. The best is brought from a small village called Batcomb; and its excellency may, perhaps, be ascribed to their giving the calves small doses of metheglin in the milk, and keeping them in a dark place.

† In the South-Eastern part of this district, where the dairy land is chiefly applied to the making of butter, and skimmed milk cheese, the calves are taken from their dams at a fortnight or three weeks old, and suckled with skimmed-milk until the middle of May, when they are

tried to increase their growth, by giving them whey after they are put to grafs; but this plan is reprobated as doing more harm than good. When they become yearlings, they are subject to a disorder provincially called the *quarter-ail*, which is a mortification beginning at the hock, and proceeding with astonishing rapidity to the vital parts, occasioning death in a very few hours. The first symptom is lameness, and no cure has yet been found; the quarter affected becomes intirely putrid, whilst the other quarters are in a sound state. This disorder is, I think, the same with that known in Norfolk under the name of *gargut*; nor is it confined to these counties, but is, I believe, generally known; and an investigation of the cause of the disorder, which might lead to the discovery of a cure, is well worthy the attention of all agricultural bodies.

Cows are subject to a disorder called *the yellows*, something similar to the jaundice in the human species. This disorder frequently affects the udder, and brings on a false quarter, that is, a deprivation of milk in one teat, accompanied with a swelling and inflammation. For this, however, I can suggest a remedy which seldom fails, viz. flour of mustard mixed with any liquid, two ounces a dose, and repeating the same two or three times in the course of twenty-four hours.

The heifers are put to the bull in July, when they are about one year and half old; and the prevailing opinion seems to be, that those which are kept from the bull a year longer do not turn out *good milkers*. The average produce

are turned out to grafs at home, or sold at some distant market for the same purpose. A few dairy-farmers, in this part of the district, have adopted the practice of making flax-feed and hay-tea, and mix it in the milk, with which the calves are suckled. This practice appears to answer very well, for the last month or six weeks of suckling. A. C.

of a dairy per day, may be calculated at about three gallons per cow, from Lady-day to Michaelmas, and from Michaelmas to Christmas one gallon per cow per day.

Cows are kept till they are fourteen or fifteen years old, and when fatted they seldom get to a higher price than seven or eight pounds.

A dairy-maid can manage twenty cows so far as relates to the in-door work. The gross produce of a dairy frequently averages twelve pounds per cow, and in some particular instances fourteen pounds; but this can only be done when cheese is at the present enormous price of near sixpence per pound twelve months old; and fat hogs at sixpence per pound.

The following estimate of the expences and produce of a dairy, supposing the land and the cows to be of the *first* quality, may, I trust, be considered as tolerably accurate.

DAIRY TWENTY COWS.

<i>Dr.</i>	£.	s.	d.
To two milkers forty weeks, at 3s. per week	6	0	0
To a man's labour, winter serving cattle, changing their pasture, selling cheese, &c.	—	4	0
To dairy-woman, 4s. 6d. per week	—	11	14
To dairy utensils, candles, salt, brushes, mops, and all other articles	—	4	6
To arnotto	—	1	0
To rent, thirty acres of summer pasture, 40s.	60	0	0
To skimming the same, and making six tons of hay	—	3	0
To rent of fifteen acres mown ground, 40s.	—	30	0
To making the hay, say thirty tons, at 12s. per acre	—	9	0
To tithe, taxes, &c. say	—	10	0
	139	0	0
To profit, interest of money, and the decreasing value of cows included	—	113	10
	£252	10	0

N. B. A large dairy might be kept for 25s. per cow.

<i>Cr.</i>	£.	s.	d.
By ninety hundred of cheese, at 45s.*	—	202	10
By calves	—	15	0
By butter	—	10	0
By hogs	—	25	0
	£252	10	0

* At this time (January 1797) cheese of last year's making is worth three pounds per hundred.

On a comparison of this with the grazing account, it is apparent that the dairy occupation is more profitable than grazing, for this amounts to fifty shillings per acre, whereas the other is only twenty-eight shillings per acre. On account of population, the dairy system ought also to be preferred, as one grazing farm of two hundred acres would afford a comfortable livelihood to four dairy families.

I am aware, that should these observations induce an increase of dairies, and consequently a more liberal supply of cheese, such a declension in the price of that article might take place, as would bring all things again on a level, and advance the grazier's profit to an equality with that of the dairy-man.

Be this as it may, I think dairies should be encouraged; for the arduous domestick labour and incessant employment which they bring on the female part of a farmer's family, will always prevent an undue increase thereof, unless their profits on a comparison are very great indeed. But whilst I thus recommend encouragement to the pail, I must do it with this proviso, that a different mode of management be adopted from that now practised.

The cows of this district are almost universally depastured in the fields both summer and winter; in consequence of which, the dung produced even by a large dairy is trifling indeed; hence arises a manifest declension in the fertility of the land, and you may distinguish a grazing from a dairy farm at a great distance. In this exhausted state the dairy land must remain, unless a different system of management be successfully inculcated. Were I to suggest a plan of improvement, it would be the following: Let all dairy farms be accompanied with a due proportion of arable, perhaps *a fourth part*; let proper stalls and bartons be erected as a residence for the cows during the winter months; let cabbages, turnips,

turnips, and potatoes, be grown for their winter subsistence; but above all, let them be well littered, and kept perfectly clean. By these means, a large supply of dung may be procured at a little expence; and if the farmer wish to increase the quantity, he need only dig up the waste earth on the borders of the highways, and make a layer therewith in his farm-yard. This will absorb the urine, and when mixed and incorporated with the dung, will constitute a manure highly fertilising. It cannot be sufficiently regretted that this practice should be so seldom adopted; for repeated experiments have taught, that one hundred acres of land thus managed, will keep more cows than one hundred and fifty acres under the present system. *Artificial grasses* will enable the dairy-man to turn his cows out a month or five weeks earlier than he was accustomed to do on *natural grass*, and turnips, &c. will supply them with winter provender; so that the consumption of hay will be greatly reduced, and more land may be devoted to summer pasture. It may be here objected, that the quality of the cheese and butter may be injured: of this I have my doubts. Artificial-grass, in the months of March and April, will make as good butter or cheese as natural grass; after this, the cows should be put to the natural pasture, and the former shut up for mowing.

As to the effect of turnips and cabbages, I will obviate every difficulty by stating a simple recipe, whereby all disagreeable flavour may be entirely prevented in the making of butter; and as to cheese, there is but little made at that season; and if there were, the palate must be nice indeed, which could distinguish a difference of flavour.

RECIPE.

When the milk is set abroad in the leads, put one gallon of boiling water to six gallons of milk. It may also be prevented

vented by dissolving nitre in spring water, and putting about a quarter of a pint to ten or twelve gallons of milk when warm from the cow.

SHEEP.

In the South-East part of this district, the sheep are an improved sort of the Dorset, and many considerable ewe flocks are kept to the amount of four to six hundred each; they begin lambing about Christmas, and the lambs are weaned in May.* After the lambs are shorn, which is at Midsummer, they are worth about fifteen shillings each.—The produce of an ewe, fold at three years and three quarters old, may be thus stated:

	£.	s.	d.
Two lambs, at fifteen shillings†	—	1	10 0
Wool both of ewe and lambs	—	0	12 6
Folding	—	0	15 0
Ewe	—	1	8 0
	£.4	5	6

The ewes, forward with lamb in October, are sold to the graziers who supply London and Bath markets with house-lamb, and sometimes they bring thirty-five shillings per head, though folded to the time of sale.

Some farmers buy wedder lambs about Midsummer (shorn) at fifteen shillings, and keep them about twenty-two months, constantly folding them: they are then sold (unshorn) to the graziers occupying the marsh lands, at the price of twenty-seven to thirty-eight shillings each.

* Would it not be more adviseable to protract the lambing to March or April?

† Lambs have been sold in the autumn of 1796 for nearly double this price.

			£.	s.	d.
Folding	_____	_____	1	0	0
Wool	_____	_____	0	4	0
Average price sold at	_____	_____	1	12	6
				2	16 6
Deduct first cost of lamb		_____	0	15	0
			£.2	1	6

The latter stock requires less care than the former, and at the same time enables the farmer to manure more land; for they may be folded through the whole winter on the pasture land.

The number of sheep kept in this district is immense, and folding unremittingly pursued.*

Lately some of the *Leicester sheep* have been brought into this district by Mr. POSTER near Yeovil, and by Mr. LOWMAN near Crewkerne. The carcases of some have been sold in Crewkerne market, and were remarkably fat, and highly esteemed for their delicious flavour; but with all these good qualities, if they cannot walk a mile to the fold, they never will gain much ground in this country.

The Sheep-breeding system of White-Lackington and its neighbourhood.

In a regular flock of three hundred ewes, it is necessary to rear all the chilver or female lambs; for if the twins are

* Mr. JEANES, of Alhampton near Castle-Cary, has exhibited before the Bath Agricultural Society repeated proofs of his skill in the cure of rotten sheep; and has, in his possession, a variety of corroborating testimonies, under the signature of respectable sheep-farmers, who have availed themselves of this useful discovery.]

sufficient,

sufficient, after all accidents, to keep up a regular succession, it is as much as can be expected. The stock then will consist of

150 Chilver lambs
150 Ewes from one to two years old
150 ditto from two to three years old
150 ditto three years old.
600 in the whole.

From this stock are fold one hundred and fifty pur (male) lambs, and one hundred and fifty old ewes, yearly. The lambs are fold about Midsummer, and the old ewes are bought by sucklers, for the London market, in September or October, about which time they begin to drop their lambs. The stock ewes are folded for eight months, viz. from the beginning of April to the end of November; and the sale ewes are folded about three months. Four hundred and fifty sheep will amply manure one-third of an acre each night; and this is considered as far superior in its effect to dung, or to fifteen quarters of lime, which is the substitute with people who do not keep a flock. By the following comparison, the value of the fold may be fairly estimated:—

	£.	s.	d.
Fifteen quarters of lime, at 1s. 6d.	—	1	2 6
Carriage seven miles	—	0	15 0
Mixing, spreading, &c.	—	0	5 0
	£.2	2	6

The before-mentioned flock will annually fold upwards of sixty acres; and the value of such manuring will amount to one hundred and twenty-seven pounds ten shillings; but as it must be admitted that the benefit of the fold is not so durable

urable as either dung or lime, we will deduct one-third, and call it eighty-five pounds.

If the pur-lambs are not fold, but kept on, they are constantly folded till they are two years and a half old, at which age, by good keeping on vetches, clover, and turnips, they are brought to the value of two guineas to two pounds fifteen shillings, and are then fold to the grazier to finish.

By this system of folding, the sheep are kept free from the *foot-rot*; and as the grass is not tainted by their resting on it, more sheep can be kept per acre.

Produce of a Flock of three hundred Ewes.

	£.	s.	d.
One hundred and fifty male lambs, fold at Mid-			
summer, after being shorn, at 1l. 1s.	—	157	10 0
Wool of three hundred lambs, at 2s.	—	30	0 0
Ditto of one hundred and fifty young ewes at 4s.		30	0 0
Ditto of three hundred full-grown and aged			
ditto, at 3s. 6d.	—	52	10 0
One hundred and forty old ewes, fold in Sep-			
tember, at 40s. each	—	280	0 0
(N. B. Ten allowed for accidents)			
Folding sixty acres	—	85	0 0
		<u>£.635</u>	<u>0 0</u>

One shepherd at eight shillings per week will take care of the flock, change the fold, and have time for other work; and the hurdles will be attended with an annual expence of about three guineas.

Corn, after the fold, is much greater in quantity, and better in quality, than after any other manure.

Passing from Crewkerne to the Southward, you enter one of those excavations, or large vales, for which this county is remarkable; comprising the villages and hamlets of Clapton, Seaborough, Wayford, Woolmington, Partington, Cricket-Thomas, Winsham, &c.

Within this vale commences a district of twenty miles square, (one half in Somerset and the other in Dorset) which ought to be noted for supplying the summer markets at Exeter with *weanling calves*. These calves drop in February and March, are suckled by their dams for three weeks, when they are housed, and suckled by hand with warm skimmed milk until the month of May, at which time they are sold to the drovers for the market before-mentioned. At Exeter, they are bought by the Devonshire farmers, and depastured for three or four years, when they are disposed of to the Somerset graziers, who fatten them for the London market: thus we see, that part of what is called the Devonshire breed of cattle is the produce of a small district of the counties of Somerset and Dorset; a breed which will probably, ere long, be generally acknowledged to be equal to any other in the kingdom.

The dairy at Ayshcombe farm, within the parish of Wayford, is a good specimen of the Devonshire breed.*

* Mr. WHITE PARSONS also, of Ilchester, has exhibited before the Agricultural Society at Bath, for the premium offered by that Society, a young bull of his own breeding, together with the sire and dam of the *Devonshire* race; and all breeders of horned cattle were challenged by him to produce, at the said exhibition, any three of equal value for stock; but no competitor appeared, and the premium was deservedly adjudged to him.

CHAPTER XIV.

RURAL ŒCONOMY.

THIS county is very populous, and the wages low, notwithstanding there are very considerable manufactures.

Men's daily labour in winter is 1s. per day, with cider.*

Ditto in summer 1s. 4d. ditto

Women's daily labour in winter is 6d. per day, with cider.

Ditto in summer 8d. ditto

Mowing grafs 1s. 4d. per acre, and one gallon of cider.

barley 1s. od. ditto ditto

Reaping wheat 4s. od. ditto, two gallons and half of cider.

And all other labour proportionably cheap.

Price of provisions something less than in the North-East District of the county.

* Wages are now (1797) advanced one-third at least.



CHAPTER XV.

POLITICAL ŒCONOMY, *as connected with or
affecting* AGRICULTURE.

ROADS.

FEW countries can boast better turnpike-roads than may be found in this district.

From Wells to Bridgwater, and from Crofs to the same town, they are, comparatively speaking, as smooth as a gravel-walk. This may, in a great measure, be attributed to the great attention paid to the breaking of the stones, which is done by men with small sledges in a fitting posture; and the stones are reduced to the size of a pigeon's egg, at an expence of six-pence per ton weight.

CANALS.

An act was obtained, last sessions of parliament, for cutting a navigable canal through the Eastern part of this district, and the same is now in execution. It commences at the collieries near Mendip, and, passing through the town of Frome, divides itself into two branches, one joining the Kennet and Avon Canal near Bradford, and the other extending itself through Wincanton to the borders of Dorsetshire.

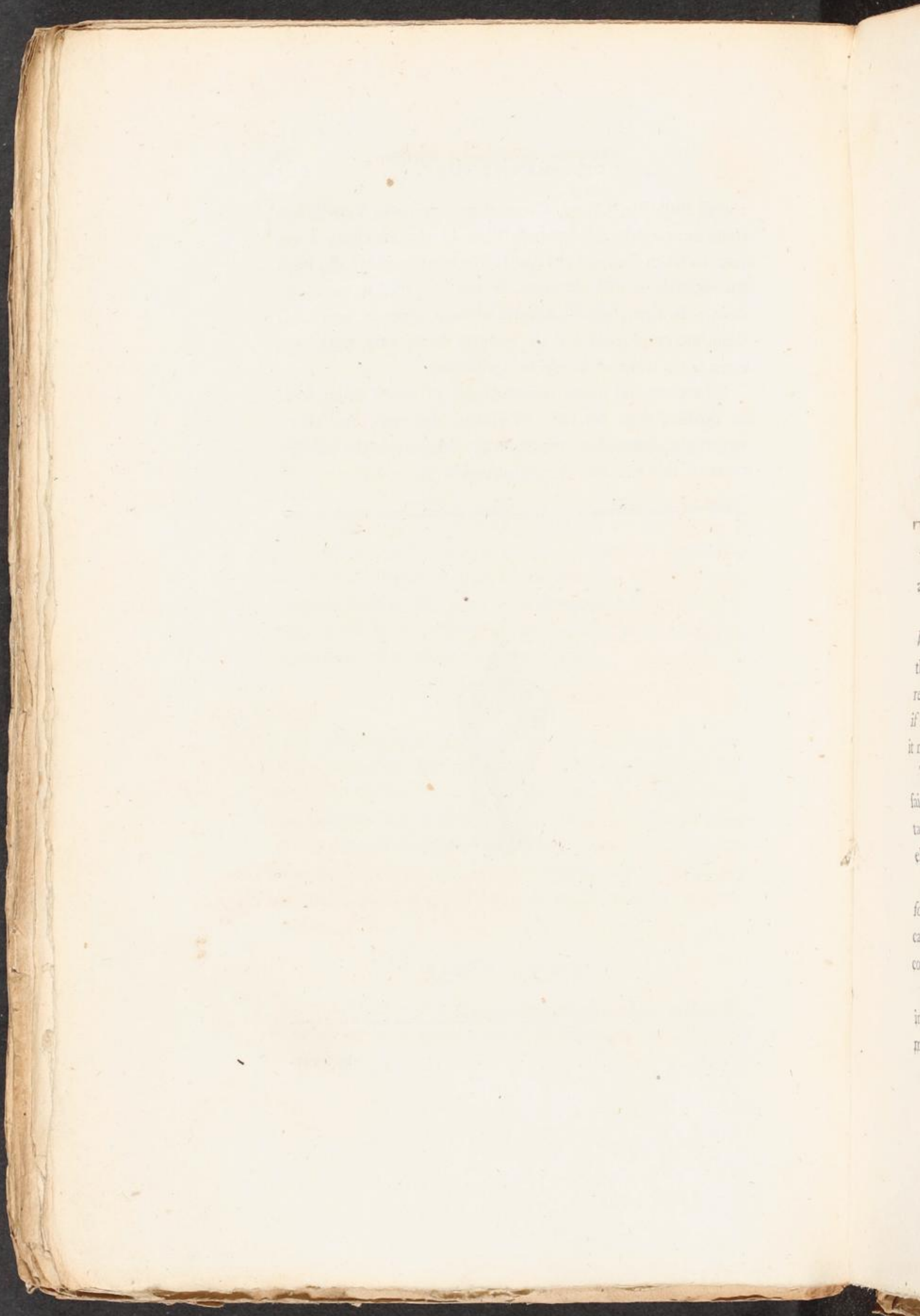
MANUFACTURES.

A considerable clothing manufacture has been lately established, by some gentlemen of Wiltshire, at Chard; and
round

round Ilminster, Chard, Crewkerne, Martock, Yeovil, &c. there are considerable manufactures of narrow cloth, from four to seven shillings per yard; the quality of which, both for appearance and duration, is not surpassed in the kingdom. In these, great numbers of men, women, and children, are employed; but the country being very populous, there is no want of hands in agriculture.

There are also many manufactures of coarse linen, such as dowlas, tick, &c. also of gloves, girt-web, &c. all of which give animation, wealth, and comfort, to the inhabitants of this rich and delightful region.







SOUTH-WEST DISTRICT.

CHAPTER I.

GEOGRAPHICAL STATE AND CIRCUMSTANCES.

THIS division of the county has nearly an equal portion of rough mountainous hills, and rich fertile slopes and plains.

The climate, particularly of that part which is called the *Vale of Taunton-Dean*, is peculiarly mild and serene; and the soil highly fertile and productive. The eye is agreeably relieved by a judicious mixture of arable and pasture; and if it be contrasted with some parts of the Northern District, it may emphatically be called the Land o' *Canaan*.

There are, however, certain parts North-West of the said vale which are mountainous, and subject to that mutability of weather, and moisture of air, generally found on elevated situations.

Quantock, Brandon, and Dunkry-Hills, may be noted for their wild and rugged scenery; and the part which is called *Dunkry-Beacon*, is the highest land in the whole county.

This district may be subdivided into two lesser districts, including, *1st*. the parishes of Taunton, Wilton, Trull, Pitminster, Bishop's-Hull, Bradford, Buckland, Ninehead, Wellington,

lington, Sampford, Hill-Farrence, Oake, Norton, Cheddon, Staplegrove, Thurloxtan, North-Petherton, Monkton, Kingston, Cothelston, Bishop's-Lidiard, Heathfield, Halfe, Ashpriors, Fitzhead, Milverton, Langford-Budville, Thorne, Bathialton, and Runnington.

These parishes comprehend what is generally called the *Vale of Taunton-Dean*.

SOIL.

The soil is a rich loam, interspersed in some places with clay, as part of Bradfield, Buckland, North side of Wellington, part of Sampford, Hill-Farrence, Ninehead, Oake, and Heathfield; and in other parts with sand, or a lighter mould; as Kingston, Bishop's-Lidiard, Halfe, Fitzhead, Milverton, Langford, Thorne, and Runnington.

These hundreds, together with that of North-Curry, are principally held under the churches of Winchester and Wells, and the lands are chiefly possessed by small proprietors.

The second division of this district includes the parishes of Combflory, Bagborough, Stowey, Stoke-Courcy, Crowcombe, Stogumber, Williton, Watchet, Dunster, Minehead, Porlock, Timberscombe, Cutcomb, Withypool, Winsford, Dulverton, Wiveliscomb, &c. &c. together with the forest of Exmoor.

The soil of some part of this district is but little inferior to that of the former; but the hills and forests are for the most part left in a state of nature. The corn land is in general good; and the watered meadows in the parishes of Crowcombe, Stogumber, Monkilver, Nettlecomb, Dinniford, Dunster, Dulverton, &c. are as good as any in the county. If we appreciate land by its capacity to keep stock throughout the year, *watered meadows* are invaluable; and it is to be hoped, that the different reports, which will no doubt

doubt be sent to the Board of their importance, will induce a general application of water, wherever it be of good quality, and there is a possibility of conveying it. A great part of these watered lands lie on steep declivities; and as the water passes quickly over them, and never lies stagnant, not a rush can be seen; this is not always the case in *low* water meadows, which for want of proper draining are much incommoded by them. Meadows which lie in a low situation and nearly on a level, should be thrown up into convex beds about thirty or forty feet wide, along the ridges of which the water should be conveyed, flowing regularly at the different outlets, and having a free passage in the trenches lying between the beds.

The expence of doing this seldom exceeds six or seven pounds per acre, and the benefit is frequently twenty or thirty shillings per acre per annum.

Excepting those instances where water passes through a town, or after sudden floods carries with it rich particles of vegetative matter, the lands receiving it near the spring-head, are supposed to be the most benefited; and the quicker it is made to pass over the land, and the greater the *impetus* given by a large quantity thrown at once, the quicker and more powerful are the effects.

The first watering commences in November, and is continued with regular intermission from that time till February. These meadows are frequently, in this temperate climate, fit to receive ewes and lambs, as early as Candlemas; and a constant and regular succession of food from that time to the beginning of May, enables the farmer to view his flock with the utmost complacency, and to look with pity on his neighbours, destitute of such a resource in these trying months.

At the beginning of May, the land is unstocked and again watered; after six or seven weeks they mow from thirty cwt. to forty cwt. per acre.

Estimate

Estimate of the value of such Land.

	£.	s.	d.
Spring-feed from Candlemas to May-day —	1	5	0
Thirty-five cwt. of hay per acre, at 30s. per ton	2	12	6
After-grass to November —	1	1	0
	4	18	6

Considering it as connected with a sheep and corn farm, all estimates must be below its real value; for it is well known, that, according to the probable plenty or scarcity of food in the months of February, March, and April, does a farmer apportion his stock for the whole year. Should turnips fail, his only resource is the hay-mow; his ewes suffer, his lambs become stunted and of little value. His meadow-ground devoted to the scythe is *spring fed*, whereby he suffers a diminution of ten hundred of hay per acre. These are but a few of the many evils attendant on a deficiency of food in the months before-mentioned, and must raise the importance of water-meadow in the eyes of all discerning husbandmen; besides, these lands require no dressing, but will preserve an undiminished vegetation from year to year, and will enable the farmer, by means of the sheepfold, to enrich his other lands without injury to these.*

* On the demesne of J. F. LUTTRELL, esq; of Dunster-Castle, a large tract of land, in a convertible course of tillage, is manured with water. The usual rotation of crops is, 1st. Wheat on the ley; 2d. Turnips; 3d. Barley and artificial grasses.

It is then suffered to remain in pasture two years, and during that time it is, at stated intervals, regularly flooded by a stream descending from the adjacent hills.

The course is then renewed, and this has been the constant practice for many years.

The produce has been in general very considerable, viz. of wheat forty or fifty bushels, and of barley fifty and sixty bushels per acre.

As

As the different modes of irrigation have been long before the public in a treatise published by Mr. BOSWELL, of Piddletown in Dorsetshire, and by other writers in different parts of the kingdom, I shall not further enlarge upon this subject, than merely to caution the farmer, unexperienced in this branch of improvement, not to feed with *sheep* in the *autumn*; for, though it may be done with the utmost safety in the spring, it is frequently fatal in the *autumnal* months.



CHAPTER II.

STATE OF PROPERTY.

THE major part of the five hundreds of Taunton-Dean, consists of customary lands of inheritance, held under the Lord Bishop of Winchester, paying an annual rent. These customary lands pass by surrender, paying to the lord fines and heriots on alienations. There are also many singular customs within the manor, difficult to be understood even by the tenants themselves. The descent is called that of *Borough-English*, with some variations. The wife is heir to her husband; and it is no uncommon thing for a widow, on the death of her husband, having children by him, to marry again, and carry her estate into her second family, to the disinheritation of her first.

If the fines, heriots, and other incidental incomes within the manor, were commuted with the lord, for an increase of the annual high rents; the lands enfranchised by act of parliament, and to pass in descent as other lands of inheritance by common law; the income to the bishoprick would be more certain, and the present inconveniencies avoided. In course of time, the proprietors would enlarge their possessions, and the manor would be brought into farms of sufficient extent for the employment of a team, which is not the case at present.



CHAPTER III. .

MODE OF OCCUPATION.

THE farms in this division are rather less than in the last, but the husbandry is much the same, only there is more land in tillage. The mountainous lands are uncultivated, and are depastured with sheep and young bullocks.

In the vicinity of these uncultivated hills, viz. at Bicknoller, Elworthy, Brompton-Rolph, and Old-Cleeve, oats are the principal corn crop; barley and wheat are grown but on a small scale.

The rotation of crops varies from that of Taunton-Dean. Here wheat is generally sown on the ley, and none but very stiff land is fallowed. Turnips are much cultivated, but they are very lavish in the consumption, giving too large a space of ground to the sheep at a time, making thereby great waste.

The dry uplands are devoted to tillage, and the rich lowlands to grazing or dairy. On the former, wheat, beans, pease, and vetches, are the principal crops; and those lands which are capable of improvement by watering, (of which there is a considerable proportion) are so managed as to produce excellent spring-feed for ewes and lambs, together with abundant crops both of hay and after-grass; but the water being frequently scarce, the water-courses are frequently a source of litigation.

There are very few estates entirely in pasture. Every little farmer is fond of the plough; but in most of these small farms, where there is not sufficient employment for a team, the occupier's situation is not better than that of a day-labourer.

Much

Much of the arable land will spontaneously produce a variety of excellent sorts of grafs, and shortly become good pasture, if laid down in an husbandlike manner. The artificial grasses here sown are, broad and white clover, trefoil, and ray-grafs, called here *evergrafs*. Many farmers think the latter impoverishes the soil; but they substitute no other perennial in its stead.

LEASES.

By the custom of the manor of Taunton-Dean, the tenant is not, without a licence from the lord, to let his customary lands for more than a year and a day; but to encourage good husbandry, it has been usual of late years to grant rack-rent leases for seven, fourteen, or twenty-one years.

The tenant covenants with the landlord, not to sow rape, hemp, or flax; these crops being considered as great exhausters, making no return in manure. It has also been common to allow the tenant church and poor-rates; but it is to be doubted whether the poor are in this case better provided for, although the rates for their maintenance increase; for the occupiers, when no ways interested, are apt to be remiss in looking into the poor's concerns.

Of late years, this burthen has been thrown on the tenant, by way of raising his rent.

At the commencement of the term, it is usual for the landlord to put the premises in compleat repair; after that, the tenant finds reed, spars, and carriage of materials, during the term; and the landlord, timber, stones, and lime. The handicraftsmen are paid between them.

In this way, the landlord and tenant being mutually interested, the expence of repairs is lessened, and the buildings are kept in better order.

The

The tenant also covenants to take care of stapling and timber trees, and to carry one hundred and twenty horse-seams (about twelve cart-loads) of dung, or fifteen hog-heads of lime, or a proportion of both mixed with earth, on every acre of land converted to arable, and to take but three crops of corn before the same quantity be renewed. He also covenants never to sow two crops of wheat in succession, nor to convert to tillage any maiden or old pasture without leave, under the penalty of five pounds an acre per annum for the remainder of the term.

CHAPTER IV.

IMPLEMENTS.

THE ploughs, drags, harrows, rollers, waggons, and carts now used, are much the same as they have been for sixty years past. Of late, indeed, the double-furrow plough has been introduced, and seems to gain ground; all who have tried it acknowledge its superiority for light soils, and for ploughing the barley or turnip land.



CHAPTER V.

INCLOSING, &c.

FENCES.

THE beech hedges, around Dulverton, Dunster, &c. are not only beautiful to the eye, and an excellent fence and shelter, but are a source of annual profit to the proprietors.

The banks on which they are planted are six or seven feet high, and between four and five feet wide at the top; the mouldering of the sides is frequently prevented by a dry stone wall, four feet high. There is no ditch; and the hedge consists of three rows of beech, planted on the top of the bank, at about one foot distance. Their growth is very rapid, and they seem to defy the destructive qualities of the sea-breeze, so fatal to the white-thorn and most other plants; when at maturity, the middle row is cut to the ground, and the outside rows plashed. The quantity of fuel supplied by these hedges is very considerable; and the only objection that can be made to them is, that the earth used in the construction of the banks is so considerable a quantity, that a large portion of the field is robbed of its vegetable matter, and rendered for some years unproductive.

CHAPTER VI.

ARABLE LAND.

THE common fields in this district are so few, and the uninclosed wastes (a portion of Blackdown and Pick-ridge-hill excepted) so insignificant, that little improvement can be made in that way. There are a few low common meadows, where frequently the hay crop (provincially, *the tonsure*) belongs to one man, and the after-grass to another, by which means such lands are totally neglected, being neither drained nor manured.

The waste lands, on that part of Blackdown which lies within this county, are supposed to exceed a thousand acres; they are so situated on the declivity of the hill, that floats might easily be made to convey the water, issuing from the springs, over the land.

And if the water should not be found to fertilize, it would not be difficult or expensive to convert these floats into drains, and thereby render the ground more dry and healthy.

The occupiers of estates contiguous to these hills stock them with young cattle in the summer months, but the distant tenants reap little or no benefit.

On some of their land they have fallows, and wheat alternately, manuring with lime.

A mixture of the earth of the headlands with lime and rotten dung, is the general manure for the ploughed lands, and soapers' ashes and rotten dung *alone* for the pasture.

The method commonly adopted for mixing the earth, lime, and dung together, is, to carry the dung and spread it on the headlands, or on heaps of earth collected on different

T

parts

parts of the field, and then put the unslaked lime on the dung, covering it up with earth till it is flaked, and fit for mixing; but as the lime is by this method dissolved upon the dung, the richest part of the manure is consumed by the lime, or carried off in vapour.

Drilling has been tried in this part of the county, particularly by two farmers of Halse, and by Mr. ANDERDON of Henlade. On light poor soils, it has been found to answer, but in rich strong loams, the corn has proved too rank.

Mr. ANDERDON has drilled all his corn for twenty years past. At first he formed an experimental field of four acres, divided into several equal parts, where he tried drilling various crops, in comparison with sowing them broadcast, and finding his drilled and horsehoed crops of beans, wheat, pease, turnips, &c. sufficiently encouraging to proceed to acres, he has continued the practice ever since; by which means he has certainly improved his land, and eradicated weeds.

He at first used WILLEY's drill plough for sowing double rows, which is to be seen in the repository of the Society of Arts in London.

With this, he drilled two rows, about a foot asunder, on five-feet ridges, leaving intervals of four feet for horse-hoeing. Since, he has drilled single rows on ridges of three feet, by which means he keeps his ground cleaner, and has a produce equally good with the double rows. Of wheat, he generally reaps from fifteen to twenty-four bushels per acre, which is about the average of the wheat crops of his parish sown in the broadcast way.

In the year 1791 he reaped from one field twenty-nine bushels per acre. The field was drilled in single rows, three feet asunder; this may be called the Tullian method of drilling, and was practised many years ago by that enlightened

ened agriculturist JETHRO TULL. The prevailing method of the present day is, to drill at intervals of six, nine, or twelve inches. Though the practice of drilling corn has been highly extolled by some, and astonishing instances of produce recorded, yet the writer of this report cannot find that it gains ground in the county of Somerset. If the advantages resulting from the practice were so great as they are represented, surely the common farmers would adopt it. The saving of seed would alone be a sufficient inducement, and in a national point of view would be worthy the attention and encouragement of the legislature. *Experience*, that best guide in all agricultural pursuits, has shewn that there are substantial objections to the practice, and they may be comprised under the following heads:

1st. The difficulty in getting compleat drilling and hoeing machines, and labourers skilful enough to conduct the process.

2d. The danger of having too *thin* a crop, whereby it is rendered more subject to rust, blight, mildew, and the effect of wind, than *thick* broadcast crops.

3d. Rankness in the straw, subjecting it to drop before the grain is perfected.

4th. Lateness, and irregularity in ripening.

Let us now state the advantages:

1st. Saving of seed.

2d. Strength and vigour communicated to the land by well-timed hoeings.

3d. Destruction of weeds.

How far these advantages counterbalance the disadvantages, I shall not take upon me to determine. I can only say, that my trials (and they have been repeatedly made on a large scale) have been uniformly unfortunate. In dry seasons, the drilled corn, particularly barley, has been not only

late, but *uneven* ripe, and this is an insurmountable obstacle to the sale of it for the purposes of malting; and in wet seasons the growth of the straw has been so encouraged by the hoeing, that it has dropped before harvest, and the grain has been but of little value. Last year I divided a ten-acre piece, and drilled part with white Poland oats, in equidistant rows of one foot, after the rate of one bushel and a half, and some part after the rate of two bushels and a half per acre.

This was done the beginning of April; three weeks after I sowed *broadcast* the remainder of the field, with the same sort of seed, after the rate of six bushels per acre. Though sown last, the *broadcast* was ripe a fortnight before the *drilled*. The grain was of better quality, regularly ripe, and the produce ten bushels per acre more. The drilled crop, *sown thick*, was better than the other. Were I to renew my practice of drilling, I would (particularly in spring crops) deposit nearly double the quantity of seed recommended by the advocates for drilling, and at least a month before the usual time of sowing broadcast.

For beans, pease, vetches, turnips, potatoes, carrots, and all gross-growing plants and roots, *drilling* cannot have a more warm advocate than myself; and with respect to wheat crops on light sandy soils that are subject to weeds, the operation of hoeing, which necessarily follows that of drilling, may frequently be of essential service not only to the wheat crop, but to the succeeding ones; but with respect to corn in general, and particularly *barley* and *oats*, I must for the present demur, at least, till I have seen better proofs in favour of the drill system. Perhaps, indeed, the ill success which I have experienced, and particularly the late ripening already mentioned, might have been owing, in some measure,

sure, to the system of saving seed being carried to too great an excess.*

I cannot

* After giving every tribute of merit to the author of this Survey, which Mr. ANDERDON thinks he richly deserves, Mr. A. feels himself, in some measure, called upon to say something to the objections stated against the practice of drilling, which carry with them very great plausibility. And, indeed, the first objection must be totally admitted, in all its force.

To the second, he answers, His wheat crops, though not always free from such complaints, (when general) have been less subject to rust, blight, and mildew, than broadcast crops; and never more subject than these to the ill effects of wind. But frequently, when the wind has blown the standing corn, so as to bend it on one side, and the weight of the ears has kept it in that position, no injury has ensued, the corn has stood very well, and so as to be easily reaped.

To the third objection, he admits, that the straw is ranker, but stands stiff, and is not more subject to fall than the broadcast; generally, not so subject.

These advantages attending his drilled and horse-hoed crops, Mr. A. imputes to the effects of his making stone-lime a principal ingredient in his compost-heaps.

To the fourth objection. He puts in his wheat crops in good season, and has never failed of reaping them by the middle of August. But, in very exposed situations, he thinks this objection may be fatal, though he has never found it so in the vale of Taunton. As a proof of his harvesting his drilled wheat in good order, as well as in good season, his bailiff assures him, he has not reaped a bushel of grown-wheat in the course of thirteen years past.

As a demonstration of the fair chances of drilled crops, he has threshed one field of drilled and horse-hoed wheat of last harvest (not the best) which grew on hilly ground. It is a field of three acres, and produced sixty-three bushels and one peck. It was reaped July the 30th, (1794) and there cannot be a finer sample of wheat for seed, or for the miller. This crop was second wheat.

Mr. ANDERDON drilled a field of oats, without horse-hoeing, in equidistant rows, except one part sown broadcast, by its side, for an experimental trial. It was a light bad sort of oat, the Tartarian, but both very good crops. No one, by the eye, could distinguish which was best. On cutting and threshing a perch of each sort, adjoining

I cannot dismiss this subject without paying a just tribute of approbation to that ingenious mechanic and enlightened agriculturist, the Rev. J. COOKE, whose drill-machine, and horse-hoe are well adapted to the purposes for which they are designed. Though we cannot accord on the subject of the drill-husbandry, I must give my unqualified assent to his general principles respecting the preparation of land for arable crops; and I verily think, that his instruments called the *scuffler*, and *scarifier*, are the best contrivances I ever beheld, for the pulverization of the soil, and the destruction of weeds.

The usual seed-time for wheat is November, but it is frequently sown after turnips, so late as January or February, notwithstanding which, the crop is ripe and harvested, in a favourable season, by the middle of August. Coloured pease are planted about Candlemas, white pease are planted at Lady-day, horse-beans from Candlemas to Lady-day; oats are sown in March, barley in April and the beginning of May; pease are harvested rather before wheat, barley at the end of August, oats and beans in September.

Of wheat they generally sow two bushels, pease four bushels, beans five bushels, planted by women with dibbles or setting-sticks promiscuously all over the land, and the crop is seldom weeded; oats five bushels, barley three bushels and a half per acre.

Of late a few farmers have drilled their beans in rows twenty inches asunder, horse-hoeing them; others thirteen or fourteen inches asunder, hand-hoeing the alley, at the

to each other, in the best part of the field, the broadcast produced at the rate of sixty bushels an acre, the drilled at the rate of seventy-two bushels, yielding a superiority of twelve bushels per acre in favour of that drilled. R. P. A.

expence

expence of four shillings per acre; in both these ways, they have deposited nearly the same quantity of seed as in the promiscuous planting, especially in the closer rows.

The produce has been uniformly superior to those planted in the old method, and the land kept cleaner for ensuing crops.

Rotation of crops on the clayey loam.

1st. Fallow manured with ten cart-loads of dung, and sixty or eighty bushels of lime per acre, mixed with the earth of the head-lands.

2d. Wheat	5th. Clover
3d. Beans	6th. Clover
4th. Barley	7th. Wheat.

The grub has of late years so attacked the wheat sown on the clover lays, that this practice is in some measure discontinued.

In the foregoing rotation, the crops are good; seldom less than twenty-five or thirty bushels of wheat, and the same quantity of beans. The beans are planted promiscuously, after the rate of five bushels of seed to an acre; and after beans they sometimes sow the winter vetch; feed it twice in the spring, and prepare the land for wheat.

In no county are the farmers more attentive to the mode of sowing wheat, or laying up their lands in such form as to secure them from injury by winter rains; and the quality of the grain is such, as to induce the farmers of Suffex, Hants, and Berks, to purchase it for seed at Weyhill fair at a great price; seldom less than ten shillings and six-pence per bushel.

An implement called a mattock is much used here, and is peculiar, I believe, to the West of England; it is of great service in sowing wheat and pease on clay lands; the ridges consist of six furrows, with a furrow left unploughed between each ridge, which is called a *comb*. The labourers with

with a mattock chop the furrows abroad, and bring part of the earth against the comb; the seed is then sown and harrowed with two horses abreast, each horse going on the comb; they then (with a plough called a combing plough) divide it; the plough being constructed to throw one half of it as a furrow to the right, and the other to the left; the labourers then go over the ridges a second time with their mattocks, and strike those furrows towards the middle of the ridges, which effectually covers what grain the harrows may have left uncovered, and leaves the ridges in the shape of a neat asparagus bed.

This method is very well calculated for clayey and wet lands, where it would be dangerous for the cattle to trample on the ground.

An acre a day is the usual quantity ploughed.

On light loam, the following rotation is practised.

1st. Wheat. 2d. Pease. 3d. Barley. 4th. Winter-Vetches, which produce a good feed by the latter end of March or beginning of April, and are fed a second time at the latter end of May; the land is then ploughed once, and sown with turnips, which are hoed and consumed before Christmas; and 5th. Wheat again.

A better system is adopted by some, viz. substituting barley as the fifth crop, on which clover is sown. The clover is well manured the ensuing winter, spring-fed, and cut in the autumn for *feed*; after which wheat is sown on one ploughing as the seventh crop.

In the parish of Bishop's-Lidiard they frequently plough their wheat-stubble soon after harvest, give it a good dressing of rotten dung, and let it lie in ridges during the winter. In the months of February and March they sow carrots, which are fit to be dug up the latter end of July; they then

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sow turnips or plant cabbages, and after these sow barley and grass seeds. On rich sandy loam this husbandry cannot be too much extolled.

It is not the general practice within these hundreds to give the arable land a compleat fallow. They more frequently introduce what they call a *pin fallow*, which is ploughing after vetches, clover, or beans, two or three times, to prepare for a succeeding crop of wheat. In this way they put on a good dressing of rotten dung before the last ploughing.*

RHUBARB.

At Williton near Watchet, the Turkey rhubarb has been cultivated, and brought to great perfection by Mr. BALL, surgeon, of that place. His management of this root having been particularly described in the annual publication of the Society of Arts, &c. I shall not notice it here, and shall only add, that equal attention and success have attended the exertions of JAMES BERNARD, esq; of Crowcombe, in the same article, though in a different climate and soil.

Mr. BERNARD has also lately introduced to this country some farmers from Norfolk, whose example, it is to be hoped, will excite in the neighbouring renters a disposition to clean and meliorate their land, by turnips and other improving crops.

* The general mode of carrying the harvest crops in this part of the country is a striking object to a farmer from a different part of the kingdom—it is on horses' backs. The face of the country is indeed so generally steep as to render this custom not surprising to a spectator—even manure is conveyed to the land by single horses, in a dung-pot fixed on each side of a pack-saddle. In carrying corn, a large wooden crook on each side of the saddle is laden with the sheaves, and when discharged in the barn, or at the mow, the horse is ridden away to be reladen, and in this way greater expedition is made than by waggons, or any other mode of conveyance. U. C.

CHAPTER VII.

ORCHARDS.

BEFORE I quit this rich and delightful vale, I must not pass by unnoticed, their orchards, from which cider is made in the highest perfection. There are many gentlemen in the neighbourhood of Taunton who sell their best cider for five or six pounds per hoghead; and it is supposed that they possess an art, peculiar to themselves, of conducting the fermentation, and thereby preserving a rich and delicious flavour.* The best fruit delights in a strong clayey soil, and it

* In part of this county, the art of making sweet rich *cider*, which sells from three to five or six guineas per hoghead, is reduced to a system; and there are some persons who, on being furnished with a sufficient quantity of apples, undertake to make and carry it through the whole process at the price of fifteen shillings a hoghead. But the method of doing this they endeavour to keep a profound secret. The writer of this note, who is in possession of this method, and has practised it successfully for his private use, desirous that all makers of cider, who think it worth their attention, may profit by it, takes this opportunity of making it more generally known:

PROCESS.

The apples being ripe, but not rotten, and all of the same sort, that the fermentation may be more uniform, grind and press them moderately, but by no means closely. Pour the liquor into a tub to kive, and when the brown head (which will rise on it sooner or later as the weather is more warm or cold) begins to crack, and the white froth appears in the cracks level with the surface of the head, it must be drawn off in order for tunning into your vessel. At this time a great deal of feculence is thrown to the top, as well as deposited at the bottom, and if the liquor is continued longer in the tub, the head will sink, the bottom rise, and a strong fermentation take place, which it will be difficult to subdue, and which carries away the sweets. Proceeding

it is common to mix a certain quantity of bitter apples, which add much to its quality for keeping; but unless great attention be observed in making, the labour is in vain; for cider requires much greater nicety of management than malt liquors. The apples are suffered to fall off the trees, or when thoroughly ripe, are picked with great care.* They are then put in heaps to ferment, and remain in that state for three or four weeks; after they are ground, and the liquor is expressed, it is suffered to remain in tubs, from thirty to forty hours, when a scum, or froth, will rise on the top; this they narrowly watch, and when it breaks, they rack for the first time into vessels; after which, unremitting attention

ceeding in your operation, tun into a hoghead vessel three pail-fulls or about fifteen gallons of this cider. This done, burn in the vessel a strong match made with nearly a quarter of a pound of stone brimstone, stopping the bung as close as possible, that none of the fume may escape. When the match is quite burnt out, open the bung, and immediately pour in four ounces of sweet spirit of nitre. Put in the bung tight again, and roll the vessel strongly for near half an hour, by which time the smoke of the match will be destroyed and taken up by the liquor. Then set the vessel in its place, fill it to within a finger's breadth of the top, but no higher, and let it stand till the month of February. In this month it will be coming fine, and must be watched attentively, and examined frequently by a peg in the barrel. When perfectly fine, it must be immediately drawn off and tunned into the same vessel, after washing out the lee, burning also at this racking a smaller brimstone match. It is directed to be drawn off *immediately* when quite fine, because a very few hours produce an amazing alteration. It becomes turbid and foul, the second fermentation is commenced, the sweets fly off, and all the preceding trouble is rendered of no effect. R. P.

* I would here particularly caution all farmers possessing orchards, not to fall in with the usual custom of beating down the apples with sticks.

Early in the autumn the buds for the succeeding year are formed, and being tender, are soon destroyed. To this violent attack on the branches may, in a great degree, be attributed the supposed incapacity of trees to bear fruit two successive years.

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is necessary to prevent *excessive fermentation*, by early and frequent rackings.

Where the natural soil is not good of itself, such manure should be mixed with it as best suits its temper.

If the soil be a cold heavy clay, horse-dung, coal, and soapers' ashes, will bring it to a due temperament.

If it be light and hollow, marl, or mud from ponds and rivers, highway dirt mixed with lime, cow dung, &c. will mellow and enrich it; and if the spade be occasionally employed to dig around, without wounding the roots, a fruit tree may be made to bear more abundantly, and to produce richer fruit.

Improvement of the heads is also of as much consequence as of the roots; and this should be particularly attended to in the early growth of apple trees. This is reckoned a very material part of tree husbanding, for according as the head of the tree is first trained, so it will grow in a form more or less regular. Even in old orchards, judicious pruning has frequently made unfruitful trees bear in great abundance.



CHAPTER VIII.

WOODS, &c.

THIS division does not abound with *oak*, but *elm* grows in hedges, and if their heads are not unfairly lopt, get to a size sufficiently large for the keels of ships of war. For the most part they grow from the inchors or suckers of the neighbouring trees; probably some from seed. Few are planted from nurseries, nor is there often any occasion for it, elm being the spontaneous production of the country.

Their heads or side-branches are seldom mutilated, it being understood that the stem swells in proportion to the sap that is drawn from the root to the head.

There are many coppices (chiefly of oak underwood) on the declivity of Quantock and other hills, but they are under no system of management. Their value, at present, of twenty years growth, is from four to ten pounds per acre.



CHAPTER IX.

WASTES.

IN an Agricultural Survey of the county of Somerset, it will naturally be expected that particular notice should be taken of the forest of Exmoor; its vast extent, and capability of improvement, render it an object well worthy of attention.

This forest extends from North to South about eight miles, and from East to West ten or twelve; containing, according to an accurate survey lately made, about nineteen thousand nine hundred acres. Nearly at the centre of this large tract of land is an estate called *Simonbath*, inclosed, and consisting of about two hundred acres, with a dwelling-house, licensed and frequented as an inn; and all offices belonging to it convenient for the management of the farm, and transacting the concerns of the forest. Here the forester has an annual sale for the small horses that are bred on the surrounding hills; and here also, during the month of May, he meets the farmers from all the country round, who enter in his books the number of sheep which are depastured with him, at the rate of five-pence per head. The small horses (in the whole upwards of four hundred) are not taken into better keeping, nor to more sheltered grounds, during the severest winter. When the snow covers the forest to the depth of many feet, these hardy animals are seen in droves, traversing the little vallies and sheltered parts, gathering their scanty fare from the banks of rivulets and warm springs; but the sheep are almost all driven off for the winter, in the months of November, December, and January, according as the season is more or less severe.

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The river Barl runs adjoining to this estate, but resigns its name on being joined by a small stream, about two miles to the East, called the Ex. This stream takes its rise in a low swampy spot of ground, about two miles North-East of Simonsbath, and runs to the other end of the forest; becomes, when joined by the Barl, a very considerable river, and in its passage to Exmouth, passes by Bampton, Tiverton, and Exeter, to which, and Exmouth, it seems to give name, as well as to this extensive forest.

Into these rivers, Barl and Ex, a number of small rivulets from every direction are constantly pouring their streams; and, should ever a general inclosure be attempted, offer an opportunity of watering some hundreds of acres. The water in these rivulets seems of the purest kind; it is not impregnated with any noxious mineral, and the soil, beyond any doubt, is favourable to vegetation.

On the summits of the hills, and especially on the West and North, are *swamps* of many acres extent. They are cut up as turf, at the rate of eight-pence or twelve-pence per thousand, paid to the tenant of the forest, and would be an inexhaustible stock of fuel to any inhabitants settling on the better part, as well as of black peat for burning lime, working iron, smelting ore, or any manufacture where fire is used.

The roads are in general, as might be expected in so large a tract of land without inhabitants, very bad, and in some places scarcely passable. But the whole abounds with materials to make them firm and comfortable, at an easy rate, and few bridges would be necessary.

Excepting a few willows and thorns by the sides of the rivulets, not a tree or a bush, out of Simonsbath estate, is to be seen on the whole forest; but plantations of most kinds need no more shelter, nor better soil, than is to be met with
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here. Oak, firs, beech, and elm, would thrive in all the parts capable of tillage. And a very large proportion of the whole needs but the spirit, and the fortune, of some one or more of our wealthy gentlemen in England, whose attention, if turned this way, sanctioned by the royal proprietor, would render the forest of Exmoor, in a few years, as fair a prospect as the surrounding country; and not an useless and void space, as it now is, in the map of the county of Somerset. The term *useless*, however, may be said by some to be misapplied, when the quantity of sheep is mentioned that is depastured on it. From the best information to be had, twenty-two thousand are summered here, besides the four hundred horses beforementioned; but the race is so small, and their value so trifling, that little profit accrues to the owner. Veins both of copper and iron have been discovered, that might be worked to advantage, considering how convenient the situation is for shipping off the produce; Porlock, Lymouth, and Combmarten, all sea-ports, not being more than nine miles distant from the centre of the forest.

From each of those places, and also from Ilfracombe and Barnstable, vessels are every week passing to Wales (where foundries have been long established) in *ballast*. A large vein of lime-stone is known to pass from East to West near the centre of the forest, and proper stone is found for building on almost every part. And to compleat the whole, *slate* of a good quality has been dug up in large quantities not far from Simonsbath; and there is every reason to think it may be found in other places. Water is in plenty in every part, as beforementioned: and several market-towns are within a few miles of the forest. Large tracts of land are well adapted for the tillage of flax, which is known to thrive best on old or unvegetated ground, with a strong deep soil.

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The grain which thrives in the adjoining parishes would, no doubt, flourish here; and a ready sale would be found in the neighbouring markets, or by being exported from the ports on the Bristol channel.

The ashes, arising from the weeds and other extraneous matter on the surface being burnt, mixed with lime, would be a first dressing, preparatory to a crop of turnips or corn.

From the produce of the crops would arise manure for future tillage; and what is now a barren waste, might be made worth from five to twenty shillings per acre.

The plan for inclosures and buildings on the forest, I would recommend, is this: Let there be a small town or village erected near the middle, suppose by Simonsbath-house, which should form proper residences for artificers and husbandmen, to be employed in building farm-houses, and inclosing many a comfortable estate round them. From this centre town, or village, it would be easy to get a supply of provisions and all other necessaries, as a butcher, baker, shopkeeper, &c. might be there settled. And, till other houses or villages should be built, labourers, artificers, and workmen, might find lodgings, provisions, &c. in the bordering parishes, many of which, at this time, have more labourers than they can well employ. The method of fencing, cultivating, manuring, &c. would vary but little from the plan adopted on Mendip hills; and if prosecuted with vigour, would tend to lessen the poor's rates, and would train up a rising generation to care and industry, instead of theft and idleness.

Besides Exmoor, there are several hundred acres of uncultivated land around Dunkry, and on Quantock and Brandon hills.

CHAPTER X.

IMPROVEMENTS.

EXCEPTING some peat turf on Blackdown, there is scarcely any fenny land to be met with. On soils any ways inclined to a weeping surface, great attention is paid to draining, which is done by digging the drains deep, filling part of them with clean picked stones, and covering with earth to the depth of six or eight inches. Where stones are scarce, shoulder trenching is practised, but these are liable to be filled up with the workings of the mole,† unless water constantly runs in them.* On the whole, perhaps *open* drains are preferable to *covered* on grass land.

All tenants are restricted in their leases from paring and burning, and the practice is scarcely known.

† The workings of the mole are a very slender objection to the use of shoulder trenching; for if the pipe be sunk two feet deep in the clay, as it always ought to be, it is very rarely stopped; but if it should so happen, the remedy is easy without much cost or labour. In point of expence, it is three-fourths cheaper than stone draining, the average price of the former being three-pence per rope of twenty feet, of the latter one shilling. If the drain be cut eleven inches wide, the shoulder left four inches on each side of the pipe or channel, the inverted turf will have a firm bearing of eight parts in eleven; and it must be very rotten indeed, if the remainder three inches ever fall in. Of near a hundred acres adjoining each other, thus drained in the last three years, not one pipe has yet been stopped by the working of the mole or otherwise, though the lands are skirted by a large wood; and woods are very frequently a secure retreat and nursery for that animal. R.P.

* The great skill of draining land consists in cutting off the water at its source. One deep drain, judiciously placed, will frequently preclude the necessity of any other; in most instances, such a drain should be near that part of the declivity from which the springs issue. This depends on the position of the clayey substratum, and on the height of
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CHAPTER XI.

LIVE STOCK.

THE stock of Taunton-Dean is principally neat cattle and sheep; the former of the *North Devon*, the latter of the *Dorset* breed, both excellent of their kind. Many graziers prefer the oxen bred in this district to those of Barnstaple, South-Molton, Torrington, &c. and the sheep are considered as equally profitable with the Leicestershire breed, which have been introduced, but do not gain ground.

The dairy farmers are accustomed to take in sheep to keep during the winter, viz. from the beginning of October and November, to the 5th of April; the usual prices are, for hog sheep five shillings, and for ewes seven or eight shillings per head. The Dorsetshire flocks are greatly improved by this custom, and the price of keeping is on the advance.

Oxen are principally used, and are for the most part worked in yokes; some, however, are advocates for working singly in harness, and there can be no doubt but oxen may be used more to advantage this way than the other. The shape of an ox's breast is peculiarly ill calculated to bear the pressure of the bow; and when worked hard in pairs, they

of the reservoir from whence the springs are fed. A judicious survey of the adjacent land, and a liberal use of the borer, are necessary preliminaries to a cheap and effectual remedy for wet land, and there are few men in the kingdom possessed of equal skill in this department of agriculture with Mr. ELKINGTON, of Lancashire, whose fame is not confined to the county in which he lives, but is known and acknowledged in many parts of the kingdom.

are apt to get into a habit of leaning against each other, by which their progressive motion is much impeded. But of all methods, that which is practised in Portugal, Flanders, some part of Ireland, and other countries, namely, working them by the *head* and *horn*, is, in my opinion, the best.

I once saw on the farm of Lord SHANNON, near Cork in Ireland, three ploughs at work on a strong soil, drawn each by a pair of oxen abreast, in a manner similar to the application of horses in Norfolk. The harness consisted of a long rein of untanned leather, which was fixed to the yoke, and then intersected the horns two or three times; after which it passed from the back of the horn over the forehead; to prevent the bruising of which, a *matting* was placed of sufficient thickness to secure it from injury. In this way the animals *pushed*, rather than *drew*, and with apparent ease ploughed an acre a day each without a driver, turning at land-end with as much docility as horses. His lordship informed me, that two moderate-sized oxen had, some time before, drawn home from the corn-field, (a distance of two miles) in a French skeleton cart, as many sheaves of wheat as weighed upwards of three ton, and with no apparent extraordinary exertion.

SHEEP.

There are two sorts of sheep in this country, the one a native breed, without horns, well made, and covered with a thick fleece of wool, weighing in general seven or eight pounds; the other a small horned sheep, called Exmoor sheep, bought, when hoggits, at South-Molton market, (April 12) at about ten shillings to fourteen shillings each, and fattened on turnips. The first is a valuable sort, not much unlike the Leicester breed; and their fleeces may be considered as a most profitable article to the breeder, as they

they sometimes reach even the weight of twelve pounds, and sell at about ten-pence per pound. The sale ewes are put to the ram about the latter end of July, and the stock ewes about a month after. Young rams are preferred, as it is supposed that old ones degenerate the quality and weight of their wool. The wethers of this breed, when two years old, and fattened on turnips, attain the weight of about twenty-five pounds per quarter; and being driven to Bristol market (a distance of near sixty miles) are sold, without their fleece, in the months of May and June. *No folding practised.**

The second sort are kept on the forest of Exmoor, or the adjoining hills, for two or three years, merely for the annual profit of their fleeces; the weight of which seldom exceeds four pounds. They are fattened on turnips, and sold without their wool. Weight of carcase from fourteen pounds to eighteen pounds per quarter.

Though these sheep in appearance are vastly inferior to those before described, being in their youth subject to a precarious subsistence on the forests and hills, it is the opinion of many sensible farmers that they are altogether as profitable stock.

OXEN.

The oxen of this country are large, well made, and beautiful animals. They are almost all red. They are yoked at three years old, and worked till they are five or six, when they are sold to the graziers, at prices from ten pounds to twenty-two pounds each ox.

* Is it not very extraordinary, that, in so hilly a country, this method of manuring land should be almost unknown? Perhaps the weight of their fleeces may indispose the sheep for lying too close together, without creating the scab or some other disorders.

CHAPTER XII.

RURAL ŒCONOMY.

THE price of labour, throughout the whole district, is nearly the same, viz. Men, through the year, one shilling per day and beer; women, for weeding and common work, six-pence per day; and for mattocking the wheat and hay-making, eight-pence per day. But contract labour is gaining ground daily; and in this way men will earn four-pence or six-pence per day more than at day-work.

PROVISIONS.

The price of provisions is comparatively moderate. In Taunton the best beef, mutton, veal, and lamb, may be had by agreement with the butchers, at four-pence per pound the winter, and three-pence halfpenny the summer half year; turkey, three shillings and six-pence; goose, three shillings; ducks, two shillings and six-pence a couple; and fowls, two shillings; fish, at certain times, very cheap.

N. B. This was in 1794.

FUEL.

Coal is brought from Wales. The quality bad, and the price high. Wood gets scarcer and dearer every year.

CHAPTER XIII.

POLITICAL ŒCONOMY.

MANY attempts have been made by the principal wool-growers in this district to establish an annual fair in or about the centre thereof, for the sale of their wool; but hitherto the wool-buyers have rather set their faces against the measure:—this is the more extraordinary, as it must be apparent, to men conversant with this business, that the present mode of buying at the *farmers' houses*, and giving indiscriminately the same price for wool of very different qualities, is not only unjust, but manifestly injurious in its consequences.

Were the fleece to fetch a price in proportion to its cleanliness and fineness, (which is the case at established fairs) the grower would be excited to care and attention in these respects.

MANUFACTURES.

About a century ago the woollen manufactures in the town of Taunton were in a very flourishing condition, and of course some of their benefits devolved to the agriculturist; but of late years the warmth of party at the elections of their representatives in parliament has run so high, that it has not subsided from one election to another; by which means manufactures declined, and have been removed to Wellington and other places. So that it may fairly be inferred, that if the right of election to members in parliament has been injurious to any borough in the kingdom, it has been so to this.

There

There are, however, some hopes that trade may revive here, as the carding and spinning machinery has been lately introduced with considerable spirit and perseverance. Some gentlemen in this town have lately formed a connection with the patentees possessing the secret of making cloth without either spinning or weaving; and the samples they have exhibited gave flattering hopes of success.*

Though the trade of Taunton has declined, yet considerable manufactories are carried on at Wellington, Wiveliscombe, and other places; and many thousand hands are employed therein.

It cannot be totally foreign to our purpose to mention the salmon and *herring fishery* of Porlock, Minehead, and Watchet, which for some years past has been carried on to some considerable extent.

The lower classes of people have, in consequence, obtained a cheap and wholesome food, particularly since the legislature has taken off the duty on salt used in curing the latter of these fish for *home consumption*.

It were to be wished that this fishery could be further promoted and encouraged, as it would be a means of furnishing employ, during the winter, for those sailors who are engaged in the lime-stone, and culm trade, during the summer months.

Their frequent journies across the Channel make them excellent pilots; and a hardy and skilful race of sailors would occasionally recruit that grand bulwark of the nation—the *Royal Navy*.

* This plan of making cloth is now (1797) intirely abandoned—at least, in this and the neighbouring county of Dorset.

A RECAPITULATION
OF THE
HINTS FOR IMPROVEMENT,
ALREADY SUGGESTED IN THE PRECEDING PAGES,
WITH SOME
ADDITIONAL REMARKS.

1st. *Inclose and cultivate all Waste Lands susceptible of Improvement, and divide and inclose the Common Fields.*

VERY few gentlemen of landed property in this county have shewn that attention to the advancement of rural œconomy, or to the improvement of agriculture, which a science of such importance merits: this is the more extraordinary, as their own interest is so deeply involved, and as great examples have been shewn them by the nobility and gentry of other counties, and even by Majesty itself.

It is no uncommon thing for untitled gentlemen to apprentice the younger branches of their family to trade, for five or seven years: And why not to agriculture? It cannot be because the former is a more respectable occupation than the latter. I rather think, it is because the acquirement of knowledge in the one is considered as more difficult than in the other. The general opinion seems to be, that any one may become a farmer: How egregiously are they mistaken who think thus! I have known both,
and

and can truly say, that more experience, care, assiduity, patience, and attention, are requisite in a farmer, than in a tradesman of any description whatever.

The various causes which have operated to retard the progress of improvement, have been so fully stated before, that I shall only add, by way of encouragement, that the lands of Mendip hills, inclosed and cultivated in the course of the last thirty or forty years, are now worth nearly ten thousand pounds per annum, which in their original state did not exceed fifteen hundred pounds; and the advantages attending the inclosing and draining the low lands have been still greater.

It was naturally expected that so great an accession of arable land would introduce such a plenty of corn (particularly of oats) in the adjacent markets, as would be accompanied with a proportionable diminution in price; but no such consequences have followed. The average price of oats for the last twenty years has not been less than eighteen shillings per quarter, *Winchester measure*. From this circumstance, some have been foolish enough to question the presumed advantage, exultingly crying, "Is not corn dearer than it was before? Are not the poor's rates equally high? Where then are the happy consequences derived from the measure? Corn could not have been dearer, had no inclosure taken place." Hold! the price of every article varies according to the plenty or scarcity in market; and if the home supply be not sufficient for the consumption, other markets at a distance must be resorted to. This would have been the case in the neighbourhood of Mendip hills, had no inclosure taken place. The counties of Wilts and Dorset must have supplied the deficiency; and the carriage alone would have amounted to ten per cent.

2dly.

2dly. *Where Lands are situate on bleak and exposed eminences, improve the climate by judicious and extensive plantations.*

Though I am no advocate for standard trees in fences, yet I think large and many plantations, in elevated situations, are not only ornamental, but profitable.

In this part of the kingdom, they should be placed on the *South-west* side of a farm, as the wind from this quarter is most injurious. The *Scotch fir* will endure almost any severity of climate, and the *beech* will resist the destructive influence of the sea-breeze; next to these, in point of hardiness, are the *larch*, the *sycamore*, the *ash*, and the *birch*.

Such plantations may be placed at the angles of the large fields, or on spots too rocky and uneven to admit the plough. They should be planted when young, and great care should be taken to secure them from cattle; this is best done by a stone wall, for hedges are liable to be broken down by sportsmen, and the work of many years may be destroyed in one night. A spirited planter would rather see cattle in a field of ripe corn, than in a new-made plantation. The damage in one instance is only partial, in the other it is nearly irreparable.

3dly. *Wherever marl, lime, or chalk, can be procured within a reasonable distance, neglect not a liberal use thereof; and if destitute of such resources, be careful to make as much dung as possible by folding sheep, housing all sorts of cattle, preserving urine, collecting woollen rags, malt-combs, ashes, horn shavings, bones, &c. &c.*

In the Northern part of the county of Somerset, both marl and lime are in great abundance. The former is dug for about eight-pence per ton; and as it is the produce of
the

the land to which it is applied, the carriage is very trifling. There can be, therefore, no excuse for those people who possess such a treasure, and yet forbear the use of it. Wonderful, however, as it may appear, I can assure my readers, that there are large tracts possessing this valuable manure *unwrought*; and in those parts where it is applied, a repetition of it seldom takes place in less than twenty-five or thirty years; so that a liberal manuring does not exceed one shilling and six-pence per acre per annum, and for this, there are many instances of an almost immediate advance of rent of twenty shillings per acre.

Lime is still more plentiful than *marl*, and, within a distance of six miles from the coal-pits, may be burnt for sixteen or eighteen-pence per quarter. Its beneficial effects are universally known and acknowledged, and yet, strange to relate, a second application thereof seldom takes place in less than fifteen or twenty years: this reluctance may be attributed to the baneful effects, not of lime, but of an injudicious and exhausting course of cropping.

Allowing that arable land may be injured by a too liberal use of this manure, it must be allowed, that with pasture no such consequences could ensue. Lime, like marl, kills all the coarse four grasses, brings sweet and beautiful herbage, grateful to the palate of all cattle; it forms a kind of pan under the surface, by which the nutritious particles of dung are kept longer within the reach of the roots of plants, and is the means of making *ten* loads go as far as *twenty* when applied without a previous liming. Its activity is not abated in the course of three or four years; for if the land be broken up at that distance of time, its effects are as visible in the subsequent crops of corn as if it were immediately applied. Happy then are those farmers who possess such advantages, and have the sense and spirit to use them.

How

How would a Devonshire farmer rejoice, were he to find limestone and fuel on the same estate. In that part of the kingdom, to the honour of the county be it spoken, they frequently send twenty miles for lime, and give four-pence and six-pence per bushel at the kiln; and our wise-acres of Somerset will scarcely bestow carriage, were the landlord to give them the lime.

Where neither marl, lime, chalk, nor any other similar substance dug from the bowels of the earth, can be procured, it behoves the farmer to be earnestly solicitous to supply their places with either animal or vegetable manure. For this purpose, let him mow all his stubbles for litter, house his cattle during the winter months, fold his sheep, grow a large portion of turnips, cabbages, vetches, rye, &c. keep a numerous flock, and be moderate in the extent of his corn land.* Great attention also ought to be paid to the management of dung when made, for by neglect great part of its strength may be lost. When properly soaked with urine, it should be conveyed in its strongest state to the turnip land, or any other destined to receive it, in a *low waggon* instead of a cart. These waggons should be made to open at the sides, and the contents should be deposited in large heaps of ten or fifteen loads each, with considerable elevation; and it should be shook abroad with as much care as a gardener takes in making a cucumber-bed. By these means, a strong fermentation is excited, and turning is unnecessary, and perhaps injurious.

* Particular care should also be taken to root out docks, thistles, and other pernicious plants, which, if allowed to bring their seeds to perfection will be dispersed by the wind, to the infinite prejudice of all the surrounding lands; and the richer these lands are, the sooner will these noxious weeds be propagated.

From

From these heaps, placed at such distances as to manure *one* acre, it may be wheeled and spread for two-pence half-penny per load. In this method of hauling out dung, three waggons, four horses, and five men are employed; namely, one waggon and two men loading in the yard, another waggon and two men unloading in the field, and the third waggon and driver going backward and forward.*

Wherever waste earth, mud from ponds, highway dirt, ashes, &c. &c. can be procured, compost heaps should not be neglected; these are best calculated for pasture land.

Such a conduct will entitle the farmer to a great produce, and keep his land in good order; but all this will not do without

4thly. *A regular and well-conceived rotation of Crops.*

This I consider as the most promising feature in good farming; and if it were generally adopted, would increase the produce of the land *threefold*.

A custom prevails in this county, and indeed in most others, of subjecting a portion of land to continual tillage, and of interdicting the plough on all the other; this originated from improper conduct on the part of the tenant.—

* In the application of dung, the farmers of Somerset begin at the wrong end. It is almost the general practice to manure for the *wheat* crop, whereby the wheat land is made foul, and though there is a great burthen of straw, there is but little corn.

How much more beneficial would it be, to apply all the dung to potatoes, turnips, &c. and to the artificial grasses, making wheat the last crop in the course? It is also usual to manure the turnip land immediately before sowing; but I have experienced great advantage, and more decided certainty of a crop, by manuring in autumn on the stubbles, ploughing the same in, on a fleet furrow, and letting it remain in that state during the winter months.

No

No sooner is the plough put into his hand, than he uses it without mercy, harrassing the land with constant crops, till its fertility is intirely exhausted.

The landlord, alarmed at these baneful effects, endeavours to counteract the progress by restraining clauses, and these are indiscriminately applied both to *good* and *bad* farmers; and are considered by the one as *highly necessary*, and by the other as *exceedingly grievous*.

Were we to advert to the general practice of the tenants, we should be led to justify the caution of the landlord; but were we to calculate the loss yearly incurred by such restrictions, we should have cause to regret that the covetousness of the occupier should have rendered necessary a conduct so inimical to the general weal of the kingdom.

In respect to low meadow land, or very rich pasture, there can be but one opinion, viz. *that it should so remain*; but it must be allowed, that there are in this kingdom large tracts of old grass land, *mossy, hide-bound*, and, comparatively speaking, *unproductive*. Land of this description might be greatly improved by *ploughing*; and if the following course of crops, and mode of manuring, were adopted, would be left, at the end of three years, of double the value it was in the sward.

ON LIGHT LAND.

1st. Pease or oats on the ley.

2d. Vetches fed off, and the land manured with lime or the sheepfold, preparatory to turnips.

3d. Barley and artificial grass feeds.

In which, let it remain till the grasses fail, and the land again becomes mossy; then renew the course.

ON HEAVY LAND.

1st. Beans on the ley.

2d. Spring fallow, well manured, and cabbages.*

3d. Oats and artificial grasses.

Then remain as before.

The foregoing courses of cropping cannot possibly injure the land, and by them fallowing is excluded, which (unless in particular instances, such as great foulness, or dearth of manure) I do not think necessary.

5thly. *Enlarge the upland corn farms; erect proper buildings and conveniences for the shelter of the cattle in the winter months, thereby inviting substantial and well-informed farmers, of more enlightened countries, to settle upon them.*

I have before stated the advantages of large corn farms, buildings, &c. and shall, therefore, only add, that nothing so much contributes to the progress of good husbandry as example. One good farmer in a parish (particularly if he take no pains to make proselytes) will in a few years convert all the rest; the superiority of his crops, the advancing fertility of his land, the thriving state of his cattle, the abundance of manure, all plead daily in favour of his system, and will, in the end, produce conviction even in the most bigoted mind.

* The cultivation of cabbages on *heavy* land cannot be too strongly recommended. It puts the clay land farmer on a level with his neighbours occupying light land, and as a farther encouragement, I can assert, from experiments repeatedly made, that *two* tons of cabbages are equal to *three* of turnips, that they are less subject to injury from frost, and that the expences of cultivation, compared with turnips, do not exceed five shillings per acre.

I know

I know no method by which general improvement can be more promoted, than by dispersing the farmers of those counties, whose practices are held in the highest estimation, among those parts of the kingdom on which the light of good husbandry has never shone. This would introduce into general practice the Turnip Husbandry of the Eastern districts, with all its concomitant advantages.

The soil and climate of the county of Somerset is peculiarly well adapted to the cultivation of this root; and were the pasture lands less rich and productive, necessity would oblige the farmer to have recourse to this root for winter subsistence. At present, the quantity of land devoted to this purpose is trifling indeed, and in most instances the hoe is never used, nor are turnips consumed with any degree of œconomy.

Though the rent of the land in the elevated parts of this county may be considered high, there are advantages which more than compensate; these are, its rich and productive quality in all seasons, the facility with which it may be ploughed, the easy access to marl, limestone, and coal, goodness of roads, vicinity to markets; and lastly, the high price of produce. The last-mentioned advantage is alone sufficient to induce a residence; for it frequently happens that corn sells twenty per cent. dearer here than it does in the Eastern counties.

6thly. *Improve the Stock by a judicious selection of Males and Females for breeding; and be particularly careful to choose a Male handsome in those points wherein the Female may be deficient.*

In this department of husbandry, the farmers of Somerset are very inattentive, though they all acknowledge that the proper stocking of a farm is of the highest importance.

In confirmation of this, I need only inform my readers, that few instances can be produced of a bull being sold for more than fifteen pounds, or a ram for more than five pounds. As to stallions, there are but few bred; the mares are served by horses brought every spring from the Northern counties, and without this cross the breed would be contemptible indeed.*

It is not within the compass of my undertaking to enter upon this article at large; suffice it to say, that it is a thing of great consequence to the husbandman; and the only caution to be observed, when he introduces an alien stock by way of improvement, is, *not to change from rich land to poor, or from a warm to a cold climate.*

7thly. *Lessen the number of Horses, and encourage the use of Oxen.*

It is universally acknowledged that too great a portion of land is employed in raising food for horses; and it is also as certain, that a draught horse, if well fed and kept in house thirty weeks of the year, will consume twelve quarters of corn, and thirty cwt. of hay, beside grass; this may be considered as the produce of four or five acres of land, which, under common cultivation, would maintain nearly three men. If, therefore, the riches of a country consist in the extent of its population, and that population can only be advanced by increasing the means of subsistence, it follows, that every man who keeps an unnecessary horse is an enemy to his country, by retarding the increase of his own species

* A tax on stallions and bulls would encourage the attentive breeder, by increasing his custom, and enlarging his price, and would lessen the number of ill-bred and ill-shaped males of each species.

Navigable canals would also greatly tend to reduce the number of horses, and, wherever the situation is such as to admit of them, should be encouraged.

To a spirit of speculation and gambling the country is indebted for the canals now cutting; but though the rage has subsided, yet, I trust, the probable advantages will inspire the present adventurers with sufficient spirit and vigour to prosecute their undertaking to its full completion.

The county is rich, populous, and abounds with all those heavy articles of traffick, which will render water conveyance profitable to the subscribers, and beneficial to the public; and if the cuts be made of small dimensions, the cost will be trifling; the consumption of land, and the invasion of private property, insignificant: such a canal could only be considered as a large ditch, and might be so multiplied as to answer the purpose of turnpike-roads.

8thly. *Amend the Publick Roads.**

Nothing so much contributes to the improvement of a county as good roads; before the establishment of turnpikes, many parts of this county were scarcely accessible.

Seven or eight horses were necessary to draw a waggon loaded with *two* tons weight, and scarcely ever exceeded the distance of twenty miles a day; now, the same number of horses will draw *five* tons, and travel thirty or forty miles. This is an immense saving of labour, and yet the establish-

* In some parts of the kingdom road clubs are established. These are very good institutions, and ought to be adopted in every county. Rules and orders of such clubs may be seen in the appendix to the Worcestershire report. The reluctance which individuals shew to the preferring indictments, renders such an association peculiarly necessary.

ment of such roads was as unpopular, and the probable benefit as little credited, as those of canals are now. The money collected at the gates was considered as a burthen, and the publick were for some time loaded with an extra charge for carriage. This, however, did not last long, for in the course of a few years, a diminution in the price of carriage universally took place, and it has gradually fallen from that time to this.

Before the turnpike-roads were established, coal was carried on horses' backs to the distance of fifteen or twenty miles from the collieries; each horse carried about two hundred and a half weight. Now one horse, with a light cart, will draw ten hundred weight, or four times more than the horse could carry: Can an insignificant toll be put in competition with this saving?

In respect to private roads, I would recommend a repeal of the law compelling statute labour, and changing the same to a composition in money.

Whenever a farmer is called forth to perform statute-labour, he goes to it with reluctance, and considers it as a legal burthen from which he derives no benefit. His servant and his horses seem to partake of the torpor of the master. The utmost exertion of the surveyor cannot rouse them, and the labour performed is scarcely half what it ought to be.

This would not be the case, were the surveyor to receive in money the highway tax; he could then employ such workmen as would do him justice, or, if they were indolent or insolent, he could dismiss them.

9thly. *Encourage*

6thly. *Encourage the use of such ploughs, and other instruments, as are best calculated to expedite work and do it well.*

Admitting that there are only one hundred and fifty thousand acres of tillage in the whole county, and that the same are ploughed on an average twice; allowing also that one-third of this is of so hilly a nature that a wheel-plough cannot be used to advantage, there will remain one hundred thousand acres capable of being turned with the *double furrow* plough.

For the sake of argument, let it be also admitted that three horses, a man, and a boy, with the common plough of the country, will turn an acre a day, and that the double plough with four horses, and the same number of attendants, will turn two acres. The number of acres will of consequence be ploughed in half the time, and the difference in expence cannot exceed two shillings per day. Here then might be a saving of twenty thousand pounds per annum in this article alone, besides the inestimable advantage of expediting work at certain seasons.

Some may doubt the possibility of making the double plough so generally useful; but I can truly say, I have never yet found an instance where it could not be worked to advantage; and it is well known, that, in the various trials made under the auspices of the Bath Society, on lands of the most *difficult nature*, the double plough has always gained the prize.

In the counties of Wilts and Dorset, where three large and powerful horses are put to a single plough, the saving by such an instrument would be immense; and this I can confirm, by the testimony of some eminent farmers of the first-
named

named county, who, in consequence of my recommendation, have introduced them on their respective farms, with great profit and success.

10thly. *Sow early in exposed and cold situations, and be particularly careful not to plough or harrow in wet weather.*

The necessity of this caution is so well known to all practical farmers, that I need not, I trust, enforce it.

11th. *Destroy Rats and Mice.*

The depredations of these vermin are too important to be overlooked. A sensible farmer of my acquaintance thinks, that by them and birds a twentieth part of the corn of the kingdom is devoured. Corn in barns they have free access to, and it is very difficult to keep the mows on stables free from them. If they are not brought in from the corn field, a stick, a rake, a pike, or any other body carelessly placed against the mow, will introduce them.

Destruative, therefore, as they must be, it behoves all farmers to make their slaughter a general concern, and it might be done by a parish rate.

12th. *Introduce Threshing Machines.**

These are common in the Northern parts of this kingdom, and in Scotland; and from the accounts I have received, answer the purpose, threshing the corn both well and expeditiously. There appears to be but one objection,† which

* A simple engine for weighing cattle *alive* is also a desirable thing.

† Query. Is the straw equally palatable to the cattle?

is, the lessening of *in-door* labour in the winter months. As a substitute for which, let the farmer house all his cattle, drain his wet lands, collect manure, &c. and employ the barn-men in these occupations.

13th. *Let all Unmalted Corn be sold by weight.*

The different measures of this kingdom, and the confusion incident thereto, were so notorious, that great pains have been taken by the houses of parliament to introduce one general standard measure, and the acts of the legislature have been followed up by the most active exertions of the magistrate.

By these means, the Winchester measure is pretty general, and in respect to this county I may add, to the *great benefit of the seller*, and the *great loss of the purchaser*. The calculation in respect to the comparative price between the old and new measure, was formed on the difference between eight and nine gallons, but this is erroneous; the old measure of the county was not less than nine gallons and a half, and in some instances ten gallons, so that the buyer gives seven or eight per cent. more than he ought to give; and I humbly think that *weight* would be a better standard, as the drier and plumper the corn is, the heavier it weighs.

14th. *Grant Long Leases.*

All farmers who have spirit enough to improve their estates, should have some security for being reimbursed the expence. Where a man's tenure is precarious, and subject to the whim and caprice of a landlord, little improvement can be expected. Upon unimproved farms, such as wastes, commons, &c. newly inclosed, a considerable expenditure is
necessary

necessary to bring them into order. Here the tenant should have a lease of twenty-one years, and the rent to advance at fixed periods; for instance, suppose the land in its original state to be worth, when inclosed and accompanied with necessary buildings, five shillings per acre; this rent, if the tenant is to pay all expences of cultivation, should continue seven years; at the expiration of which time, he should be advanced to ten shillings, and at the end of fourteen years, to fifteen shillings per acre.

Or the following method might be adopted; let the landlord pay all expences of cultivation, manuring, &c. and charge five per cent. on the expenditure, allowing the periodical advance to be proportionably less. At all events, the interest of the tenant should be better preserved than at present; but this is so copious a subject, that I must forbear entering into it, not doubting but it will be ably treated by some of your numerous correspondents.

15th. *Sow more Sainfoin on the stone-brash lands, and on all other soils congenial thereto.*

16th. *Roll all Grass Land once a year at least, with a heavy roller, and abstain from ploughing your Arable Land in wet weather.*

17th. *Set all Pease and Beans in lines from North to South, and hoe them twice at least.*

18th. *Devote at least one quarter part of your Turnip Land to the Ruta-Baga or Swedish Turnip.*

This root will bear the utmost severity of weather, and will remain sound when the other turnips are all rotten. The seed should be sown the beginning of May, and treated in other respects like the common turnip. The root does not attain the size, but is much weightier, and consequently more nutritious.

19th. As in every point of view this county appears from its soil and situation to be better adapted to *grafs* than arable, it deserves enquiry, whether stock could not profitably be kept on *grafs land alone*, without the aid of winter roots. The argument for ploughing arises from a wish of having straw to make manure, and turnips to support stock in the winter season. But whenever the plough is put into the hand of the generality of farmers, the land is from that time in a state of degradation, and its value reduced at least 10s. per acre, in comparison with contiguous *grafs* land.

Grafs, therefore, should be considered as the ultimate improvement of land in the Western part of the county of Somerset.

CONCLUSION.

THIS county does not raise grain sufficient for its consumption, nor are the climate and soil of many parts thereof favourable to corn farming; yet, were all the improvements before suggested to take place, there cannot be a doubt but that the produce of the soil might be increased at least one-third.

The advanced rent which might be produced by draining the marshes, and by inclosing and cultivating the common fields and waste lands, may, according to the most moderate calculation, be thus estimated:—

No. of Acres.	Description.	Increased Rent.			Total Increase.
		£.	s.	d.	
30,000	Marsh lands	0	15	0	22,500
20,000	Common field	0	5	0	5,000
65,000	Uncultivated waste	0	5	0	16,250 per ann.
					43,750

To

To which may be added, a capacity of improvement in the arable and pasture lands *inclosed*, of at least five shillings per acre, amounting to more than 213,000*l.* per annum, which increased rent, at thirty years purchase, would exceed six millions.

These blessed effects would be the natural consequence of that spirit of industry which publick encouragement would excite, would add greatly to the capital of the nation, and be much more valuable than any foreign conquest of treble the amount. Would to God that nations would learn wisdom, and instead of coveting distant territory, improve to the utmost *that* which they possess!

IT now only remains for me to apologize to the honourable Board, for the desultory and procrastinated way in which this Report has been executed.

The various publick as well as private business, in which I was engaged prior to my undertaking this survey, could not be dispensed with; I have, therefore, only had it in my power to snatch an occasional hour from other numerous avocations. Had not my general knowledge of the county, and particularly of the Northern and Middle districts, enabled me to write on its practices without a personal survey, I must have declined the undertaking. As it is, I have felt, and still feel, a considerable portion of regret that I did not resign the appointment, as the Board might have then selected some person possessed not only of more leisure but of superior ability.

With

With a sincere wish that the establishment of an Agricultural Board may be attended with all those happy consequences, which its most sanguine supporters can desire,

I remain,

Their most humble servant,

J. BILLINGSLEY.

Ashwick-Grove, Oct. 4th, 1794.



ERRATA.

Page 16, line 6, for *Wirton* read *Weslon*.

— 60, l. 5, f. *qualifying* r. *qualitying*.

— 122, l. 18, f. *thirteen cwt.* r. *one hundred cwt. three quarters*.

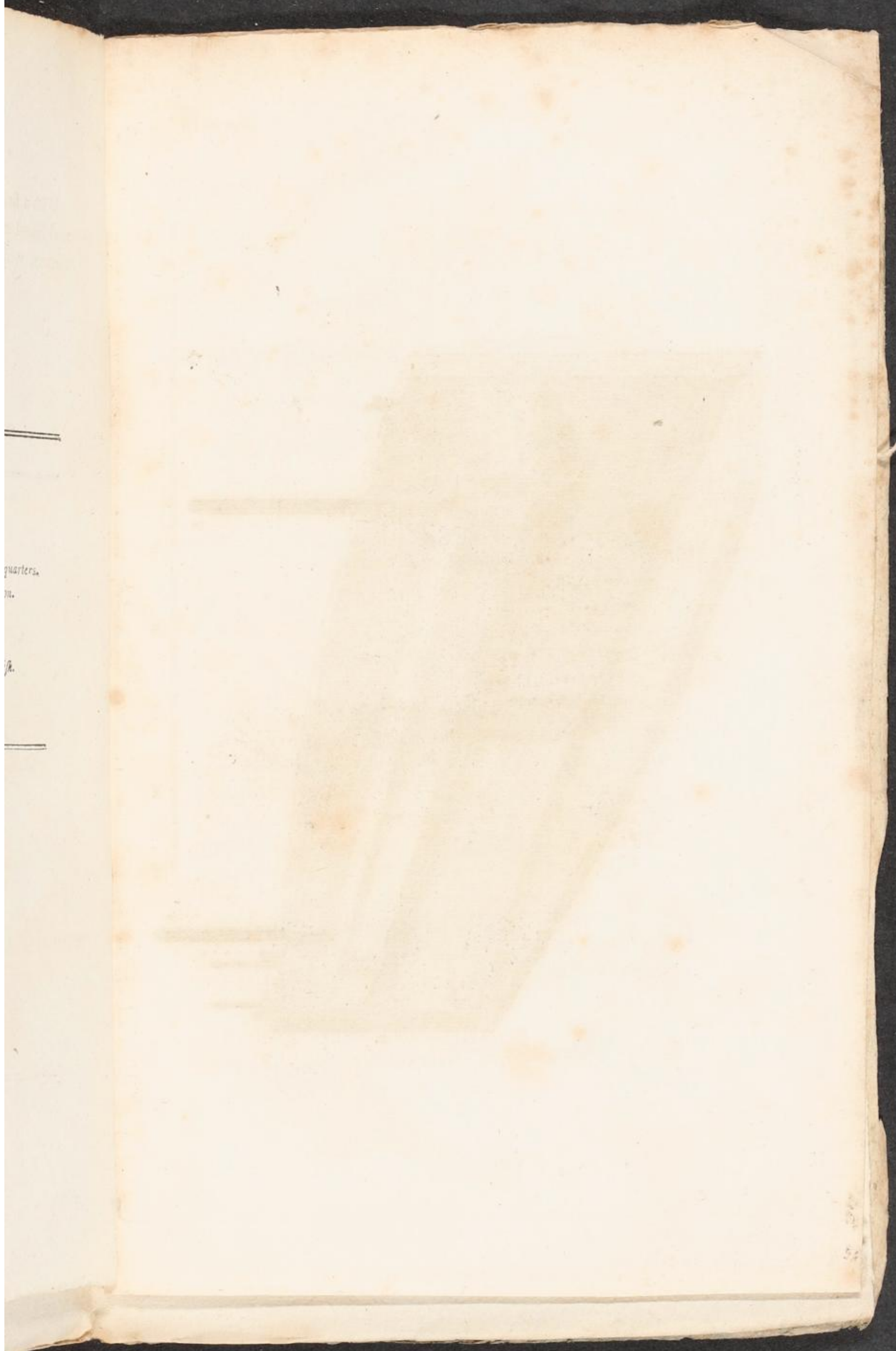
— 202, l. 3 from the bottom, f. *irregation* r. *irrigation*.

— 216, l. 6, f. *1l. 4s.* r. *4s.*

— 232, l. 3 from the bottom, f. *because* r. *become*.

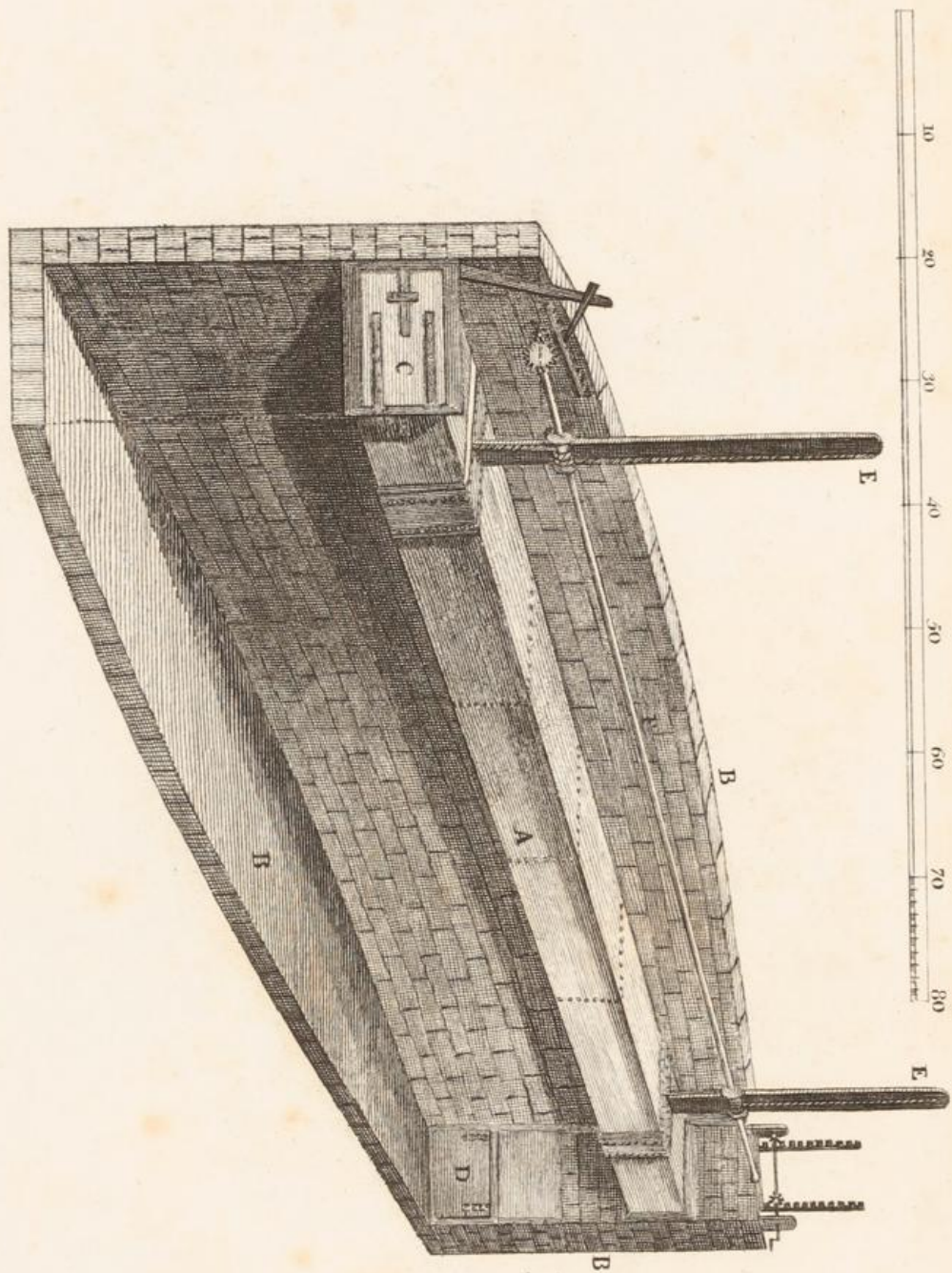
— 252, l. 8 from the bottom, f. *distingush* r. *distinguish*.

— 263, l. 9, f. *o r.* *of*.



quarters,
m.

A.



A DESCRIPTION OF

ROBERT WELDON'S

HYDROSTATICK or CAISSON-LOCK,

Which is now building and nearly completed

On the SOMERSET COAL-CANAL near COOMB-HAY,

ABOUT THREE MILES FROM BATH.

AS many impediments arise in the progress of Canals;
First, From a want of water to supply locks in dry
 seasons and elevated situations.

2dly. In crossing valleys by expensive aqueducts;

3dly. Tunneling through hills and high grounds;

And *4thly*, The great delay occasioned by passing many
 locks where the unevenness of the country renders it unfavourable for canals;

R. WELDON, after having devoted many years study and
 indefatigable labour to avoid these difficulties, and to accomplish this great object, now offers to the publick a description
 of his Hydrostatick or Caisson Lock.

The drawing annexed presents a perspective view of the
 machine or contrivance by which the conveyance is to be
 effected, and of the inside of a lock, or pound, in which it
 is immersed.

A. consists of a trunk or caisson made of wood, and of
 dimensions equal to the reception of a commercial vessel of
 twenty

twenty-five or thirty tons burthen, at each end thereof is a door-way, which the boat, &c. is to be floated through into or out of the caisson, and being received therein, and the door then shut, with a given quantity of water to float the boat, and counterpoise the caisson, so as to make it the same specifick gravity with the water in which it is immerfed; it may then be easily raised or lowered at pleasure, either by destroying the equilibrium, by admitting a small quantity of water into the caisson through a valve constructed for that purpose, or by discharging a similar quantity through another valve, or by chains and rollers, as in the drawing annexed, from one level to another, and the boat be floated from the caisson into the canal; the water in the caisson and that in the canal having both the same level whilst the conveyance is effected.

B. is one side the bottom, and one end of the lock or cistern in which the caisson is immerfed, which is built of free-stone, and of the following dimensions, viz. from the foundation to the top of the wall sixty-six feet, length from out to out eighty-eight feet, width in the middle twenty feet, ditto at each end eleven feet and half, and the perpendicular height from the surface of the lower canal to that of the upper canal forty-six feet.

C. The door at each end of the caisson, which shuts into a rabbet, the frame projecting about three inches beyond the door when shut.

D. An aperture at each end of the cistern or lock, communicating with the upper and lower canal, with a sliding door or gate, which are counterpoised like a common fash, and wound up by wheel and pinion, to receive the end of the caisson, to which it is closely fitted at the time the boat is received or delivered.

R. WELDON,

R. WELDON, having devoted the whole of his time to the superintendence of this great work since the commencement of it, he hopes will be a sufficient excuse for not having the whole history of it ready for the press, but flatters himself to have it complete to lay before the publick (with engravings and references to every part distinct, and carefully copied from the original drawings after which the present machine is constructed) in a few months.

Extract from an Account of a Provision made upon an Inclosure, for supplying the Poor with Fuel.

(Communicated by EDWARD PARRY, esq.)

UPON the inclosure of the parish of Little-Dunham, in Norfolk, in the year 1794, being Lord of the Manor, I got a clause inserted, directing the Commissioners to set out a parcel of land to be called *the Poor's Estate*, to be vested in the lord of the manor, rector, churchwardens, and overseers of the poor for the time being, and to be let by them for twenty-one years on lease; the rents and profits to be laid out by them in fuel, to be delivered at the cottages of the poor, in such proportions as the trustees should think proper.

Although the prejudices of the poor, against the inclosure, were very great before it took place; the moment they saw the land inclosed, and let as *the poor's estate* for twenty-one years by auction, at the rate of 5*l.* a year, (although only estimated by the Commissioners at 2*l.* a year) they were highly gratified; and have indeed great reason to rejoice, as they will now be most amply supplied with that great com-

fort

fort of life. This was so evident, that some neighbouring inclosures have followed the example, and it appears to me to be adviseable that such a plan should be generally made known.

The first idea was to sell the land, and place the money in the publick funds, in order to produce a larger income; but I found that was not understood by the poor: they said they might at any time be deprived of the money, and they had no interest in the land inclosed; whereas, in the mode pursued, they considered themselves as having a permanent and improveable estate, which their children would inherit. These prejudices are valuable; as in their consequences they produce, if attended to, industry and content.

I have had occasion to observe, as to fuel, which is certainly an important article to the poor, that where there are commons, the ideal advantage of cutting flags, peat, or whins, often causes a poor man to spend more time after such fuel, than, if he reckoned his labour, would purchase for him double the quantity of good firing.



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