The Salamanca Corpus: ***General View of the Agriculture of the County of Sussex*** **(1793)**

Author: Rev. Arthur Young (1741-1820)
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GENERAL VIEW

OF THE

AGRICULTURE

OF THE COUNTY OF

SUSSEX.

WITH OBSERVATIONS ON THE MEANS OF ITS IMPROVENT

BY THE

REV. ARTHUR YOUNG.

DRAWN UP FOR THE CONSIDERATION OF THE BOARD OF AGRICULTURE

AND INTERNAL IMPROVEMENT.

LONDON:

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M.DCCXCIII.

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THE following valuable communication, respecting the present state of husbandry in the county of Sussex, and the means of its improvement, drawn up for the consideration of the Board of Agriculture, is now printed, merely for the purpose of its being circulated there, in order that every person, interested in the welfare of that county, may have it in his power to examine it fully before it is published. It is therefore requested, that any remark, or additional observation, which may occur to the reader, on the perusal of the following sheets, may be transmitted to the Board of Agriculture, at its office in London, by whom the same shall be properly attended to; and, when the returns are completed, an account will be drawn up on the state of Agriculture in Sussex, from the information thus accumulated, which it is believed, will be found greatly superior, to any thing of the kind, ever yet made public.

The board will probably follow the same plan, in regard to all the other counties in the united kingdom; and, it is hardly necessary to add, will be happy to give every assistance in its power, to any person who may be desirous of improving his breed of cattle, sheep, &c. or of trying any useful experiment in husbandry.

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INTRODUCTION.
BOUNDARIES, EXTENT, DIVISIONS, RIVERS, CLIMATE.

For remarks and additional Observations.

SUSSEX is a maritime county, bounded on the west by Hampshire, on the north by Surrey, on the north-east and east by Kent, and on the south by the British Channel.

In contains; according to the mensuration in Templeman's Survey, 1,416 square miles, and 1,140,000 acres and the extent is 65 miles in length, and 26 in breadth; but,

according to this calculation, the length is very considerably under-rated, and the breadth as much augmented, which we by later and more accurate surveys. Another calculation reduces the number of acres to 908,952; both are confessedly erroneous. The true length of the county from Emsworth to Kent Ditch, extends 76 miles; the medium breadth exceeds not 20; the superficial contents amount to 933,360, and the whole county contains, upon an average, 2,982 acres in each parish.

Artificial Divisions. The artificial divisions are 6 rapes, running full North and South; these are divided into deaneries, which again are subdivided into hundreds and parishes.

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Rivers. The chief rivers are the Ouse, the Adur, and the Arun: they rife in the Northern parts of the county and after dividing the chalk-hills into 4 or 5 parts, empty themselves into the Channel; the first at Newhaven, the second near Shoreham, and the third at Littlehampton. Although comparatively small, they render the greatest benefit to the county at large, by furnishing points of connection for the canals already finished, or in agitation. Assisted by the public-spirited and enterprising conduct of a few noblemen and gentlemen., Suffex, on the completion of those canals, will not be inferior to other counties in the improvements of inland navigation.

An extensive tract of waste, with some intersection of cultivation, stretching into Hampshire on the West, and Kent on the East, and calling loudly for improvement, occupies principally the Northern part of the county. It is part of that division denominated by the term *Weald*, comprehending, in its greatest latitude, all the land North of the South Down hills, and the levels or marshes. A person viewing the Weald from these hills, would immediately be struck with some degree of surprise at the prodigious proportion of woodland, as the country under view appears one uniform mass. This arises partly from the words being so extensive, and in part from a most barbarous inveterate practice, when the country was cleared, of leaving a belt of wood, several yards wide, round every distinct field as a nursery for timber; the very small

inclosures also contribute to render the general aspect so woody. Anterior to the conquest, the Weald was one continued forest, extending from the borders of Kent to Chichester across the whole county, and the names of a variety of parishes situated in this line, and evidently derived from Saxon origin attest this truth to the present day: indeed the forests

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now remaining take up a very considerable portion of this county. The iron works, formerly established in various parts of this district, supplied a market for its produce; but the dearness of fuel, amongst other causes, has been supposed to have occasioned their removal to cheaper situations in the island; very few now remaining to testify the existence of such establishments.

The next division we come to, is the South Down hills. These are an extensive range of chalk hills, rising some hundred feet above the main level of the adjacent county. They extend, in an unbroken chain, from East Bourne into Hampshire, or about 54 miles in this county, and the general breadth certainly does not exceed 4 miles. This entire district of chalk, containing 88,000 acres of land, is every where uneven, not a level acre is to be seen in a thousand.

Climate. The climate in the western part of this county, on the South side of these hills, is very warm, and exceedingly favourable to of vegetation. But upon the exposed and bleak situations of the hills open to the South West, the winds are frequently so boisterous as to strip off the thatch from corn stacks, and the covering from all thatched buildings; farmers have suffered great losses by these winds blowing the corn out of the ear at harvest, and the wheat especially, to the loss of £.4 *per* acre. These winds, when they are impregnated with saline particles, occasioned by the West winds beating the spray against the beach, destroy all hedges and tree; all the leaves, and in general every thing green, being turned down. The hedges are cut by the spray on the side open to the wind in the same manner as if it had been done artificially. All buildings whatsoever, in

the district of the Downs, are therefore placed in a low situation, to shelter them from the damage occasioned by these winds.

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Soil. The investigation of the nature and properties of the varietiy of soil, in this or any other county, so as accurately to chalk out the line where one soil ends and another sets on, can be thoroughly made only by those who have a most exact and intimate knowledge of the county: in attempting to give the board this information, it appeared that the variations would be more clearly traced out, and more accurately defined, by a rough sketch of the soil, than by any other mode which could possibly be adopted. I am still aware, however, that it will be but superficial and imperfect at best, and liable to those errors which unavoidably result from such a survey.

Different soils. The different soils of chalk, clay, sand, loam, and gravel, are found Sussex. The first is the universal soil of the South Down Hills; the second of the Weald: the third of the North part of the county; the fourth is found on the south side of the hills; and the last lies between the rich loam of the coast and the chalk on the hills.

Of the South Down Hills. The soil of these hills varies according to the situation. On the summit is usually found (more particularly in the Eastern part) a very fleet earth: the substratum is chalk, and over that we find a surface of chalk rubble, covered with a light stratum of vegetable calcareous mould. Sometimes on the summit of the Downs there is only a light covering of flint, upon which the grass grows spontaneously. Advancing down the hills, the soil becomes of a deeper staple, and at the bottom is every where a surface of very good depth for ploughing. West of the river Arun, the soil above the chalk is very gravelly, intermixed with large flints. Between the rivers

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Adur and Ouse, a substratum of reddish sand is found, covered by a flinty surface. The usual depth of the soil above the chalk varies in almost every acre of land—from 1 to 12

inches. The general average between Eastbourne and Shoreham does not exceed five inches. West of Shoreham the staple is deeper; and between Arundel and Hampshire the soil is still more so.

North of the hills. At the North foot of these, and usually extending the same length as the Downs, is a slip of very rich and stiff arable land, but of very inconsiderable breadth: it runs for 1 to 3 miles into the vale before it meets the clay. The soil of this narrow slip is an excessive stiff calcareous loam, on bottom of clay: it adheres so much to the share, and is so very difficult to plough, that it is not unusual to find 10, 12, and sometimes even 14 at work upon it.

South of the hills. South of the hills, is an extensive arable vale, of a singular fertily. This district, extending from Brighthelmstone to Emsworth, 36 miles, is, at first of a very trifling breadth, between Brighthelmstone and Shoreham, The nature of this soil, which is unquestionably to be ranked with the finest in the island, is a rich loam, either upon a reddish brick earth, or gravel; the general depth of the upper soil varying from 10 to 16 inches. As we proceed to the West, we generally find a gravel under the surface. This soil is in some spots stiff, but more usually light, intermixed with sand, and beneath that we find marl. Between Brighthelmstone and Shoreham the general breadth of this uncommonly rich arable vale falls short of one mile; between the rivers Adur and Arun it is increased to three; and, from the Arun to the borders of

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Hampshire, it becomes still wider; from 3 to 7 miles: in the South-West, the quality of this land becomes stiffer: in the peninsula of Selsea, the soil is a stiff clay-loam, upon a blue clay bottom; and the farmers here not having the same opportunities of marling, as their brethren on the eastern side of Pagham-harbour, the soil on the Western side is not equal to the other in fertility.

Between this vale and the South Downs, runs a vein of land, not equal to the foregoing in point of richness, but admirable land for the turnep husbandry. This land is provincially called *Shravey,* stony or gravelly; the flints sometimes lying so thick, as

effectually to cover the ground; and it is curious to see how vegetation flourishes through such beds of stones. The general opinion is, that if the farmers were to put themselves to the trouble end expense of picking them off the land, the soil would be very materially injured; some, indeed, who have tried this experiment, are thoroughly convinced of the loss thereby sustained, the land having never since produced the same crops of corn as before; but this remark applies only to some places where the stones are so numerous.

In the line from Chichester to Emsworth, on the North, we meet with the same kind land for turneps and barley. The declivity of Hanbrook Common is wet and springy to the South: The North it is dry and gravelly. The nature of this soil is a light gravelly, or stoney loam, upon a gravel bottom: a brick earth 18 inches in thickness, frequently intervenes between the upper soil and the gravel.

Of the Weald. The soil of the Weald is generally a very stiff loam, upon a brick-clay bottom; and that again upon sandstone. Upon the range of hills, running through the county in a North-West direction, the soil is somewhat

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different. It is here either sandy loam, upon a sandy grit-stone; or it is a very poor black vegetable sand, on a soft clay marl. A great proportion of these hills is nothing but a poor barren sand. St. Leonard's Forest contains 10,000 acres of it; and Ashdown Forest 18,000 more. The depth of the black sand on these rabbit warrens is various—full 12 inches in many places: the soft clay, which in its outward appearance resembles marl, is much deeper. In the neighbourhood of Handcross upon St. Leonard's, this substratum is several feet in depth, as may be seen on the declivity of a new road, lately made by Mr. Marcus Dixon.

Respecting the soil of this district, I shall set down a short account of what I had a more immediate opportunity of seeing, by observing the gradation in the surface earth, and mineral beds, for above a hundred feet under ground at Ashburnham furnace.—The soil of Penhurst is gravelly to an indeterminate depth: at the bottom of the Earl of

Ashburnham's park, sand-stone is found, solid enough for the purposes of masonry. Advancing up the hill, the sand rock is 21 fee in thickness, but so friable as easily to be reduced to powder. On this immediately a marl sets on, in the different paths of which the iron-stone somes on regularly in all the various sorts as follows:

1. Small balls. Provincially *twelve foots;* because so many feet distant from the first to the last bed.
2. Grey lime-stone. What is used as flux.
3. Foxes.
4. Riggit.
5. Bulls.
6. Caballa balls.

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7. Whiteburn. What tripoli, properly calcined and treated, is made of.
8. Clouts
9. Pity.

This is the order in which the different ores are found. Advancing on, I crossed a valley where the mineral bed seems entirely broken, and the sand stone sets on. At the distance of something above a mile, the iron-stone is again seen—another intervention of sand, and then, at low water, when the tide goes out, the beds of iron-stone appear regularly on the shore; an indisputable proof, that however the appearance of the surface may vary, the substrata continue the same.

In taking the range Northwardly from the bottom of Ashburnham Park, for 12 miles at least, the strata are nearly the same, there being no matirial inequality of furnace that does not partake of sand-stone, marl, iron-stone, and sand again at the top. It is unquestionable owing to sand being the general cap to the hills, that the cultivated soil of these districts is made up so largely of it; even the loamy and marly soils, after

rain, very evidently discover it in small glittering particles, which, in process of time, have been washed from their native beds.

The received opinion of the range of the lime-stone is, that it runs eight miles from East to West, and one from North to South: —how far this opinion of the limited continuation of lime-stone is well founded, has not been decided upon. The soil tending immediately to sand, is of the hazel kind; that tending to marl, connected either with iron or lime-stone is formed of a more tenacious and closer texture, and every where the substrata bear a strict analogy to the surface. —The lime-stone and iron-stone generally rise very near the surface; often within 3

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feet: the depth to which the lime-stone continues has not yet been discovered, having never in this country been drawn deeper than 120 feet, where it is much firmer, and highly superior than at any other depth whatsoever.

The appearance of the iron-stone above 40 feet under the surface is different; certainly not so good, being coarser, and seems more dull, and works heavier in the surface, and the very best of the veins are frequently intersected with stripes, the thickness of a quill, filled with a soft marly matter; and the marl beds, which the iron lies in, wear a bluer appearance than where it is good—but the beds of lime-stone have no such resemblance at any depth. It is a curious fact, and worthy the attention of men conversant in matters of this sort, to account for the difference; which, perhaps, may not be very difficult upon fully considering the component parts of each substance.—The, fact certainly is, that iron-stone diminishes in goodness from depth, and lime-stone does not; neither the grey, which is composed of shells, and the exuviæ of marine animals; nor the blue, which is a *perfectly indurated* calcareous marl.—As it is now sufficiently proved that there are under-stones, that, with clearing and burning, will make equally as good lime as the top-bed, or *great blue* (as it is provincially called), from which one of them is at the distance of 21 feet; so that instead of 2 to 2 ½ feet of blue-ston, which was generally drawn and used, there is now produced, without spoiling any more

surface, upwards of 7 feet. This fact fairly considered, must convince every man, that but for the perseverance of the Earl of Ashburnham in drawing the deep under-stones at his works, and thereby setting an example, which other lime-stone drawers are now following, that part of Sussex must have ceased to avail itself of that advantage from lime as

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a manure which it now does, and which will, from this circumstance alone, be prolonged to future generations.

The alternate order of sand-stone and iron-stone is every where found through the Weald, in all directions. The sand-stone, marl, and iron, stone, all dip into the hill.

Under this, at a considerable depth, the various sorts of lime-stone are discovered in the order in which they are set down with the thickness and shale of each different sort.

The First Limestone,	3 feet	3 inches thick;	8 feet shale		
Second	0	9	9	Ditto	
Third	4	0	39		
Fourth	1	1	3		
Fifth	0	8	3		Greye
Sixth	0	8	2		
Seventh	8	3	4		
				Inch.	
Eighth	2	0	2	6	The great
Nintth	0	6	0	4	blue: by
Tenth	0	9	1	3	far the
Eleventh	1	2	0	4	best.
Twelfth	0	8	1	1	Blues.
Thirteenth	1	1	1	6	

Fourteenth ditto	0	6	8 0
Fifeenth	2	3	This last stone is fine enough to set a razor.

This is the succession in which they are found. The Sussex lime-stone, upon trial, has been discovered to be superior both to the Maidstone and Plymouth stone, and it is now confessed, that no cement equal to it in the kingdom has been discovered.

Of the Marshes. Besides the soils already treated of, there is a large tract of marsh land adjacent to the sea coast, between the Eastern extremity of the South Downs, and Kent. The soil is a composition of rotten vegetables,

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intermixed with sand and other matter, collected from the floods and filth which settle on the surface. In Lewes Level this vegetable mould is 12 inches thick. In Pevensel Level full eight feet in thickness. Under this a very heavy black filt, mixed with marine shells. Water logs, or stumps of trees, of very considerable size, have been dug out of Pevensey-Level; and trees, each containing a full load of timber, have been taken out of Lewes Level, when the cut for a canal was made.

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SIZE OF FARMS, RENT AND TAXES, PROPORTION BETWEEN ARABLE AND PASTURE, PRODUCE.

FARMS in this county as in every other, are constantly found much more extensive, and of far superior arrangement, on dry than on wet soils. This is the case in the district of the Weald; for, although farms are sometimes found exceeding £.300 *per ann.* Still a far greater number fall short of this; and the average size of farms on the wet soils is under £.100 *per ann.* I find, from the particulars of several distinct farms, that the rent of arable in this district is 10*s. per* acre. The Western part of the Weal,

comprehending a considerable portion of poor, and frequently wet, sandy lad, is set at 8*s*. *per* acre; and good loamy clay, on the Eastern side, rises as high as 15*s*. At the foot of the Chalk-hills, not included in this district, we find a slip of excellent arable, which, taken by itself, is rented from 20 to 24*s*. *per* acre. But this part is generally included in the Down farms. A very great quantity of waste, not less than 90,000 acres, in this part of Sussex, averages from 1*s*. to 1*s*. 6*d*. *per* acre. Of this St. Leonard's and Ashdown forests comprise nearly 30,000 acres.

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Land Tax, and Rates. The land tax in this county is very high at 4*s*. it levies 3*s*. in the pound. The amount of that, and of the rates in 10 parishes in the Weald, is as follows:

Cowfold,	£.295	Land tax at 3*s*.	*Rates*	324	0	9 ½
Hitchinfield,	119	—	—	132	10	3 ½
Horsham,	887	—	—	776	13	1 ½
Ifield,	312	—	—	404	16	4
Nuthurtst,	184	—	—	275	11	3
Rusper,	186	—	—	269	7	9 ½
Shermanbury	153	—	—	227	2	6 ½
Shipley	497	—	—	711	11	10
Warneham,	353	—	—	406	15	2
W. Grinsted,	446	—	—	767	9	9
	3432			4295	18	10 ¾

Farms on the South Downs. Farms on the South Dow Hills rise much higher, in proportion to those in the Clays. Many farmers occupy the greatest parts of their

respective parishes: as in Buttolph, Kingston, Piddingho, and many others in the neighbourhood of Lewes, East Bourne, and Brighthelmstone. All, or the greatest part, of these farmers have large tracts of marsh land annexed to their farms, for the convenience of maintaining and fattening their oxen: the work of every farm depending chiefly on them. A farm of 1200 acres, at East Bourne, has 300 acres of marsh: another farm, or 1260 acres, 400. The average size of farms in this district amount to 350*l.* a year. In the triangle formed by Shoreham, Lewes, and East Bourne, farms rise much highter; and, on the Western side of the Downs, they fall lower.

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In the rich vale. In the rich vale South of Arundel and Chichester, farms vary from £.70 to £.150. Three farms out of five are under £.100 rent. In Selfea peninsula rented at £.1,800, and containing upwards of 2,000 acres; farms vary from £.50 to £.400, and rates are 3*s.* 3 ⁄. in the pound. Upon the light gravelly soil, situated between this rich arable land, and the South Down hills, farms are averaged at £.200 yearly rent. In West Bourne hundred, they are sometimes to be found unusually small. Prinsted hamlet is occupied by nine farmer, each not exceeding £.50 *per annum*. Farms, within a circuit of 5 or 6 miles round West Bourne, fall short of £.100 yearly rent.

Rental. With respect to rental, we find that farms are occupied at a rate in proportion much lower on the chalk-hills than on the cold wet soils in the Weald, when the nature of the soil, situation, &c. are calculated. Some farmer on the Downs rent their farms at a valuation under what the same lands would yield in some other parts of the kingdom: this practice deserves consideration, as low rents do not always generate exertion and activity. The Native Down, or Sheepwalk, is rented at various prices—from 1*s.* to 8*s.* 6*d.* A very large tract of the hills between Newhaven and Shoreham averages at 5*s.* 9*d.* and the arable at 11*s.* very rich 20*s.* Between Lewes and East Bourne, the Down averages at 2*s.* 6*d.* arable, 10*s.* 6*d.* Between East Bourne and Shoreham at 4*s.* 1*d.*

Of the light gravelly land. On the light gravelly soil, at the South foot of the Downs, the rent is 12*s.* 6*d.* Where the soil is much finer it is in

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Prinsted,	Manor	24
East Marden,	Ditto	20
Childham,	Ditto	20
Thorney Bickley,	Ditto	20
Racton,	Ditto	16
Stoughton,	Ditto	12
Aldsworth,	Ditto	12
Bosham,	Ditto	20
West Bourne,	Ditto	20
Funtingdon	Ditto	20

Average above 18*s. per anum.*

Of the rich vale. In the noble district of arable loam, rents rise from 20*s.* to 25*s. per* acre. It is entirely arable, and property here is very equally divided; almost all the farmer enjoying land of which they are proprietors.

Of Pasture. Excluding the rents of pasture in the vicinity of towns, with all grass land which enjoys any locar or particular advantages over any other in its neighbourhood, the general average of grass land in the Weald is 12*s.* to 14*s.* one acre with another, when grass-land is let by itself, which indeed is seldom the case.

Of watered Meadow. On the Western side of the county where the admirable practice of watering is understood, and skilfully performed, meadow rents as high as 40*s.* In East Lavant it is rented at *25s.*; in West Bourne at 35*s.*; in Halnacker, meadow, which before watering rented at 5*s. per* acre, is now let at 40*s.*, and has been valued as

high as 60*s.* The river Lavant, from the Spring-head at East Dean to Chichester, waters between 4 and 500 acres.

On the Levels or Marsh-land. A large tract of marsh-land, the greatest part of which lies along the sea coast, varies

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from 20*s.* to 40*s. per* acre. A small portion of very rich fertile land rises as high as 50*s.* and even 60*s.* Pevensey Level averages 30*s.*; Winchelsea, 25*s.*; Brede, 35*s.*; Pett 25*s.*; Lewes and Laughton the same; Breeding, 30*s.*; Arundel Rape, 25 *s.* ; the whole rental of Pevensey and Westham amount to £. 7,510, almost entirely grazing land; Pevensey parish contains only 4 arable acres, and in Westham, by far the major part is of the same description. Two thirds of this parish is occupied by the parishioners, and the remainder by graziers who live at a distance.

Land-tax, Tythes, and Rates. The land-tax in the Level of Westham is 2*s.* in the pound on the full rents, and the tythe upon grazing land the same; upon arable 1*s.* 4*s.* The poor rates are 4*s.* in the pound on the half rents, the church and highway rates 6*d.* each. The land-tax and tythes in Pevensey are the same; but the rates are much lower. The por rates are 1*s.* 9*d.* in the pound on the half rents; the church and highways 3*d.* each.

	A.	R.	P.
In the rapes of Pevensey and Hastings are,	16,462	1	12
——————Arundel, — — —	5,258	0	0
Lewes and Laughton Levels, — —	4,739	0	9
Beeding Level, — — — — —	1,700	0	0
	28,159	1	12

Scot. In Pevensey, and generally in all the levels, is raised a tax by the acre, called *Scot*, both general and particular. The general *scot* is applied for the purposes of paying water-bailiffs expences; officers wages; erecting buildings; and repairing the hutches, groins, and sluices, at the sea; clearing the havens and channels, —al this is

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paid by the landlord. The particular scot is applied for the purposes of casting, mowing, cleansing, and looking after the streams and sewers; likewise for pulling down gates, guts, and sewers, in the internal part of the level: and doing all other necessary work. This scot is paid between the landlord and tenant, and the rule of apportioning it is, that the landlord pays for all new work, and the tenant for mowing and cleasing, which is an annual expence. There is another tax laid on particular lands, for the purpose of repairing the droveways in the levels, and building and keeping in repair bridges over the streams running across the droveways, which is wholly paid by the landlor. The Levels of Pevensey and Hastings, are under one and the same commission of sewers; the manner of assessing the scots is by the acre. In Arundel Rape there is a tax of 6*d*. an acre in three years; the 15th of May, 1788, and the 9th of June, 1791, were the two last. Separate tases are also rated in addition to the above, for the several levels as occasion may require.

Proportion of arable and pasture. The proportion between arable and pasture varies in different parts of the county. In the Weald one third is arable, one third pasture, and one third wood and waste. On the South side of the Downs the arable exceeds the pasture in the proportion of 30 acres to1. Upon some farms this proportion is lower, but on others much higher; for there are whole parishes that have hardly an acre of grass, excepting a little marsh land.

I shall conclude this account with the following estimation of the total number of acres, rent, and produce, of the whole county.

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	Acres	*s.*	Rent, £.		Produce.
Down land	68,000 acres	7 *per acre*	23,800	at 4 rents	95,200
Rich arable	100,000	20	100,000	at 4 rents	400,000
Marsh - -	30,000	25	37,500	at 5 rents	187,500
Waste - -	90,000	1 6*d.*	6,750	at 1 ½ rents	70,121
Arable and Pasture in The Weald	425,000	10	212,500	at 3 rents	637,500
Woods, &c.	190,000	10	95,000	at 3 ½ rents	332,500
	903,000		475,550		1,722,821

The remainder is rivers, roads, towns, buildings of all sorts, &c. Thus we find that the general rent of the whole county, excluding rivers, roads, &c. is 10*s. per* acre, the rent 475,550, and the acreable product £. 1,722,821 sterling.

COVENANTS, MATERIALS for BUILDING, FENCES.

The covenants between landlord and tenant on the South Down hills are, that the landlord shall find materials for all repairs, and different buildings, as posts, rails, gates, &c. That the tenant, within the distance of 4 or 5 miles, shall be at the expence of conveying these materials to his farm, and shall pay all costs of labour, except occasioned by fire, tempest, or extraordinary high winds. Out buildings are thatched with straw, and built with flint. The flooring plank is two inches and a half in thickness. Gates and stiles are made of oak timber. The landlord is at the expence of the material in its rough state, and all other charges are defrayed by the tenant. —Where hops

are cultivated, the covenants agreed upon are, that the tenant is to sow one crop of corn between the new and old crop of hops when they are grubbed up. That one third of his farm shall be in tillage, and two thirds in meadow pasture, and hops. That no grass shall be plowed up but for hops; and, in the old leases, that all manure arising from the farm shall be given to the meadow and hop-grounds. The term of leases are the same as in other parts of the county, for 7, 14, or 21 years, with this variation only, that leases for 11 years are not unusual. Respecting repairs, they are much the same as on the hill farms—that all rough timber for field fence shall be allowed the tenant, who is at the expence of cutting out, &c. All close fences, as yards, stables, barns, and out-houses in general, are repaired by the landlord. On the Western side of the county the stipulation agreed upon are, that no grass land shall be broke up under £.10 penalty; that the farm shall be sown in 4 regular *laines*, or divisions, to prevent the ground from being too much exhausted; and, at the close of leases, that one *laine* shall be left fallow for the succeeding tenant; that no coppice shall be cut under twelve years growth; that no trees shall be lopped; rough timper on the stem, and in some cases brick and mortar are allowed with materials in general, but all workmanship is at the tenants expence.

The fences are usually in the new inclosures, two rows of white thorn on the bank of the ditch. But care should be taken that the ditch be not too near the quick, for it acts as a drain, preventing the quick from receiving that regulation necessary to raise a strong and lasting fence.

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COURSE and PRODUCE in the WEALD.

The rotation, or system adopted by farmers, in arranging the method of cropping their land in this district, is in a great degree fixed by the nature of the soil they cultivate. The most general system pursued on the stiffer, or strong loamy soils, is the following:

1. Fallow.
2. Wheat.
3. Oats.
4. Clover.
5. Oats, Peas, or Wheat.

The wheat-sowing season commences the beginning of October, and usually concludes with the month of November. The most beneficial time is allowed to be the middle of October; early and late sowing depending on the seasons. The method of preparing the land before sowing, is by a clean fallow, giving the land usually from three to five plowings, and then sowing about 3 bushels of wheat. If found necessary, it is weeded in the Spring by women and children, who earn at this work 6*d*. a day; and in the month of August it is harvested. The succeeding crop of oats is sown upon two plowings, the first in winter, from 4 to 5 inches in depth, and with the oats the land is laid down to clover, usually one peck. The clover is mown the first year; and fed the second, or ploughed in July as soon as mown, after having turned into it a few sheep, and then they plow it 3 or 4 times for wheat, peas, or oats; or the lay is broken up in May, after Spring seed time is finished, when the land is hard and

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dry; a bastard fallow is given to prepare it for the ensuing crop. All this is barbarous management,—To recommend a better system than is practiced, is highly desireable upon any land, but more especially upon those soils which nine-tenths of the kingdom are absolutely ignorant how to manage, such as the cold and wet clay soils of the Weald of Sussex—a hint is sufficient. —The first operation is hollow draining, without which, these soils can never be cultivated to any advantage: this well executed, will last from 25 to 30 years. Cabbages, upon such land, for feeding oxen, will answer well: after this come oats, laid down with clover, or any other plant adapted to the soil—the cultivation of chicory would turn out to great advantage. The great and leading object to aim at, is to cultivate grass; corn is sure to follow, if found necessary; but in the Weald, corn

shoul be no object, as the nature of this soil is far better adapted to permanent pasture that it possibly can be in a state of tillage.

Upon some of the cold clays, under the northern parts of the chalk, on the western side of the county, the clover lays, after having laid 8 to 10 years, are broken up, and sown with oats, upon one ploughing, at the rate of 4 bushels to the acre: after this comes a summer fallow for wheat, upon 4 earths, sown with 2 bushels to 3 rood; a second crop of oats succeeds the wheat, the land is then laid down with clover and trefoil. The nature of this soil is so excessively wet, that it is impossible to keep it from running to grass, and without the least preparative it would turn to pasture in 18 months. At Ashburnham, a most excellent course is adopted upon the lighter soils of, 1st. turnips, 2d. barley, 3d clover, and 4th. Wheat; the Norfolk system of wheat, two bushels are sown, and the land produces from 6 to 8 sacks per acre; of oats the produce rises from 4 to 6 quarter.

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Another method upon light land is to sow

Rye,
Turneps,
Barley,
Clover,
Wheat.

The rye is sown the latter end of August, or beginning of September, the earlier the better: in the Spring it is sheep-fed, after which the land is ploughed 3 or 4 times, and a pound of turnep seed sown about Midsummer: these are once hoed, and in October or November the turneps are fed on the land with sheep, and the following April 5 bushels of barley are sown upon 3 cross ploughings: this is succeeded by clover, trefoil, or rae grass, laid down for two years; the land is fed with sheep for the first year, and the second year's crop mown, which produces from one lad and a half to two loads *per* acre. This arrangement is admirable, and only practiced by intelligent farmers.

Beside these systems every where overspreading the Weald, other practices are adopted by skilful farmers, which are of the highest utility to the general husbandry of this district.

Farmer, in the neighbourhood of Battel, cultivate potatoes with great success, for fattening bullocks; and they are experimentally convinced, that wheat after potatoes, is equal to wheat sown either upon a clover lay, or a clean fallow. It is now about seventeen years since the cultivation of this root was first introduced as an improvement in Sussex husbandry: and the farmer, to whom the county is so highly indebted for the introduction of it, has had the most productive crops of wheat sown upon potatoe land; and the largest quatity of wheat *per* acre which he ever raise, was after potatoes, and sown on the 14th of December. This spirited improver introduces potatoes in the course of 1 wheat, 2 potatoes, alternately; always

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taking care to manure well for the wheat. His average crop of potatoes varies from 350 to 400 bushels, and his wheat 3 to 4 quarter *per* acre. This course he has practiced from the time he first introduced the cultivation of potatoes, and they have never failed of an abundant produce. The farmer plant from 16 to 20 bushels of the clustered or globe sort, from the latter end of March to the beginning of May. They plough the wheat stubble about three times, and from 5 to 7 inches in depth. In Spring they handhoe, and shim the ground, as occasion requires; and a month after Michaelmas, take up the crop by spade or prong. The method of preserving the potatoes against the severities of the winter's frost is to dig a hole, proportioned to the quantity to be put in, usually about 4 or 5 feet deep; and over this build up a house 10 or 12 feet in height, with walls, 6 feet in thickness, of clay and chopped straw plastered; the entrance is filled with haulm or straw. Sometimes, in very sever weather, a little charcoal fire is burnt in an iron kettle. Much rae-grass and trefoil is cultivated round Battel. Of clover or trefoil, they sow 2 gallons; of rae-grass a bushel. Where the soil will take it, the farmer find clover the best artificial grass; but the same land has so often been laid with it, that it turns very often to

little advantage. In this case rae-grass is an excellent substitute. A practice, very general in this county on light land inclined to sand, is to roll their wheat crop, when first sown, or as soon as it is out of the ground. Others feed it off with sheep, and drive all their cattle, of every kind, repeatedly over it, to press the soil together, thereby preventing the worm in the ground from destroying it. When the nature of the soil, and the season will permit, a very heavy roller, 2 or 3 tons in weight, drawn by 12 or 14 oxen, to be rolled over the wheat, is sometimes done. On the thorough sands, along the Northern side of the county, their common course

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is either, 1. wheat, 2. barley, 3. clover, 4. turnips, 5. wheat; or the following, unquestionably one of the best systems that can be practised upon light and sandy soils: 1. turnips, 2. barley, 3. clover, 4. wheat.

Acreable Produce of the Weald. Respecting the produce *per* acre of this district, the following account of several parishes, scattered over the Weald, in a circle of 50 miles circumference, will enable us to form an accurate idea of the corn produced in this part of the county.

	Wheat Bushels
Worth, Slaugham,	12
Horsham, Rusper, Balcomb,	14
Lower Beeding, Crawley, Nuthurst, Rudgwick, Billinghurst, Kirdford,	
Green, Hitchingfield	16
Bolney, Cuckfield	29
Luggershale, Warneham, Slingfold, Cowfold, Henfold, Shermnbury	22
Salehurst, West Grinsted, Ashurst, Pulborough, Chiltington, Shipley	24
Hursterpoint, Albourne, Ditchling, Haylsham, Ashburnham,	

Winchelsea, Westham	32

	B.	P.
Average	21	2

Oats	Bushels
Slaugham, Rusper	16
Worth, Horsham	20
Rudgwick, Kindford, Wisperer Green, Billingshurst, Hitchingfield, Crawley, Ifield, Ralcomb	24
Shipley, West Grinsted, Ashurst, Warneham, Cuckfield	28
Horsham, Slinfold, Pulborough, Chiltington	30
Salehurst	32
Bolney, Haylthan	36
Hurstperpoint, Albourne, Ditchling	40
Ashburnham	44
Winchelsea	48
Average	31

Peas	Bushels
West Grinsted, Slaugham	10
Worth, Rusper	12
Balcomb, Horsham	14
Ifield, Cuckfield, Rudgwick, Kirdford, Wisperer Green, Billinghurst, Hilchinfield	16
Warneham, Horsham, Slinfold, Pulborough, Chiltington	20
Shipley, Husterpoint, Albourne, Bolney	24
Haylsham	31
Ditchling	36

	Average	20
	Barley	Bushels
Slaugham, Worth		16
Cuckfield, Horsham		24
Shipley, West Grinstead, Ashurst		26
	Average	22

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Rye and Tares—none of any consequence planted in this circle. Of hay and clover the average weight is 20*lb**.

Lime as manure. This is an article of great consequence where chalk is to be had in great abundance, as all the farmers use it very plentifully to manure their crop, chiefly their wheat. But the present use renders the expence so heavy, and the repetition so rapid, as to put the effect of liming in a very questionable point of view: the farmers generally lay in on their fallow from 80 to 120 bushels, every 4th to 5th year, and some use it every third year. The effect of lime is unquestionable great, more especially upon lands lately broken up, and by a prudent and judicious disposition in the management, it will turn out an excellent manure; but, repeated so often, it answer no longer. Indeed sensible farmers have discovered this to be the case by long experience, and they mix it with other manures or mould, or no longer use it.

As the chalk hills extend no farther Eastward than East Bourne; in order theretofore, to supply the rest of the county, the chalk is shipped in sloops from the Holywell pits at Beachyhead, from when it is carried to the Bexhill, Hastings, and Rye kilns: here it is burnt into lime, where the farmers come with their teams and take it away at 6*d. per* bushel. In this trade 16 sloops are constantly employed, from April till

the month of November; nine of these belong to Hastings, and seven to the port of Rye. The total quantity consumed at these kilns, for one year, amounts nearly to 633 sloop loads of chalk, each containing 550 bushels, or about 350,000 bushels.

* A gentleman, eminent for his exertions in improving the waste land of this county, very liberally assisted me in drawing up this account of the corn product of the Weald.

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That the Board may have all requisite information respecting the method for burning, &c. I have inserted the account of a kiln, and process of burning, &c. which I had from a lime-burner at Hastings, who has been employed in the trade for many years. —The kiln is seventeen feet in the clear, at the bottom; nineteen in depth; and fourteen over: 70,000 bricks were used in the construction, which, at the time of building, 23 years since, were 25*s. per* 1,000. It has four eyes at bottom, each 21 inches wide in the run of the shovel, and the same in length: these are situated at the opposite sides of the kiln, and are used for drawing out the lime. The arched way, round the kiln, is eight feet wide in the ring, clear of the buttresses, which are 3 feet in thickness. The whole circumference of the inside circle is 90 feet. The conveniences are all excellent, as a waggon with one horse can stand in the porch, clear of the door-way. The kiln contains about 1,200 bushels of chalk, proper coal measure; and the draught, in full work, is 300 bushels of lime every day. To burn one kiln requires fix chaldron of coals, either from Hartley in Northumberland, or from Wales; but the best coal for this purpose are from Sunderland. The process in the burning, is to lay, at the bottom of the kilns, a little faggot-wood, and on that, a small quantity of cordwood, covered with some straw, upon this is laid coal, and on the coal chalk; this is continued until the kiln is three quarters full, when the faggots are lighted. After this the kiln is in constant burning the whole season, whatever quantity of lime is drawn from the bottom, the same quantity of chalk and coal is thrown in, the kiln always being full.

They think that the lime is much stronger when burnt with coal, as the chalk is always cut into small pieces before it is put into the kiln; whereas, in *flame* kilns, so called because the heat is forced upwards, the chalk is put

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into the kiln in large pieces, without any breaking; and, in the operation of burning, it must happen, that a large portion will be too much or too little burnt; for, in these flame kilns, the heat being forced upwards through the chalk, the lower part of the kiln will be thoroughly done, but the upper part very little. Last year the price of the lime was 50*s. per* hundred bushels, and a drawback allowed of 5*s. per* Ct. to those who bought 500 bushels, —this year the price is raised to £ 2 14*s.* 2*d.* The demand for lime from these kilns rather decreases, as we may perceive from the consumption of these last two years.

The account I had from a lime-burner at Hastings in — —		Bushels burnt.
	1788 . .	70,000
	1789 . .	80,000
	1790 . .	98,000
	1791 . .	103,000
	1792 . .	80,000
	1793 . .	60,000

This decrease is caused by the erection of two new kilns in opposition to those from the proprietor of which this account is extracted.

Besides the lime burnt from chalk, another great supply is drawn from the bowels of the earth, in the Weald. Of this the Earl of Ashburnam is almost the sole proprietor, and the greatest lime-burner in the kingdom, the spray-faggot of all his extensive woods being cut down as fuel for his kilns. These lime-works are situated in a valley surrounded by woods. And as they are entirely of a different construction to the

foregoing, I shall in this place insert the following account of one of them, with the process of burning, &c. &c. with faggot-wood; accompanied with the plan,

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elevation, and section, of one of his Lordship's lime-kilns; for this account I am indebted to the spirited and enterprising superintendant of the lime-works.

The plan of the lime-kiln, drawn by scale, and shewing the appearance at different heights, will enable a brick-layer to build one. It must be set into a bank of earth, and care taken that no wet can lodge in the bottom, which must be paved with brick—the breast wall, above the throats, may be done with stone, laid without mortar; and the bricks in the inside of the kiln, may be laid either in loam or mortar. It will be necessary to have a rim of iron, about two inches wide, round the top and inside of the throats, to prevent the lime-burners from loosening the bricks as they put in the fuel. The bench is used to form a steady base for the arch to spring from; and, when done with stone, it is never liable to be burnt, as the embers lie as high in the kiln, whilst burning, as the bench; and if the stone is of that nature, which retains its shape, during the burning, without cracking or opening, it does not get sufficiently done. It has a hatch merely for the convenience of taking the lime out, and the size of it is not material, as, of whatever size it may be, it must be closed up with earth and stones, during the burning of the kiln. The first operation is the filling, done by forming the arches of the kiln, which are a continuation of the two throats to the far end; and they are turned higher, and lower according as it is intended to have more or less stone in the kiln, but they generally stand hollow about four feet. The arches spring from the benches, and care must be taken to fill up the sides as the work advances, and also the space upon the middle bench, or the arch would not stand. There is no occasion to be very particular as to the size of the stone in the arch, but it may be put in as large as a man can readily fit. —The arch being turned, and safe, the largest stones, about the size of a

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man's head, are placed nearest the breast of the kiln—when it is filled within two feet of the top, smaller stones are put in; and within six inches of the top, the smallest of all, and as small as possible. The kiln being now filled level with the surface, it is then covered over with bricks; care having been taken, during the operation of filling, to place the limestone adjoining the sides and back part of the kiln, *hollow*, which assists the flame in penetrating through the stone, and meeting with some resistance from the closeness of the smaller pieces at the top, is, by that means, thrown more into the body of the kiln. This finished, a gentle fire is kindled, which is kept up with a moderate degree of heat for 15 hours—by which time the kiln becomes thoroughly heated, the limestone has done cracking, and the inside of the arch assumes a pale red colour. At this time the work goes on as quick as possible, there being now little fear of the arch failing. It is to be observed only, that towards the conclusion of the burning, when the kiln necessarily becomes very hot, for 10 minutes in every half hour, the lime-burner may stop and put no fuel into the kiln, and the operation will proceed on with the same expedition. When the limestone is thoroughly burnt, there is a clear red fire at the top, and an appearance of sulphur upon some of the bricks may be generally seen in the hollowest parts of the lime-kiln. It is then necessary to throw a little clay upon the tops of those bricks, in order to choak the fire, and force the heat elsewhere; and, by covering the surface with dirt, the heat is gradually conducted over the whole. When cool, the bricks and dirt come from the lime without the least injury; but it must remain 30 hours before it can be emptied. The tools necessary are,—a prong to push forward the faggots, and sometimes to lighten them up in the throats; a long pole, reaching to the farther end of the kiln, for stirring up the embers to make then throw out a

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fresh degree of heat; a large hoe for raking the embers, and a large iron shovel-pan to carry them away. In putting the fuel in, the stronger end of the faggot is first thrust forward. Embers are worth as much *per* bushel as the lime, either for the use of the farmer or soap-boiler. The two sorts of lime-stone in use, are very different in the effect which the fire has upon them. The one, a grey stone, is a mass of marine shells, and the exuviæ of sea animals; this will at first bear the necessary degree of heat, without danger*;* is very tough, and will open a little without flying; but, upon fire being continued too long, will vitrify. The other is a blue atone, very much inclined to crack, and fly to pieces, and requires great attention to prevent the stone forming the arch, from breaking and letting in the kiln. By continuing fire too long, and too fiercely, it runs into a powder, although it does not vitrify like the other; it is a much stronger cement than the grey, or chalk. At first difficulties may arise in the burning, and the stone may tumble in ; but be the difficulty what it may, care and perseverance will overcome it. It may not be worth while to bind the furze, when used as fuel, into faggots, but whenever it shall be burning as faggots or loose, it should be stacked when cut to retain its strength, and it may be used in its dry state: this mode, therefore, should be adopted. There should be water near the kiln, for the convenience of wetting the iron over which the faggots are put, and also for wetting the tools, and the ground round the kiln, to prevent the scattered faggots or furze from taking fire. The top of the kiln should be level with the surface of the adjacent ground; and a drain should be made from the hatch round the kiln, to carry away any wet that may fall, and which would otherwise keep the kiln cold, and thereby waste the fuel.

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The hole for the reception of the embers, will be most convenient on the left-hand side of the mouths of the throat, at the distance of 5 or 6 yards, so as neither to give much trouble in conveying them from the kiln, nor reflect too great a degree of heat on the burner. For burning coal, the *tunnel* kiln is superior to the *flame* kiln; for no heat is lost. In a flame kiln this is not the case, since a great degree of heat, and much time also,

is consumed, before it can be emptied. Chalk loses one fourth in the kiln. Those farmers who for many years have limed with chalk till it is useless, by changing it for the stone lime, have reaped great benefit; and so on the other hand, with stone lime. Variation in manure is absolutely necessary*.

COURSE—and PRODUCE on the DOWNS.

The following systems of cropping their land, are adopted by the South Down farmers.

1. Wheat,	1. Wheat,	Wheat,	Wheat,	Wheat,
2. Barley,	2. Barley,	Barley,	Barley	Peas,
3. Clover,	3. Clover,	Tares or peas,	Oats,	Barley,
4. Wheat,	4. Turnips,	Oats,	Clover,	Turnips
5. Fallow	5. Wheat,	Clover.		Tares.
	6. Fallow.			

The clover-lay is usually manured or folded for the succeeding crop of wheat; on the lower lands wheat is sown upon 2 or 3 ploughings after peas or tares; but after turnips, only one ploughing is given, On stiff and strong loamy soils, wheat upon fallow is better than when it follows either peas or tares; but after clover, upon the lighter soils, it is superior. The best and most beneficial wheat-

* For this last process of lime-burning, the public is indebted te the able superiontendant of the Earl of Ashburnham's lime-works.

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sowing season, upon the South Down Hills, is from the middle of October until the beginning of November; and the quantity of seed is from 3 to 4 bushels. Some capital farmers sow from 2 to 3 only. A large quantity of seed clears the ground of weeds. By sowing after the month of November, the corn remains in the ground so long before it

vegetates, that much of it is destroyed, and if frosts come in a late seed-time, the grain is cut off before the nourishment arrives. Where the light thin surface of the Downs does not cover the seed well, it some times happens, that the corn in summer-seasons is burnt up from the reflexion of the chalky soil; but this is the case only in scorching summers. The smut is an evil which they are very little subjected to. This disease in the corn is attributed to the almost universal practice amongst the farmers, of sowing the same sort of seed for a length of years, without giving the land any change. Or it is owing to a negligence in properrly preparing the seed. Lime is the best preventive.

Method of preparing seed-wheat. The most beneficial method of using the lime in preparing the seed-wheat, which is put into practice by one of the best farmers in the county, is to have a sieve made about 10 inches deep, containing 3 pecks of wheat, which is dipped in a tub of sea-water, or into thick muddy pond-water; this causes the lime to enter the grain, and thereby to destroy effectually the infect. By this method does the lime work more powerfully than when dry; it leaves also a coat of lime upon the wheat, which, when the grain is dry, is not the case. Another reason for wetting the corn is, that by making the brine sufficiently strong to swim an egg, where no sea-water is to be had, all the light corn and rubbish floating on the surface is skimmed off, and the good wheat remains at the bottom. The common method of preparing seed corn is to soak it in briny, or

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sea-water 12 hours: the water is after this let off, and the lime sifted on the corn, mixing the whole together. Now this operation is performed at 5 or 6 o'clock in the morning, and the seed is carried into the field at 7; consequently, the lime, remaining so short a time on the grain before sowing, has no time to enter and penetrate into the corn; whereas, by wetting the wheat, and leaving it until the succeeding morning well limed, the lime has a greater power in destroying the insect than when it remains on it for half

an hour only, when most of the lime is rubbed off the corn. Sometimes the brine has been heated, and then poured out of a pot upon the seed,

The following wretched practice is the general system of arranging the course of cropping the land on the tenantry laines in the neighbourhood of Lewes.

1, Wheat, 2, Barley, 3, Oats, or Peas, or Tares, 4, clover or turnips; but the more general system is to have 5 crops of white corn in 6 years. A better method is the following: 1, wheat, 2, rye, and tares mixed, sown in August and September, and fed off in May and June, for turnips; 3, barley, 4, clover. Another arrangement put into practice by intelligent farmers on light land, is to manure the land for wheat after tares or clover, then turnips, or clover sown in Spring amongst the wheat. If turnips sown after the wheat, the land is manured. The turnips are succeeded by barley or oats, and with the corn, the land is laid down to clover. After remaining one year, the lay is then broken up, sown with peas or tares, followed by wheat. But on stiffer soils wheat is sown after clover or tares, and seeds with it in the Spring; the clover is either mown twice, or fed all the Summer; it is then manured, and sown with wheat upon one ploughing. On wheat stubbles, turnips, spring tares,

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or rye, or peas, are sown, succeeded by barley or oats which, with clover and rye-grass, are sown, and the land laid down to grass. Upon the following course the seed and produce are as under:

1.Tares 3 bushel seed.

2. Wheat 3 — — 32 gained.

3. Turnips 1 pound.

4. Barley 6 bushel seed 24 gained

5. Clover half a bushel, and rye grass half a bushel, or half a peck of trefoil, half a peck of clover, half a bushel rye-grass, for early spring seed.

6. Peas 5 bushel seed 30 gained.

7. Wheat 3 —— —— 26 ——

A very bad practice is prevalent among the South Down farmers, of sowing wheat upon the turnip land. Those that follow this are obliged to feed their stock upon turnips at that time of the year, when the turnips are of the least value, and when there is a plentiful supply of all other food, upon which the stock might be equally well supported; and the sudden change from moist food frequently causes many disorders in the cattle and sheep.

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The following is the clear product of corn upon a Capital South Down farm, in the neighbourhood of Lewes, for 20 years.

	Wheat			Barley		Oats		Peas		Beans		Tares	
	Q.	*B.*	*P.*	*Q.*	*B.*	*Q.*	*B.*	*Q.*	*B.*	*Q.*	*B.*	*Q.*	*B.*
1773	3	5	0	6	0	7	5						
1774	3	4	0	5	1	8	0	4	0				
1775	3	5	0	3	1	7	5	3	2				
1776	3	4	2	5	5 ½	6	7 ½	2	4 ½				
1777	3	4	0	5	2	6	7	2	5	3	5		
1778	4	3	0	3	7	7	0	2	7	2	7		
1779	3	0	3	5	3	7	0	2	0	4	3		
1780	3	4	2	4	4	6	1			3	4		
1781	3	4	2	6	1	5	0	2	0	4	3		
1782	3	6	0	4	2	5	2	5	0	3	1		
1783	3	4	2	4	7	6	7	3	7	——			
1784	4	0	2	5	1 ½	6	0	2	2	Av. 3	5		
1785	4	0	2	6	0	5	7						
1786	3	1	1	5	5 ½	6	3	3	7				
1787	4	0	0	6	1	6	0 ½	5	2			4	2
1788	2	5	0	4	5	4	0	2	6				

1789	3	7	0		5	5		8	7			
1790	3	5	2		5	7		8	6			
1791	3	6	2		7	4		7	6 ½			
1792	3	7	0		5	5		6	2		2	2 ½
Av.	3	4	2	Av.	5	3	Av.	6	5	Av.	3	1

Saintfoin. Of all the Various sorts of artificial food, none can be compared to saintfoin. We find not, however, one-fiftieth part of what ought to be cultivated on the Downs. Where it is cultivated, they sow it in the Spring, with barley; it is mown once for hay, and then fed off with sheep or cattle; but it should never be fed down very close; sheep are apt, by their close feeding, to bite the crown of the root, which very much injures the plant. Land, before sowing this plant, should be brought into thorough order by turniping for two years, and when well laid down, it will last from 12 to 16 years.

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Rotation, &c. in the Rich Vale. Upon the fertile vale South of the chalk hills, the usual mode of cropping i: 1, wheat, 2, orts, 3, tares or peas, 4, wheat, 5, clover, 6, wheat, 7, fallow; that is, three crops of wheat, and one of oats, in 6 years, besides a crop of peas and the clower. This is a system adapted only to land capable of bearing such a method of cropping, from its very extraordinary fertility. But still greater is the surprize, when we find that wheat has been regularly sown upon these rich foils for 4 or 5 years successively, and that the produce has amounted to a quantity never less than from 4 to 5 quarters *per* acre. Throughout this rich district the average produce of wheat is from 4 to 5 ½ quarters *per* acre, and the see 2 ½ bushels; barley from 5 to 6 quarters, seeds 3 ½ bushels; peas 4 quarters, seed 4 bushels. The course of crops at Ford is, 1, wheat, 2, barley, 3, peas, 4, wheat, 5, barley, and this pursued till the land is thoroughly exhausted, and then comes a fallow.

Marl. Marling in this country has enriched numbers of the farmers. It is laid on the land from 10 to 1200 bushels *per* acre, but never repeated: the first 2 or 3 years the effect is scarcely seen. When there is any soil inclining to a reddish loam, upon that it best answers; or with a mixture of sand. The practice which is found to be the most beneficial, is that of laying it during the winter upon a clover lay, to give the frost an opportunity of pulverizing and mellowing it. The general rule is, to lay it on the ground in the summer, ploughing it directly from 3 to 6 times for wheat. Chalk is used in the same manner as marl, and to a greater extent: the effects of it are visible for 50 years.

In this rich district, the following is another arrangement, and very generally adopted throughout the whole

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extent of this vale: wheat is sown upon fallows of 3 ploughings, or upon a clover lay, or after peas and tares, which are generally twice ploughed before sowing; the wheat is succeeded by barley, sown upon three earths; and the barley by turnips, upon four. Winter tares are sown for soiling horses in Summer, or as Spring food for sheep.

Upon the light gravelly soils North of Chichester, we find 1, wheat, 2, barley, 3, clover, 4, wheat, 5, peas, or 1, wheat, 2, turnips, 3, barley, 4, clover. A method very commonly practised is, to bring their land round in six *laines,* when it is all kept in tillage, and in the following manner; 1, wheat, 2,barley, 3, seeds, lay, 4, oats, 5, fallow, 6, turnips, and so on; all which methods undoubtedly cannot be approved, as, upon all the arable farms in this part of the county, it is not only a very bad plan for keeping stock, but it is farming also at a very great expence, as that course will occupy at least 5 four-horse teams in the management of 700 acres in this manner, and we may reckon the expence of each team at 100*l*. but by laying 200 acres to saintfoin, and as much to pasture, after two years turniping, the yearly expence of 10 horses, equal to 250*l*. will be saved. This will enable the farmers to keep the remainder in exceeding good condition, by having so much saintfoin hay to winter feed their sheep upon, besides two other great advantages, for, by having so much saintfoin hay, the sensible farmer will

always be able to feed his seeds, and by that means will bring his land round in four *laines* instead of aix, and in much better heart, if they choose to follow that course. Farmers are very unsettled in their mode of management; many who followed the six-laine course, and others nearly in the same system, are now changing it to four laines on the chalky and gravelly land. A very excellent practice, to produce a succession of tares in Spring and Summer, is to sow upon the

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wheat stubbles in August or September, directly after the wheat shall have been reaped and cleared off the ground, about 3 or 4 bushels of tares to the acre ; and after these shall be up, and cover the ground, to throw in another crop; and in like manner a third, as there will be about a month between the sowing the first and the last crop: a regular succession will by these means be ensured for the whole of the following summer—but, from the excellency of such systems, they are but seldom adopted.

WATERED MEADOW.

On the Western side of this county, the admirable practice of watering their meadows in a regular manner, is very well understood, and very ably practised. The whole course of the Lavant river, from the Spring-head as far as Chichester, waters the finest meadows, and the most productive in the whole county. The water is let on to the grass in the month of December, when it waters the meadow for 3 weeks; this 3 weeks watering is equal to all the red of the year; for, at this time, the moss is entirely killed by it, and the young grass will then begin to shoot out in a very luxuriant manner. In Spring watering, it is usual to let the water over the land 34 hours each time; and in May the watering ceases altogether. In July, from 2 to 3 ton of hay is sown *per* acre, and the after-grass, or *rouen,* fed with cattle till Christmas, but seldom with sheep, as they are apt to rot. If wethers or ewes, before lambing, were turned in, they would certainly die. Eighty ewes, from Weyhill fair, were turned into some land adjoining to a watered meadow: it

happened that a score of these accidentally broke into the meadow for a night; taken out the following morning, they

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were all kept till lambing: the score, that had broke loose, produced 22 lambs, all which lived, but every one of the ewes died rotten before May-day; the remaining 60 made themselves fat, nor could a rotten sheep be discovered amongst them; several of these were put into the meadow with their lambs, but received no injury. The soil of this meadow-ground is either peaty or gravelly; it is cut into lands of 30 or 40 feet width, with a drain and water carriage to each land.

Stock and product. As soon as these meadows are mown, oxen are turned into them, at the rate of an ox from 100 to 140 stone to 2 acres, till Christmas; which, at 3*s*. 6*d*. *per* head *per* week, the accustomed valuation, is *£*.*1* 8*s*. 0*d*. for the months of September, October, November, and December. They are then taken up to the stalls for winter fattening, and during the three succeeding months of January, February, and March, the same ground is stocked with 2 couple of ewes and lambs *per* acre, which, at 6*d*. *per* week each couple, for 12 weeks, is 12*s*.; this, in April, is encreased to 5 couple for 6 weeks, which amounts to 15*s*. more. The hay is mown in July, and the ordinary crop 2 ton.

Together the account will stand thus.

	£.	*s*.	*d*.
Sept. Oct. Nov. Dec. ½ an ox *per* acre, at 1*s*. 6*d*.			
Per week — — —	1	8	0
Jan. Feb. March, 2 couple of ewes and lambs at			
6*d*. each couple — —	0	12	0
April and part of May, 5 couple for 6 weeks	0	15	0
Two tons of hay at 40*s*. — —	4	0	0
	6	15	0

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The expences, & c. are

Rent	1	10	0
Labour	0	4	0
Watering	0	2	0
Rates, &c.	0	6	0
Tythes	0	4	6
	2	6	6

Remains, clear profit 3 8 6 *per* acre.

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SHEEP HUSBANDRY OF THE SOUTH DOWNS

Of all the various features of the husbandry of this county, there is none so excellent, nor any management equal to the sheep husbandry of the South Down hills. The merit of this breed, now so firmly established beyond all the artful insinuations of interest or prejudice, is so unrivalled, that it is rapidly extending its superiority in the Eastern and Western sides of the kingdom with a rapidity heretofore unparalleled in this kingdom. Wherever the horned stock, either in Norfolk or Dorsetshire, come into competition, they make a second comparative trial useless and absurd.

Breeds. The breeds of sheep in this county are various. They consist of the West Country breed (Hampshire, Dorsetshire, Somersetshire); on the Western side of the

county, of the Romney breed in the marshes; or, lastly, of the South Down breed (a native of the county), so called from the South Down hills upon which they ate fed. As this breed overspreads the greatest part of Sussex, I shall be

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more particular in my remarks upon them than upon the rest. It is the original breed of the county, pure and unmixed with any other. This breed is distinguished by being polled, and more compact, as their legs are shorter, than either Dorsets', Hants', or Norfolks'; for long-legged sheep have generally thin carcasses; they are fuller in their haunches, and greatly outweigh the abovementioned sheep proportionably to their size of carcass; since they are weighty in a small compass. The colour of the leg and face is various; the true colour is a dark grey speckled face, inclining to black; the whiter coloured breeds being almost universally allowed to be unthrifty and degenerate. Deep brown, and black faces and legs, are much hardier; for white faces and legs do not stand the severities of winter in an equal degree, and they are moreover inclined to fall off in flesh; but a medium between both is the true colour, since black legs and faces not only produce lambs generally spotted about the carcass, but wool also liable to be so spotted, more especially about the head; and all black and dark-coloured wool is thrown together by the staplers, and sold at half price, as it will take no dye; for although the quality of it may be equal, at the same time it is fit only for particular purposes, as dark cloth. These sheep are sufficiently gentle and domesticated for an open country breed, for although they require little activity to fill their bellies on short keep between the hours of turning them out of the fold in the morning, and putting them in at night; still their activity and hardiness are unquestionable, when it is considered, that many are driven to water three miles, and as many back, every other day in summer; and they must necessarily posses a very considerable share of hardiness, as upon very high bleak situations, they are thoroughly exposed to the blowing winds and driving snows, and several of the finest wooled stocks have not been off these hills; and

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this for years: their winter provision, which is hay, has been given them on the downs. The bone of this breed is small and clean, the carcass straight upon the back, and wide; they stand a little higher in their hind quarters than in their fore, and the hind quarters are thicker, and when fat are heavier than the fore by 2 or 3 pounds—a criterion of great merit in the breed (as the hind parts fell at 1*d. per* pound dearer), to be able to lay the greatest weight on the most valuable quarters of the carcass. Wethers are kept till they are 2 or 2 ½ years old, and average 16 to 20lb. *per* quarter. The quality of the mutton is allowed to be equal to the best in the island, and the wool little, if at all, inferior to the Hereford; since the common practice of sorting the different wools in Herefordshire is not known upon the Downs. The Hereford flock-masters sold last year their prime wool at 2*s*. 8*d. per* pound, and the inferior sorts as low 1*s.*; whilst prime fleeces on the hills in this county sold as high as 2*s. per* pound, without any sorting; a great superiority in favour of the South Downs. The average weight of the fleece is various, and greatly depends upon the food eaten. In the line formed by East Bourne, Lewes, and Brighthelmstone, the average weight *per* fleece was about 2lb. a few years since, which is increased half a pound within the space of 2 or 3 years. The following is the number and weight of some of the largest flocks in this district.

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[Information about fleeces, weight, and averages in different places]

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Here is an encrease of 7000 fleeces, and almost 16000 lambs in 20 years, and the weight of the fleece likewise increased.

But for 12 years, from 1711 to 1722, the total number of entries at Chichester were 632,980 fleeces and lambs; and for the last 12 years, from 1781 to 1792, they had decreased in number 255,362; and the entries for the first 12 years, amounted to 5388; and, for the last 12 years, to 4067.

In the district, traced out upon the map, by a line drawn from Glynd to Newhaven and then to East Bourne, is grown by far the finest wool in the county. Advancing Westward, the weight is encreased, whilst the quality is diminished; and, west of Arundel, the horned flocks, or the mongrel mixture between both, takes place; but the west country fleece, although coarse in its quality, compared with the South Down, will excell it by one sixth, reckoning the South Down at 60, and the other at 40, the former will tod 15, and the latter 8. It well deserves the attention of breeders, since it is a fact, no less- remarkable than true; confirmed

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Disorders. The disorders to which the South Down sheep are exposed, are the gall, the redwater, and the being paterish. The gall is a kind of purging which generally continues till they die, and is occasioned by feeding on land lately folded, in wet weather, such as rape, turnips, &c. The redwater is a dropsy, and proceeds from the sheep being let out of the fold, when the ground is covered with hoar frost. A paterish sheep appears totally deprived of its senses, and is continually turning round instead of moving forward. This disorder is occasioned by a bladder of water that surrounds the brain; for which there is no remedy. The rot is common to the South Down sheep, but it is never caught upon the hills; it is caused by their being put out during the winter to the Weald, or by being turned into the marshes to fat. Indeed, it appears that the cause of every disorder is attributed to feeding the sheep on wet lands, and in moist seasons; and they break out chiefly in the winter and spring months, which is an additional reafon, as they are exposed to it in the wettest seasons of the year. Hampshire and South Down

sheep are equally subject to the *scab,* caused by their being over-heated; in its effects it is similar to the itch; the remedy for which is—wild vine root, tobacco, and brimstone, boiled in brine for the space of fifteen minutes, strained off, and kept for use; when it is poured upon the part affected, the wool having been first separated.—Or, boíl ½ a pound of tobacco in 2 gallons of brine till it is half wasted; then stir in ¼ of a drachm of sublimate, and the same quantity of precipitate; ½ oz. of verdigrease powder; 2 oz. of sulphur; and 1 oz. of allum. Another diaorder these sheep are subject to (in common with other breeds), is the *foot rot*; this last muft be dressed with hot oils (oil of vitriol, and spirits of turpentine), having first-cut away the root of the disorder —or, ½ oz. of sugar of lead; 1 oz. of Roman vitriol; 1 oz.

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… when they are a fortnight old, the calf is *hobbed* upon skim milk; after being weaned, they are turned to grass during the summer; and, the following winter, are fed upon hay…