
AGRICULTURAL SURVEY
 OF
 LANCASHIRE.

CHAPTER I.
 GEOGRAPHICAL STATE AND
 CIRCUMSTANCES.

SECT. I.—*Situation and Extent.*

LANCASHIRE is a maritime county, bounded on the coast by Saint George's channel and the Irish sea.

The dimensions of the county are as follows*.—Its greatest length 74 miles; breadth $44\frac{1}{2}$ miles.—Its circumference (crossing the Ribble, at Hesketh bank) 342 miles; containing 1,765 square miles, and 1,129,600 statute acres.—Total number of parishes, with the additional ones, 62.

SECT. 2.—*Divisions.*

THE county is divided into six hundreds; namely, Salford, West Derby, Leyland, Blackburne, Amounderness, and Lonsdale. There are two districts in it which may deserve more particular mention; namely, the Filde, which is remarkable

* Calculated upon this occasion by Mr. William Yates, who surveyed and published a map of the county of Lancaster in the year 1786.

2 AGRICULTURAL SURVEY

for its great fertility; and Furness, bordering on Cumberland and Westmorland, where there is a fertile vale. The Filde is peculiarly distinguished for its breed of cattle. Since the circulation of the Lancashire Report there, a new spirit for agricultural improvements has arisen, particularly in regard to draining, watering, making composts, manuring their lands, &c. which cannot fail to be attended with the best consequences.

The shape of the county is somewhat similar to that of England, Wales, and part of Scotland; *e. g.* suppose the parts beyond the fands represent part of Scotland; the river Loync, and the inlet which runs up to Cockerham, the rivers Mersey and Dee; that tract called the Filde, the principality of Wales; the Ribble, Bristol Channel, and the Severn; and, again, the river Mersey, the southern boundary of the county, by the English Channel, the southern boundary of the kingdom. The indentures upon the eastern parts of the county have a strong similarity to the indentures on the eastern part of the kingdom.

SECT. 3.—*Climate.*

THE ridge of mountains, which bounds this county on the eastern side, from Yorkshire, and which runs not only through Yorkshire, but Cheshire, Derbyshire, and Staffordshire, &c. and called, not improperly, the Back-bone of the kingdom, being the most elevated ground in the island, screens Lancashire more particularly from the ungenial eastern blasts, the frosts, blights, and insects, which infect the countries bordering upon the German ocean; and though the high mountains may cause a greater quantity of rain to fall in this district, (as appears by rain-gauges kept for that purpose) than in the more interior parts of the kingdom; yet this county, fanned with the western gales, or north-west breezes, has a salubrity of air, to which may be attributed the vigour and activity of the inhabitants, who are, if temperate, generally long-lived. The saline particles, with which the westerly winds are loaded, may also not a little contribute to the verdure of the fields. Snow
 continues

of LANCASHIRE. J

continues but a short space of time upon the ground, owing to the maritime situation of the county.

The prevailing winds of this county are the West and N. W. winds, which produce a mildness of climate, and salubrity of air and atmosphere, unknown in most districts so far advanced to the north.

Though that part of the county which lies to the south of the river Ribble is in general a low and flat region, perhaps few districts of this or any other kingdom can produce a more healthy, vigorous, or active race of inhabitants; living in general, when temperate, to a great age, and bearing in the whole of their appearance a most ample testimony, to the salubrity of their native air. The beauty of the *Lancashire witches* has long been celebrated; and the men are no less distinguished for their military strength and prowess. The neighbourhood of the Atlantic ocean, and the elevation of its mountain boundary, certainly render this county more subject to wet weather than most in the kingdom. These frequent rains, however, have the effect of rendering Lancashire one of the most productive and certain grass-land districts in the island. The soil is peculiarly adapted to grass, and the climate uncommonly favourable for that production.

AGRICULTURAL SURVEY

Perpendicular Height of the RAIN that has fallen at Lancaster, during the last Nine Years; distinguishing each Month and Year in Inches and Lines. By DR. CAMPBELL, of Lancaster,

Years - -	1784.	1785.	1786.	1787.	1788.	1789.	1790.	1791.	1792.
Months.	In. Lin.	In. Lin.	In. Lin.	In. Lin.	In. Lin.	In. Lin.	In. Lin.	In. Lin.	In. Lin.
January - -	2 8 $\frac{1}{2}$	2 6	2 6	1 7 $\frac{1}{2}$	2 10	4 5	5 11	5 10	3 2
February - -	2 3 $\frac{1}{2}$	- 6 $\frac{1}{2}$	1 1	5 -	2 1	4 11	1 2 $\frac{1}{2}$	3 1 $\frac{1}{2}$	3 -
March - -	2 7 $\frac{1}{2}$	- 1	- 11	3 7 $\frac{1}{2}$	1 10	- 8 $\frac{1}{2}$	- 8	2 2	5 9
April - -	3 -	1 8	- 4 $\frac{1}{2}$	1 3 $\frac{1}{2}$	2 7 $\frac{1}{2}$	4 3 $\frac{1}{2}$	1 3 $\frac{1}{2}$	4 3	5 9 $\frac{1}{2}$
May - -	3 -	1 6	1 8	1 4 $\frac{1}{4}$	1 1	4 1 $\frac{1}{2}$	2 1	2 4 $\frac{1}{2}$	5 -
June - -	5 9	1 - $\frac{1}{2}$	1 10	3 6 $\frac{1}{4}$	2 - $\frac{1}{2}$	5 2 $\frac{1}{2}$	4 -	- 10 $\frac{1}{2}$	3 10
July - -	3 -	2 1 $\frac{1}{2}$	2 9 $\frac{1}{2}$	7 -	6 5	5 7 $\frac{1}{4}$	7 6	3 6	5 1 $\frac{1}{2}$
August - -	5 -	10 4	5 -	7 -	2 - $\frac{1}{4}$	- 5 $\frac{1}{2}$	3 10 $\frac{1}{2}$	6 2	8 6
September - -	2 7	5 6	7 11	2 -	3 7 $\frac{1}{4}$	4 1 $\frac{1}{4}$	5 5	1 9 $\frac{1}{2}$	9 4
October - -	- 8	5 9	1 6	9 9	2 1 $\frac{1}{2}$	6 6	2 9	3 10	4 3
November - -	3 -	4 6	3 -	4 5 $\frac{1}{4}$	1 9 $\frac{1}{8}$	4 1	4 6 $\frac{1}{2}$	6 6	4 -
December - -	1 6	1 2	3 8	4 5	- 10 $\frac{1}{4}$	6 6	7 4	5 7 $\frac{1}{2}$	8 1
Total -	35 1 $\frac{1}{2}$	36 9 $\frac{1}{2}$	32 3	51 - $\frac{1}{4}$	29 4 $\frac{1}{2}$	51 - $\frac{1}{4}$	46 6 $\frac{1}{2}$	46 - $\frac{1}{2}$	65 10

N. B.—A line is the twelfth part of an inch.

Mean

of LANCA SHIRE. 5

Mean heat of the Thermometer at noon at Lancafter - - 51.8.
 D° - - at London - - 56.
 D° - - at Edinburgh - 50.1.

WINDS blow at Lancafter :

North - - 30 Days.
 N. E. - - 67
 S. E. - - 35
 East - - 17
 South - - 51
 S. W. - - 92
 N. W. - - 26
 West - - 47

The mean heat of the Thermometer, and the direction of the Winds, are taken from an average of the seven years from 1784 to 1790 inclusive.

Perpendicular Height of RAIN that has fallen at Liverpool from the year 1784 to the year 1792 inclusive. By MR. WILLIAM HUTCHINSON, late Dock-master.

1784.	1785.	1786.	1787.	1788.	1789.	1790.	1791.	1792.
36½ In.	26½ In.	26½ In.	37½ In.	24½ In.	48½ In.	42½ In.	45½ In.	54½ In.

The feed-time, and harvest, vary a little between the northern and southern parts of the county. Those towards the east, and contiguous to the mountains, are in general later than the south-western parts.

The following Register will shew, that there is a greater difference of season than many may imagine; and if these meteorological registers were multiplied, and kept in different places, and the system more extended, such data would not only be pleasing memoranda, but afford many useful hints.

The following particulars were taken from the memoranda of D. Daulby, Esq. Birch House, Liverpool, respecting some articles produced on the grounds of Mr. Hill, of Wallasey, in Cheshire, about three miles from Liverpool. The articles mentioned were for the Liverpool market, the dates corresponding

6 AGRICULTURAL SURVEY

corresponding to the two days in the week on which the market is held, Wednesday or Saturday. It may be worthy of remark, that there is a general strife betwixt the Kirkdale and Wallasey gardeners, who can produce the first early potatoe at Liverpool market. They generally succeed both on the same day. In the year 1790 the Cheshire gardener had, however, the start by nearly a whole week.

EARLY POTATOES.

1766.	June 7,	20 lb. sold for 5 <i>d.</i> and 6 <i>d.</i> per lb.
1767.	June 6,	3 lb. sold for 14 <i>d.</i> in the whole.
1768.	May 14,	8 lb. sold for 4 <i>s.</i> 8 <i>d.</i>
1769.	May 13,	2 lb. sold for 1 <i>s.</i>
1770.	May 23,	2 lb. for 3 <i>s.</i>
1771.	May 18,	$\frac{1}{2}$ lb. for 1 <i>s.</i>
1772.	May 13,	1 lb. for 2 <i>s.</i> 6 <i>d.</i>

N. B.—From this period the early potatoes have been regularly sold for 2*s.* 6*d.* per lb. when first brought to market.

After this period the Register was extended to the following articles; namely,

	ASPARAGUS.	POTATOES.	GOOSEBERRIES.
1773.	April 10.	April 7.	May 5.
1774.	3.	30.	9.
1775.	1.	19.	April 26.
1776.	6.	17.	May 2.
1777.	4.	24.	12.
1778.	11.	25.	9.
1779.	March 27.	3.	April 10.
1780.	April 15.	20.	May 6.
1781.	March 31.	14.	April 21.
1782.	May 4.	May 11.	May 18.
1783.	April 12.	1.	April 30.
1784.	May 8.	17.	May 22.
1785.	April 23.	14.	18.
1786.	22.	13.	10.
1787.	March 28.	April 11.	April 28.
			1788,

of LANCASHIRE.

7

1788.	April 19.	May 11.	May 7.
1789.	18.	9.	9.
1790.	3.	April 3.	April 24.
1791.	9.	16.	23.
1792.	7.	25.	25.
1793.	May 1.	May 11.	May 18.
1794.	April 15.	April 12.	April 18.

From the above Register it appears, that the difference between an early and late spring is not less than six weeks; *e. g.*

	ASPARAGUS.	POTATOES.	GOOSEBERRIES.
1789.	March 27.	April 3.	April 10.
1784.	May 8.	May 17.	May 22.

From this Register may also be traced, the improved cultivation of the early potatoe upon common ground: but the potatoe at present may be truly said to be raised the whole year throughout, by the new method of heating the stoves with steam. Mr. Butler, gardener to the Earl of Derby, at his seat at Knowsley, has practised this some time; and Mr. Collins, late his lordship's gardener, who has ground near Liverpool, had, under glasses, forced by the heat of steam, Christmas, 1794, nearly, as he calculated, one cwt. of potatoes, ready to take up. But he observed, that the process by steam was too expensive to afford any profit at the price they were usually sold.

It will at this day scarcely be credited, that when potatoes began to be brought to market so early as June, the gardeners were under the necessity of bringing the stems adhering to the potatoes, for without this no purchaser could be obtained.

A gentleman who has been particularly attentive to this subject, observed that, in this northern district, autumnal seeds require to be committed to the earth one fortnight at least earlier than is recommended by Mawe, in his *Kalendar*.

SECT.

8 AGRICULTURAL SURVEY

SECT. 4.—*Soil and Surface.*

THE features of this county are, in many places, strongly marked; towards the north they are bold and picturesque, diversified with alpine mountains and fertile vales. The north-east part of the county, Blackburn, Clithero, Haslingden, &c. is rugged, interspersed with many rivulets, with a thin stratum of upper soil; the southern part more softened, and the plains are more fertilized: along the sea coast, the land is chiefly flat, and has the appearance, in many places, as if formerly covered by the ocean. In various fields at Formby, near the shore, there is soil above two feet below the sand, which lies beneath the present green-sward. There are the strongest reasons for believing that this soil (which is about four inches thick) originally formed the surface of the ground, and was gradually buried by sand from the neighbouring hills. Few countries produce greater varieties of soil, which yet does not change so rapidly as in some others.

The greatest proportion of that district, which lies between the Ribble and the Mersey, has for its superficies a sandy loam, well adapted to the production of almost every vegetable that has yet been brought under cultivation, and that to a degree which renders it impossible to estimate the advantage which might be obtained, by improved and superior management. The substratum of this soil is generally the red rock, or clay-marle, an admirable sandy loam, perhaps one of the most desirable soils that can be found, equally well adapted to the production of every vegetable. In this district there is little or no gravelly soil, no chalk or flint, no stony land, and very little obdurate clay, for the generality of it (except what is under grass, and indeed much of that) is treated in a manner that does little credit to this æra of improved and enlightened agriculture. There is also a black sandy loam, something distinct from the above description, which has no red rock, but the substratum white sand, under which is clay, and then marle. There are also tracts of white sand lands, and some little pebbly-gravel lands. There are many large tracts which

of LANCASHIRE.

9

come under the denomination of *moffes*, and some stiff, but no obdurate clay lands.

There is a kind of land which throws up great quantities of rushes, not owing so much to springs, as to a thin stratum of surface soil, under which lies a bed of matter, principally composed of clay, which does not admit the water to penetrate; therefore, the upper surface, or soil, is kept in a continual spongy state (if not surface-drained) and produces rushes and other four grasses*.

Remarks on this Observation †.—“ This kind of land lying upon clay or marle, is not (I am of opinion) cured, and but little benefitted, by surface-draining; the evil, generally, if not always, is under the soil, occasioned by the ‡ sand-beds, which are of various depths and forms, from the surface of the clay or marle, say from half a yard to 1½ yard deep, like so many basons filled with sand and water, which keep the soil continually moist (except in very dry weather); and as it must be granted by all, that rushes are occasioned by a stagnated moisture, so it is obvious, that the only effectual method of cure is draining the land sufficiently deep, so that the wet cannot be sucked up to the soil or upper surface. If land lies wet in winter, when dried by summer’s heat it becomes hard and firmly baked together, so that little vegetation is produced, consequently the propriety of under-draining, to produce crops and destroy rushes, is obvious. And further, to prove this, if a drain is cut across a field of this description into the marle, and through the sand-beds, it will be found, that there is a continual stream all the winter season.

* Upon such land, common rack or gravel sand is spread upon the ground previous to ploughing, as thick as common dunging; and then, after second ploughing or cross-cutting, dung at top, and harrow in the seed, and you will loosen the water-tight soil. If twice repeated, the success is infallible.

† By Mr. James Blundell.

‡ Called here sand-goats.

C

“ Good

10 AGRICULTURAL SURVEY

“ Good marle has the property of stiffening light land, and meliorating, and unbinding, (if dry) stiff land. Stiff soil, it is true, for a long time, resists the rain before it is saturated; but when made wet, it longer retains the moisture than a dry soil.”

Marle has a good effect upon these lands; for, besides its usual qualities of promoting putrefaction, it renders the soil stiffer, and enables it to resist and throw off the surface water more effectually.

Moor lands which are in a state of nature, and produce heath, and other wild plants, are of various qualities; very extensive indeed, and much more so than might have been expected in a county so populous, and consequently where lands must be so valuable.

These are distinctions, not necessary perhaps, on this occasion, to particularize more minutely, than by observing that the vales are in general fertile, but have less of that fertility as they approach nearer to the higher lands.

S E C T. 5.—*Water.*

THE great advantages which this county possesses, both from its having such a range of sea-coast, and also from the numerous streams and rivers it is possessed of (not forgetting the lakes of Windermere and Coniston-water) need hardly be dwelt upon, being so extremely obvious. It may be sufficient to remark, that without those advantages, neither the manufactures of the county, nor the sea and inland fisheries, a matter of no inconsiderable moment to the inhabitants, could be carried on to the same extent.

It is believed, that the only decoy pond is at Orford, the seat of John Blackburne, Esq. member for the county.

S E C T.