

ART. V.—*Some factors in the Development of Cumbrian Agriculture, especially during the Nineteenth Century.*
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IN any study of the development of Cumbrian agriculture it is soon evident that conditions have changed very greatly since the end of the eighteenth century when Cumbria was reckoned one of the poorest parts of the country and when more than half of the land in the region was uncultivated and unenclosed.

The changes which have been brought about are due to three outstanding factors, all necessarily inter-related. The first concerns the human application to the development of the region which involved internally the initial work of Corby, Curwen,* Graham and others and its subsequent application by the energies of the many who worked on the land. We need not stress this more than to say that the energy and hardihood of the workers is in measure related to the historical facts of the early invasions and to the climate of the region itself.

Amongst the external human factors affecting the agriculture we must give first place to the inclosure of the common and waste land, which was most marked in the first half of the nineteenth century, after the general act of 1801. It has been noticed that a Cumbrian Wm. Blamire, was the chief official concerned with this, and that he also played an important part in the vexed question of tithes.†

Between 1793 and 1816 the commons enclosed in

* T. H. Bainbridge, "Eighteenth Century Agriculture in Cumbria," *Trans.* n.s. xlii, 56-66.

† T. H. Bainbridge, "Land Utilisation in Cumbria in the Mid-Nineteenth Century as revealed by a study of the Tithe Returns," *Trans.* n.s. xliii, 87-95.

Cumberland were estimated at 200,000 acres and after the latter year, Dickinson estimated that "there may have been about 50,000 acres more inclosed."* He said that "scarcely a common has been inclosed, but the allottees have found nooks and corners for planting (trees) and have thereby improved the appearance of the neighbourhood and of their estates" (p. 77). Another result was that "the enclosing of the numerous commons, on which so many farms enjoyed pasturage . . . added to their extent" and whilst in 1805 the rentals, according to Culley were from £15 to £30 per annum with some few £100 or a little more, in 1853 there were rentals of £400 or £500 and even up to £800 or more. Again "the enclosure of all the low commons, and of portions of the higher, and the consequent cultivation of all the available parts, caused the sheep to be sold off in thousands, till, about the year 1820, few except those on the mountains remained. Since that period, drainage and turnip culture have been widely extended and the system of feeding sheep on turnips has been approved and practised to such an extent as to cause the number of sheep now kept to be little short of what the commons maintained, and the weight of mutton and wool to be considerably increased, and the quality of the latter very much improved by the introduction of superior breeds and crosses." The Leicester and Cheviot cross was important on the arable farms and considerable attention was now being given to breeding, rams consequently often fetching high prices.

Cattle breeding too had developed and by the middle of the century there was scarcely a stock of pure Longhorns in the region.† The Shorthorns which had then been

* William Dickinson, *The Farming of Cumberland*, p. 85, in *Journal of the Roy. Agric. Soc. of Eng.*, Vol. XIII. Pub. separately 1853 in a 96 page report—this and subsequent quotations are from the report.

† In 1866 there were in Westmorland 91 head of cattle for every 100 inhabitants.

”	”	Cumberland	53	”	”	”
”	”	England	10	”	”	”

bred in Cumberland for about forty years were the predominant breed. Their introduction had been regarded with doubt and distrust but the work of Curwen, Graham and later the Earl of Lonsdale amongst others, resulted in their dissemination in all parts of Cumbria by the middle of the century. The neighbourhood of Penrith was pre-eminent for the number of high-bred stocks and had established a reputation for this breed which exists to the present time. Now that turnip growing was important, winter feeding became general and many arable farms were able to feed annually twenty or thirty or more head of cattle where fifty years previously the keeping of one or two cows in the winter season had been a rare occurrence. The cattle were then mostly sent away as they became ready, to the markets at Liverpool or Newcastle.

Whilst the Shorthorns were displacing the Longhorns over the greater part of Cumbria an exception was the Bewcastle area where Galloway cattle were introduced. Dickinson's words have been shown to be true when he said "There can be no doubt of those cattle suiting the high parts of that district better than the Shorthorns or any other breed, and the just predilection of the occupants in their favour will ensure their permanency" (p. 48).

Evidently at this time (i.e. c. 1853) records were being kept, for "the dairy books kept by some gentlemen farmers show the milking qualities of their herds with great accuracy . . . and if brought into general use on farms would unfold truths which many do not think of." But said our reporter "Book-farming is still held up to ridicule by the few who cannot read or understand books, but is eagerly investigated by the many young farmers who are anxious to know more, and farm better than their fathers have done." "It is unquestionable that well-educated men are better able to conduct their farms properly, and, above all, are able to keep accounts and to

know at any time how their affairs stand as to profit and loss."

Whilst John Christian Curwen had developed turnip husbandry, improved the drill horse hoe or weed-harrow, shown the advisability of penning sheep on turnip land, used carrots as a substitute for oats, and generally made farming experimental,* his favourite pupil, Sir James Graham (1792-1861) appears to have devoted his energies chiefly to land drainage.

It was during Sir James Graham's five years forced retirement from public life (1821-26) that "he got fairly indoctrinated in agriculture, and carried the Curwen standard on to another generation."† When he succeeded to the estate in 1824 the 18,000 Netherby acres were "under the ban of certain per cents" but recovering from his first intention of selling the land he devoted himself with double energy to agricultural pursuits. Having seen the good results that attended tile draining when on a visit to his uncle at Thorpe in Staffordshire he engaged a person from Tamworth to discover if proper clay could be found upon the Netherby estate (near Longtown in North Cumberland) for making tiles, and on receiving a favourable report, commenced operations in 1819 or 1820.

Soon £2,000 a year was being spent upon draining at Netherby and prizes were offered annually for the largest number of tiles used. Between 1823 and 1849 12 million tiles were made and used on the estate, and within thirty years there were 42 tileries in the district. In a few years the barren and poorly productive land was made dry and fit for every operation of husbandry. "Where bogs and

* As early as 1807 the Society of Arts, Commerce and Manufacturers in London, voted their gold medal to Mr. Curwen for various improvements in agriculture. He it was who formed the Workington Agricultural Society (1805-1826) which became the largest provincial meeting of farmers in England.

† Henry Lonsdale, *The Worthies of Cumberland*, London, 1868 (The Rt. Hon. Sir J. R. G. Graham, Bart., of Netherby), p. 289.

quagmires made it almost unsafe for humanity to tread, where cold lands revealed a barren surface, where turnips were almost unknown and wheat was a rarity; where bad-shaped cattle and 'hunger-em-out' pigs were the chief livestock around thatched biggings, and where roads were hardly usable without risk to horse and machine; the eye of the observer now rests upon large plots of arable land, rich in cereals, green crops, and pastures upon which first class animals browse and fatten; good homesteads, capital roads, high class farming."*

The name of James Smith of Deanston (b. 1789) is usually associated with the introduction of land drainage but careful comparative enquiries might show that Sir James Graham, held prior claim. Sir James Graham's example was followed in Westmorland by Lord Lonsdale and tile works were established at Lowther, Wetheriggs, Julian Bower and other places in the north of the county.† The only tile works in the south was at Lupton near Kirkby Lonsdale, and elsewhere, owing to the lack of clay, tiles had to be brought from Lancashire.

The chief scene of Lord Lonsdale's activities was on Shap Fell, on ground from 1200 to 1600 feet above sea level. The first operation was to tile drain the wet portions and this was carried on from year to year, until more than 1200 acres were drained. Limestone being on the ground, kilns were built, and about 1500 acres limed. The lower lying portions were enclosed with six-foot walls and sheds erected for sheltering stock whilst the upper portion was left as a mountain sheep walk and grouse ground. By 1868 this was let to a tenant at a rental of about £800 per annum.

* *The Worthies of Cumberland*, p. 41. It has been estimated that between 1822-1890 nearly a quarter of a million pounds was spent on the improvement of the Netherby Estate. Dickinson, p. 85, states that in Cumberland to the end of 1851 tiles and pipes made was 275,528,000, sufficient to have drained 140,000 acres.

† In 1852 3-inch tiles were £1 to £1. 7s. 6d. per 1,000.

It should be stressed that this work of drainage which owed so much to Sir James Graham made possible the full realisation of all the discoveries and inventions which followed later in the century. New manures like guano, nitrate of soda and superphosphate could be used extensively without fear that much of their potency would be lost in the mire. The greater stock carrying capacity of the drained lands* led to a general improvement of breeds, whilst drills, hoes and other agricultural machinery could be used more easily, and, most important, the turnip crop did not become general until it was related to, or rather preceded by, tile-draining. Another interesting relationship was noted by Dickinson later in the century, he said "Since more attention has been paid to draining and early and regular sowing, there has been less difference in the period of harvest between the naturally rich lands of Furness and the improved lands of Cumberland; and it not unfrequently happens now that a week or so is the only difference, instead of two or three weeks, as formerly."† The result was the cessation of migration "from the bases of the western mountains to the early harvest of Furness."

By 1853 Dickinson remarked "manures are now assuming the importance they are justly entitled to in rural affairs . . . the best farmers also exercise more judgment in preparing, mixing, preserving and applying the manures produced on their farms." "Farmers at a distance from the seaports have double reasons for being careful in preserving the qualities of their home-made manures; they cannot have the cheap manure which the Irish coal vessels bring over as ballast; nor can those at a distance from any towns send their carts for the town manures; therefore they have only their own resources to rely upon, aided by guano and the more expensive preparations they risk the

* "The farm belonging to Holme Eden . . . has been made almost to double its produce within the last 10 or 15 years by thorough draining (2½ to 4 feet deep)." Dickinson, p. 19.

† Dickinson, p. 16.

purchase of." Guano was now extensively used over most of Cumbria but bones and the composts of lime and soil so common when Bailey and Culley made their survey, were little used.

In 1860 two manure agents were attending Kendal market and the Kendal Farmers' Club which was formed in the following year had as one of its objects " the analysis of artificial manures." By 1867 some 25 manure agents were operating in this market providing evidence that the new chemical and scientific ideas, which were the second of the outstanding features of nineteenth century development, were now being actively followed.

Implements not seen by Bailey and Culley were now in use. Such was the thrashing machine, some 306 being in use in West Cumberland in 1849, seven were steam driven, one by wind, seventy-one by water and the rest by the more expensive power of horses. Drills for sowing grain were still not numerous being too costly for any but the large farmers. Almost every parish had its plough maker and iron had been substituted for wood.

The third and in some ways the most important factor concerned in the great change was improved communications. Down to the end of the eighteenth century there were only four carriage roads in the region, from Lancaster northward through Kendal, Penrith and Carlisle to Scotland; from Egremont through Cockermouth and Carlisle to Newcastle, the two being linked by roads from Cockermouth to Kendal through Keswick, and from Keswick to Penrith. The remainder were cart-lanes or bridle tracks with narrow bridges for the pack horses and as late as 1792 some of the tracks over the commons had to be re-opened to wheeled traffic each spring. The whole of the west coast had no adequate connection with the carriage roads and Kendal was pre-eminent as a road centre—more important than Carlisle. It was in the latter half of the eighteenth century that the first stage coach linked

Kendal with London. Although in the nineteenth century the road system was extended and developed it must be noticed that the west coast route never received adequate attention and in consequence the agricultural regions of this part, the St. Bees Coastal Belt and the South Coast Plain had not developed as the soil and climate warranted.

In the first quarter of the nineteenth century attempts were made to compensate for the lack of navigable rivers by cutting canals, such as the Kendal-Lancaster Canal (1819),* the Port Carlisle-Carlisle Canal (1819-23) and by the development of a coastal trade.† By about 1820 it was estimated that the annual grain shipments from Whitehaven were over 10,000 quarters, whilst from Maryport and Ravenglass together, about half that quantity was probably exported, chiefly to Lancashire with the remainder to the Severn ports.

These efforts were however soon surpassed with the coming of the railways. The first line to be opened was that from Newcastle to Carlisle in 1838. Although relatively far removed from the county of Westmorland yet it affected markets as far south as Kendal. "In April, 1838, for the first time, two wholesale egg merchants attended Kendal market and bought up all the eggs at 4½d. per dozen. They packed them in carts and took them by road to Carlisle where they were transferred to the railway and taken to Newcastle, whence they were shipped by steamer to London."‡ So commenced a link between Cumbrian agriculture and the North East coast which has steadily developed for over one hundred years and still affords an important outlet for surplus produce.

* John F. Curwen, "The Lancaster Canal," *Trans.* n.s. xvii, 26-47.

† The idea of a Tyne-Solway Canal was apparently first made public at a meeting called in Newcastle in 1817 to consider the "comparative merits of accomplishing the projected communication by canal, railway or other means."

‡ Garnett, F. W., *Westmorland Agriculture*, 1800-1900, p. 46.

Access to the ever-growing markets in the Lancashire manufacturing towns was made easier by the opening in 1846 of the Lancaster and Carlisle Railway with its branch to Kendal and Windermere in 1847. In September of the latter year a fortnightly cattle fair was commenced at Kendal, and in 1849 at Milnthorpe station, with the purpose of providing fat cattle for Manchester. Penrith was also another centre for these fortnightly fairs and so the effect of the new means of communication was felt almost immediately by agriculturists.

Carlisle benefited most from improvements in transport and because of its nodal position on the Solway Plain developed as a livestock auction centre until to-day it is one of the largest centres in the country.*

Until the opening in 1856 of the North British line between Carlisle and Silloth, Wigton market had been noted for corn and other produce, the farmers of Abbey Holme finding it a suitable centre for their disposable surplus. The diversion of trade to Carlisle consequent upon the building of the railway affected the market to a considerable extent and this decline was later accentuated by the importation of foreign grain.

One minor feature, but indicative of the trend of events was the falling into disuse of many small lime kilns which were a conspicuous feature of nearly every farm in the limestone area, and the growth of large limestone companies sending the output by rail.

The consequent changes in the condition of rural life had an influence on the progress of industry, although not to the same great extent as in other parts of the country. One of the characteristic features of the domestic system of manufacture was the scattering of workshops in the villages, with the ultimate basis of the system consisting

* T. H. Bainbridge, "Carlisle—A Geographical Analysis," *Journal of the Tyneside Geographical Society*, No. 2 (Jubilee Issue), Oct., 1937 (N.S.) Vol. I, pp. 102-111.

of a close alliance between cottage industry and the cultivation of a small holding. In the early years of the nineteenth century almost every cottage had its hand looms and usually each member of the family participated, the father and sons weaving, and the wife and daughters winding the weft for the looms.

On market days the country people brought in their "webs" to the nearest town. Carlisle was a very important centre and Messrs. Dixon and Ferguson of that city had also "factories" at Wigton, which were supplied by the surrounding villages, in one of which alone, Oulton, there were over 50 looms. In 1811 there were eleven textile establishments in Wigton, the largest of which, the Printworks at the Stampery, employed at one time 450 to 500 workers.

Some of the country people grew their own flax, prepared it in all its stages, wove it into cloth or sold the yarn to manufacturers. The flax did not undergo the refining processes of modern times, it was "heckled" by the farmer or his family into threads of required thickness and though the home-made 'lin' sheets were coarser in appearance than the modern manufactured article yet they were tough and serviceable.

The introduction of the power loom led to the centralisation of the textile trade especially in Carlisle and the hand loom weavers experienced hard times whilst with the increasing localisation of the cotton and woollen industries in Lancashire and Yorkshire the hatteries, blanket factories, printworks, dye works, etc., also declined. Knitted hose were once important and it is computed that at one time over 3,000 pairs found their way every week into Kendal market and were then transported on the backs of 300 pack horses to various parts of the country. The hand loom weaving of cotton goods, especially important in the Carlisle neighbourhood has died. At one time there were at least a dozen linen mills in Cumberland where home grown flax was used.

Hand made straw goods and especially straw-hats were formerly important and the last link with Penrith's once flourishing trade was severed in 1936 when the oldest inhabitant—a woman—died at the age of 96. In some parts, e.g., at Lily Hall, Distington, a special straw was grown for this particular industry.

In the eighteenth century every considerable village had a tannery, some had more, whilst places like Cockermouth had seven and Egremont four. The introduction of steam power and the employment of chemicals instead of oak bark tended to make for a reduction of numbers.

Gone too are the breweries, the flour mills and the saw-mills, where several sawyers performed their laborious tasks in the days before the circular saw. And gone too are the country bobbin mills one of which used to be one of the attractions of the 'Howk' at Caldbeck where the large water wheel is but a relic of a once thriving industry. And, as the following table clearly shows there gradually passed out the statesmen, or peasant proprietors, who had been dependent on the commons; ruralists, men of the land, of their own land, rough-hewn, rugged, brusque may be, but men of personality who left their mark on Cumbrian history.

Statesmen.

<i>Parish of Abbey Quarter. Ravenstonedale.</i>				<i>Westmorland.</i>	
<i>In Wigton Union.</i>					
1780	51	1734	181	1829	899
1812	38	1877	70	1849	549
1837	30			1885	439
1864	21				
1894	9				

APPENDIX.

TABLE OF COMPARATIVE AGRICULTURAL RETURNS FOR CUMBERLAND AND WESTMORLAND.

Based on the Official Statistics of the Ministry of Agriculture and Fisheries.

	CUMBERLAND				WESTMORLAND			
	1866	1867	1899	1900	1866	1867	1899	1900
ARABLE LAND	273592	273760	239681	237336	53945	55584	42334	41853
Wheat	23979	22856	3578	3174	2194	1889	177	169
Barley	11372	11511	2350	1988	2628	2932	897	794
Oats	71870	72046	73918	73030	17042	16977	15387	14995
Potatoes	12137	11498	9232	8863	1767	1771	1501	1440
Turnips and Swedes	33263	34690	31454	30419	8292	8493	6778	6377
Mangolds	381	442	1521	2221	84	93	524	858
PERMANENT PASTURE	229439	241612	342403	344428	159931	166366	205905	206360
ANIMALS								
Cattle	109225	104184	149313	148339	55328	50653	68146	67608
Sheep	396021	525064	594820	580618	224664	328328	380900	374453
Pigs	40742	35386	22781	18816	7413	6466	4695	4274

NOTES. The first agricultural census was undertaken in 1866 by (1) the Board of Trade. As this was on the 5th March but was changed to June in the following year, 1867 figures should be used in any comparisons with later years, especially with regard to sheep.

(2) The most important change in the period 1866-1900 was the laying down of the land to grass and the decline in arable cultivation, especially the abandonment of wheat. The natural accompaniment of this was the increase in stock, relatively greatest in cattle because they are best fitted to live on land formerly tilled.