

The Prosperity of Farming on the Lindsey Uplands, 1813-37

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LORD ERNLE's dictum, that "Between 1813 and the accession of Queen Victoria falls one of the blackest periods of English farming,"¹ is today considered an "unsatisfactory" if not untenable generalization of the experience of English agriculture during the deflationary era.² In its place a mosaic has appeared of a "primarily arable depression," especially on the clays, with shortlived universal depressions from 1813 to 1817, from 1821 to 1823, and from 1833 to 1836, with wide regional and individual variations of depth.³ The change of interpretation has not come about because English farming has experienced depressions since Ernle's time that make the period from 1813 to 1837 appear a "golden age" in comparison, and neither is it the result of "reassessments" of the prosperous eras in the history of farming that preceded and succeeded the one in question. Rather it might be said that the reinterpretation, which has so far largely occurred from a national perspective, forms part of that general trend in the historiography of English agriculture which is tending to deny farmers their depressions.

The logical outcome of the current trend in English agricultural historiography for the post-Napoleonic-war period is a necessity for more analyses of the various agricultural regions of the country, upon which any satisfactory national interpretation must be based. The trend must also lead to an eventual questioning of some of the broader hypotheses upon which English economic history is based, including particularly the assumed greater

profitability and prosperity of manufacturing industry over farming and the sources of capital for industrial growth during the later eighteenth and first half of the nineteenth century. The present essay represents an attempt to follow this logic by offering a synthesis of the experience and profitability of farming on the uplands of Lindsey between 1813 and 1837, and by tentatively exploring some of the broader hypotheses suggested by an optimistic conclusion on the experience of farming.

I

It is somewhat paradoxical that, at the very time that the Malthusian notion of the inevitable tendency of population growth to outstrip the rate of growth of food supply was first formulated and widely accepted, English farming demonstrated a remarkable ability to lift the ceiling on production, and especially to yield increasing returns from labour and capital employed on the light and formerly marginal soils of eastern England. Nowhere was this transformation more evident than on the uplands of Lindsey, an agricultural region comprising the oolitic limestone Cliff north of Lincoln of some 110,000 acres in extent, and the chalk wolds comprising some 260,000 acres in eastern Lindsey.⁴ Before the later eighteenth century extensive grazing on poor pastures predominated over tillage in this region, which represented one of "the most considerable tracts of unimproved country in England." A large proportion of the uplands was devoted to sheepwalks, on which stock

¹ Lord Ernle, *English Farming Past and Present*, 6th edn, 1961, p. 319. A similar conclusion was reached in L. P. Adams, *Agricultural Depression and Farm Relief in England 1813-1852*, New York, 1932, pp. 140, 149.

² Ernle, *op. cit.*, O. R. McGregor's Introduction, p. xcii.

³ E. L. Jones, *The Development of English Agriculture, 1815-1837*, 1968, pp. 10-17; J. D. Chambers and G. E. Mingay, *The Agricultural Revolution 1750-1880*, 1966, pp. 126-30.

⁴ Acreage estimates derived from S. M. Makings, *The Economics of Poor Land Arable Farming*, 1964, p. 117; Lincolnshire Archives Office (L.A.O.), Massingberd MSS. 30/14; T. Allen, *The History of the County of Lincoln*, Leeds, 1830, I, p. 1.

was bred and reared for sale to lowland graziers, and for folding on the small arable "infields" adjoining the villages in the valleys of the wolds and along the scarp of the Cliff. And on the thinnest soils of the central and southern wolds a large acreage was devoted to rabbit warrens, "the dernier resort of poor land." In such a marginal agricultural region in the middle decades of the eighteenth century, it was necessary for farmers to occupy large acreages in order to afford a bare subsistence.¹

The farming system on the Lindsey uplands began to change perceptibly from the 1780's, in consequence of a dramatic fall in wool prices associated with the disruptions to overseas trade during the American War of Independence, and with the upsurge of mechanized cotton-spinning which provided cheap yarn for partial substitutes for wool textiles. Although prices recovered in the 1790's, and never afterwards fell to the levels of the 1780's, wool itself was never again to recover its former predominance in the rural economy of the uplands. The shock of the price fall in the 1780's made farmers wary for many years afterwards of placing almost complete reliance upon returns from the sale of the wool clip. "Graziers in the county of Lincoln," in the early 1800's, were "afraid to adopt measures calculated to render their fleeces more weighty, because they have not yet forgotten how much the value of wool was reduced, and what a large quantity was left on hand during every year of the American War."² Thereafter, the growth of additional and alternative sources of supply for long-wool in other parts of England, with the substitution of long-woolled for short-woolled breeds on pastures converted to tillage under fodder and cereal crop rotations, and with the development of spinning machinery permitting shorter-stapled fleeces to be spun into worsted yarn, acted to reduce the price of long-wool in relation to prices of other agricultural commodities.

Following the dramatic fall in wool prices in the 1780's, the markets for the products of the rabbit warrens, which had once been an alternative form of land usage to sheepwalks on the light soils of the uplands, began to disappear rapidly during the 1790's. Changing fashion brought a decline of demand for silver-grey rabbit fur for "muffs, tippets," and robe linings, and hatters appear to have increasingly preferred the fur of the common rabbit that was becoming increasingly abundant with the spread of fodder and cereal crop rotations on the light soils of eastern England. The meat provided by the slaughter of the stock of the rabbit warrens, which had once been a cheap source of protein for the working classes of towns in close proximity to the warrens, was displaced by the mutton yielded by Bakewell's New Leicester breed of sheep, whose "over-fat" meat was designed for the palate and purses of the working classes.³

With the decline of extensive forms of land usage on the Lindsey uplands, the secular growth of population in the region from about 1750 onwards made it practicable to consider more intensive systems of farming. However, the main impetus to agricultural progress in the region came in the late 1790's with the upsurge of cereal prices. The virtual plateau of high prices for cereals from the later 1790's to 1813 acted to transform Lindsey from a marginal supplier of cereals to external markets, when local supplies were abundant in relation to those of other areas, into a permanent and significant contributor to the national supply of basic foodstuffs.

The high prices of cereals prevailing during the majority of the war years offered the prospect of a return to farmers for bringing the light soils of the Lindsey uplands permanently under the plough, to be cultivated with cereal and fodder crop rotations designed to raise the fertility of the soil and the profitability of farming in the longer term. To bring the land

¹ A. Young, *A Six Months' Tour Through The North of England*, 2nd edn, 1771, II, p. 10; J. A. Clarke, 'Farming of Lincolnshire', *J.R.A.S.E.*, XII, 1851, p. 362; T. Stone, *General View of the Agriculture of the County of Lincoln*, 1794, p. 38.

² J. Luccock, *The Nature and Properties of Wool*, Leeds, 1805, p. 200.

³ Allen, *op. cit.* I, p. 59; J. Mackinnon, *Account of Messingham in the County of Lincoln*, Hertford, 1881, p. 12; A. Young, *General View of the Agriculture of the County of Lincoln*, 2nd edn, 1808, p. 435; A. Blacklock, *A Treatise on Sheep*, Glasgow, 1838, pp. 95-6; W. Marshall, *Rural Economy of the Midland Counties*, Dublin, 1793, I, p. 232.

to a peak of fertility required a considerable investment of capital, which was largely borne by a tenantry occupying their farms without the security of leases, and which—although inflation during the war years reduced the time-span between investment and return—was not completely returned before a number of years had elapsed. The landlords provided the framework for progress by financing the enclosure of the land and the relocation of the farmsteads from the villages in the valleys (where they had formerly been situated to provide easy access to the waters of springs and the arable of the “infields”), to the “tops” of the hills (where they were required in order to bring the land permanently under the plough).¹ Thereafter, the landlords mainly assisted their tenants by permitting a lag to exist between the level of farm rents and the productivity and profitability of the farms. But the initiators of the agricultural revolution on the Lindsey uplands were the tenant farmers, and the overwhelming bulk of investment in the land from the turn of the nineteenth century consisted of tenant outlays.

In converting the land from pasture to permanent tillage the tenants had to expend a total of £8 to £9 per acre, or the equivalent of fifteen to twenty times the unimproved annual value of the land in the late 1790's. On the wolds, in particular, the land had first to be “pared and burnt,” by gangs of men using breast-ploughs to lift the turf, in order to reduce pests in the soil, such as wireworms, and to provide a fertilizer for turnips. Next the land was “marled” or dressed with chalk at the rate of 80 cubic feet per acre, to impart solidity and “sweetness” to the soil, and to counteract “fingers and toes” in turnips—the tendency of turnips grown on light soils to run to a taproot. Finally, the process of reclaiming the land for tillage was completed by a dressing of 60 bushels of bones per acre on the initiating tur-

nip crop in the rotation. For a few years thereafter, in order to raise the fertility of the soil to a point at which it would permit two or three cereal crops to be taken every five years, fodder crops had to appear in the rotation more often than was desirable in the light of relative prices for cereals and livestock products during the war years. And a dressing of bones, of about 20 bushels per acre, and a liberal application of manure from the crew-yard, continued to be applied to the land every four or five years, or whenever turnips recurred in the rotation, while a dressing of chalk was required every twenty to twenty-five years.²

Once established during the war years, the momentum of agricultural progress on the Lindsey uplands was maintained throughout the supposedly difficult period for farming that persisted until the later 1830's, if not until the middle of the 1850's. And it was essentially after 1813 that the farming of the region came to account largely for the contemporary reputation of the county of Lincoln for advanced farming methods. By the early 1850's, in the words of a competent French observer: “If Norfolk has long held the first rank among the English counties for agricultural development, Lincolnshire, which a century ago was more waste and sterile, now disputes the palm.”³ There were, however, important differences of emphasis between the farming of wartime and that of the postwar years. Where previously the farmers had striven to raise output without according much consideration to costs, whose increase was retarded in the instances of rent and wages by custom and tradition, and whose general significance was eroded by inflation, after 1813 they were motivated to increase the productivity of labour and capital as well as the productivity of the land. After 1813 the prosperity of farming came to depend not only

¹ Stone, *op. cit.* p. 40; Young, *Six Months Tour*, II, p. 19; J. Grey, ‘On Farm-Buildings’, *J.R.A.S.E.*, IV, 1843,

p. 4.

² P. Pusey, ‘On the Agricultural Improvements of Lincolnshire’, *J.R.A.S.E.*, IV, 1843, p. 299; J. A. Clarke, ‘On the Advantages and Disadvantages of Breaking up Grass Land’, *J.R.A.S.E.*, VIII, 1847, p. 510; Young, *General View*, pp. 77–8, 157, 300; B.P.P., 1836, VIII, p. 72; G. Legard, ‘Farming of the East Riding of Yorkshire’, *J.R.A.S.E.*, IX, 1848, p. 121; P. Pusey, ‘On the Progress of Agricultural Knowledge during the last Four Years’, *J.R.A.S.E.*, III, 1842, pp. 180–2.

³ L. de Lavergne, *The Rural Economy of England, Scotland and Ireland*, 1855, p. 4.

upon the farmers' ability to increase the gross output of their farms, to maintain the level of farm income by means of a larger volume of produce, but also upon a lowering of costs per unit of output to maintain profit margins. Both of these objectives were achieved by the continued development of the farming system in the direction initiated during the war years.

Tenant capital continued to be expended upon bringing more and more of the poor pasture land under the plough to support fodder and cereal crop rotations. The ratio of livestock to acreage steadily increased with the conversion of the land to arable until, by the 1830's, the average of about one sheep per acre on the eighteenth-century sheepwalks had more than trebled on the permanent tillage. The marketable qualities of the sheep and cattle maintained on the farms were considerably and rapidly improved by selective cross-breeding, which consisted of the retention of the females of the indigenous breeds for crossing with rams and bulls of the New Leicester breed of sheep and the improved Durham strain of shorthorns respectively; each of which possessed "a marvellous power of communicating its tendency to early maturity and its refining influence to those breeds with which it is crossed". Oilcake was introduced into the farming system in order to offset the effects of fluctuations in yields of turnips and artificial grasses upon sheep numbers carried on the farms; and it was fed to cattle wintered in crewyards for the purpose of assisting the digestion of otherwise worthless straw to provide a valuable manure, and to provide an additional source of farm income in the form of sales of fatstock or stores. New varieties of seeds were adopted where they accorded better than existing varieties with local farming conditions and market preferences, as with hybrid turnips, the Chevallier strain of barley, and Hunter's "smooth-chaffed" variety of white wheat. In the processes of tillage, the large, ponderous, and slow indigenous breed of black horses, which were only suited for fieldwork on the "heavy, tenacious, clay soils," was steadily transformed by means of

crosses with thoroughbreds, and other cart breeds, into a strain of the "Old English or Shire-bred horses" that produced a "lighter and more active style of horse for the farmer's plough-team." The productivity of manual labour was increased by means of improved handtools, and extension of "task-work" to as many activities on the farm as possible, and by improvements in the organization of labour to permit an increased degree of specialization and continuity of work. And mechanical aids were introduced into the farming system, either to reduce costs and speed up the processes of preparing the land for crops, as with the adoption of the drill and subsequent improved versions of manure and seed drills which were in widespread use of the uplands from the 1790's onwards; or, to reduce costs and enable the farmers to react to seasonal and even weekly fluctuations in the prices of cereals without interfering significantly with the other necessary activities on the farms, as with the adoption of the threshing-machine.¹

As a result of the improvements in the farming system on the uplands, costs fell significantly after 1813 even in relation to the prices of final products. The ability of the permanent arable to support an increasing volume of stock, which considerably exceeded that carried on the former sheepwalks, enabled the farmers to take advantage of the divergence in price trends after 1813 which favoured livestock products over cereals. And, along with improvements in seed varieties and the adoption of "the drill husbandry," the rising ratio of livestock to land also compensated the farmers for low cereals prices in the form of higher yields. From an average of 20 to 24 bushels of wheat per acre in the late 1790's, for a sowing of up to 4 bushels of seed, average yields of wheat on the wolds increased to 28 to 32 bushels per acre in the 1830's. As a parliamentary investigation into "agricultural distress" in the mid-1830's was informed by the steward of the largest estate on the Lindsey uplands, that of the Earl of Yarborough: "the farmers in our part of the country . . . are spirited managers . . .; consequently the pro-

¹ R. Wallace, *Farm Live Stock of Great Britain*, 4th edn, Edinburgh, 1907, p. 572; J. Burke, 'Breeding and Management of Horses on a Farm', *J.R.A.S.E.*, v, 1845, p. 519; J. A. Clarke, 'Practical Agriculture', *J.R.A.S.E.*, 2nd ser., xiv, 1878, p. 580; E. J. Hobsbawm and G. Rudé, *Captain Swing*, 1969, Appendix iv, p. 362.

duce has been very great, and it has enabled them to go through the late bad times without experiencing any very great difficulties." In fact, the steward appears to have underestimated the actual success of the farmers in combating low prices for cereals, for rather than having, according to Ernle, "little capital left" by the mid-1830's, many farmers were making considerable profits to add to their accumulating fortunes.¹

II

Unfortunately, it is impossible to determine exactly how many farmers on the Lindsey uplands prospered during the years between 1813 and the later 1830's, and especially during the mid-1830's, and how much profit they made from their farms. Farm accounts and other evidence of outlays and returns in agriculture are rare survivals into an age in which an historical interest in them may be said to exist. The few extant accounts are generally rudimentary and often unintelligible documents, and many of the specific problems associated with farm accounting, and particularly those associated with interrelated systems of mixed livestock and tillage farming, have yet to be completely and satisfactorily overcome. Moreover, the majority of tenants were understandably wary of committing to paper, publicizing, or offering co-operation in assessments of farm profitability, where the results might be used to justify an increase of rent or a withdrawal of agricultural protection. Nevertheless, within the limitations imposed by the evidence it is possible to reach conclusions in which some degree of confidence might be placed.

In operating their businesses the tenants of farms on the Lindsey uplands appear to have adopted the traditional objective of producing a gross annual output that was equal in value to at least three times the amount expended upon rent and tithes. As a minimum standard for the returns of farming, total profit and current outlays were together divided into three equal parts. Firstly, rent and tithes, or the primary charges upon tenant farming. Secondly, all other outlays, including those upon the wages

of labour, depreciation of deadstock, parochial, and county rate-calls, and the upkeep of the farm family. And thirdly, net profit, which was a "clear profit" over and above the farmer's interest on his capital and living expenses during the year. This was the manner in which Francis Iles, amongst others, operated his farm of 957 acres on the wolds in the mid-1830's. His annual rent and tithes amounted to £1,148, a figure that also represented his ideal outlay upon all other costs of farming and his "clear profit" objective.² If the latter fell below the objective, it was time to demand a rent rebate or reduction, or to cut down on other outlays, of which the price of labour was the most susceptible to adjustment.

An estimate of the "Supposed Value of a Wold Farm" was made by the agent of the Yarborough estate with the co-operation of the tenant in 1836.³ This is the only known document which attempts to assess the actual value of a wold farm to its tenant, although its contents are limited to a breakdown of gross estimated produce and the totals of annual expenditure and capital stock invested in the farm by the tenant. The farm in question comprised 1,020 acres of land, divided between 840 acres of permanent arable and 180 acres of permanent grass, and yielded an estimated £4,730 per annum from the sale of its produce. This amount was distributed between the various commodities produced on the farm according to table 1.

On this particular farm, as on the majority of upland farms by the 1830's, livestock and livestock products accounted for over 40 per cent of the total returns from the sale of produce. If the value of the manure yielded by the livestock were subtracted from the estimated returns from the sale of cereals and added to those of livestock, the contribution of livestock to farm sales would probably exceed 50 per cent. Sheep accounted for the overwhelming majority of the return from the sale of livestock products. In fact, the account underestimates the actual contribution of sheep to farm income, because the farmer "had 660 Hogs on Turnips bred on his farm" instead

¹ B.P.P. 1828, VIII, p. 473; B.P.P., 1847-8, VII, p. 16; Young, *General View*, p. 145; B.P.P., 1836, VIII, pp. 75, 77; Ernle, *op. cit.*, p. 325.

² B.P.P., 1836, VIII, pp. 173-7. ³ L.A.O., Yarborough MSS. (Yar.), 5.

TABLE I
ANNUAL VALUE OF PRODUCE SOLD OFF A WOLD FARM (1836)*

I. CEREALS		
Quantity		Value £
1,000 quarters of Barley @ 27s. per quarter		1,350
600 quarters of Wheat @ 40s. per quarter		1,200
200 quarters of Oats @ 23s. per quarter		230
		2,780
II. LIVESTOCK		
<i>A. Sheep</i>		
300 Hoggetts @ 45s. each		675
150 Hoggetts @ 40s. each		300
150 Drape Ewes @ 30s. each		225
		1,200
Wool		470
<i>B. Cattle</i>		
20 Three-year-old Heifers and Steers @ £14 each		280
		£4,730

* *Ibid.* The quantities of cereals recorded are those that the farmer "expected to deliver or sell from this year's produce reserving a sufficient quantity for Seed."

of the 600 listed. Most of the income derived from sheep came from the sale of mutton. Wool, once the basic commodity produced by upland farmers, represented only 10 per cent of the estimated annual value of produce sold from this particular farm in 1836, although in most years the proportion appears to have been in the region of one-third. Cattle, as on most Lindsey farms, were merely "machines for converting straw into dung" to manure the arable, rather than a significant direct source of income to the farmer.¹ In the distribution of returns between the various agricultural commodities, therefore, the estimate may be taken as being fairly typical of large farms on the wolds.

The prices and quantities recorded in the estimate probably understate actual returns and yields. Assuming that the whole of the 840 acres of permanent tillage on the farm was operated under the five-course rotation common on the Yarborough estate, a maximum of

168 acres would have been devoted to barley. The resulting estimated yield of 40 bushels of barley per acre would appear to have been a rather conservative approximation to the actual yield. In 1841, according to the steward of the Yarborough estate, one tenant "admitted . . . that last year he had sixty bushels of Barley clean dressed for Market per acre, and judging from the appearance of the stubble . . . not much less this year."²

The prices of cereals recorded in the estimate appear to be considerably below the average for the entire period from 1813 to 1837, and somewhat less than those actually received by farmers on the Lindsey uplands in 1836. According to a contemporary calculation made by the arbitrators appointed under an enclosure Act, the average price paid for "good Marketable Wheat" in Lincolnshire from April 1818 to April 1840 was 56s. 2d. per quarter. In 1836, according to another estimate, the average price of wheat in Lincoln-

¹ *Ibid.*; Pusey, *J.R.A.S.E.*, 1843, *op. cit.*, p. 301.

² *L.A.O.*, Yar., 5, 25 Sept. 1841.

shire was 48s. per quarter. And, on the basis of the official returns of recorded sales at markets, G. R. Porter estimated the national average price of wheat in 1836 at 48s. 6d. Moreover, it has to be borne in mind that the averages disguise the fact that the white wheats grown on the Lindsey uplands realized prices that were from 10 to 20 per cent higher than those paid for the red wheats produced in the lowlands of the country. At the corn market held on 4 January 1837 at Louth, a market town on the edge of the wolds, red wheats sold for 54s. to 58s. and white wheats for 59s. to 63s., according to the quality of the sample. In the early 1850's, when wheat prices were very low, the steward of the Yarborough estate noted "the great difference in the Value of Land that would grow good white wheat and land that would not, and to the latter class nearly the whole of our Clays belong." And as a consequence of their large capital resources, and of the importance of barley in the upland economy as a source of receipts from November to March when the prices offered for malting samples were at a peak, the large farmers of the uplands were able to dispose of the bulk of their wheat crop during the late spring and early summer months, when prices usually recovered to a seasonal peak from a dramatic fall after harvest. As late as the 1860's it was said that: "Small farmers thresh early, large ones hold on, and don't thresh sometimes till May." And the ability of a farmer to hold his wheat off the market was commonly viewed as a sign of his wealth: "The farmer who had no wheat to sell was looked on with suspicion as a man who had been pressed by his creditors, and forced to realise."¹

To farm his land the tenant possessed a capital of £8,600, or slightly over the £8 per acre that was considered necessary for progressive farming on light soils.² Of this amount £6,000 represented the fixed capital assets of the farm, comprising the cattle and sheep maintained for breeding purposes, and the horses and implements employed in tillage.

In addition, the farmer's circulating capital of £2,600 covered the year's outlay necessary to farm the land. Rent and tithe accounted for £1,300 of this sum, and the remaining half was expended upon the wages of labour, the parochial and country levies, the necessary fertilizers, and repairs, the depreciation of livestock and deadstock, "and all other contingent charges." After deduction of the tenants' circulating capital from the gross receipts from the sale of farm produce, which amounted to £4,730, the remaining estimated profit of £2,130 was the equivalent of 45 per cent of turnover, and an average of £2 per acre of land. Expressed as a return on the tenant's total capital of £8,600, the estimated profit was 25 per cent. After deduction of 5 per cent as a return on capital, which was a common practice amongst manufacturers and an approximation to the current rate of interest on investments in relatively secure assets such as Consols, the farmer received a return of 20 per cent on his capital for the exercise of his managerial and entrepreneurial skills in "risking" his capital in farming.

The "clear profit" arrived at after deducting household and other expenditure of a personal nature by the farmer—"which the Tenant states to be under 500£"—was of the order of £1,600, or a return of 19 per cent upon capital. In spite of the objections of "Theoretic writers" to the inclusion of "charges for furniture and other family expenses" in the costs of farming, this remained during the first half of the nineteenth century a practice that was peculiar to farming. In part, perhaps, it stemmed from the difficulty of estimating the value of household food supplies drawn directly from the farm, and from the fact that the farmer had to reside in the house provided for him on the farm, for which the rent was rarely distinguished from that of the land and the other farm buildings. Moreover, in a sense the personal expenditure was a "necessary" cost of farming, for a "farmer must both furnish his house, and support his family, as well as

¹ L.A.O., Nelthorpe MSS, XV/II/25; *Lincoln, Rutland and Stamford Mercury* (L.R.S.M.), 16 December 1836, 6 January 1837; R. C. O. Mathews, *A Study in Trade Cycle History*, Cambridge, 1954, p. 30; J. Wilson, *British Farming*, Edinburgh 1862, p. 278; L.A.O., Yar., 5, 15 Jan. 1852; B.P.P., 1867-8, xvii, p. 297; A. G. L. Rogers, *The Business Side of Agriculture*, 1904, p. 30.

² Lavergne, *op. cit.*, pp. 110-11; Wilson, *op. cit.*, p. 543.

stock his land; and in whatever way the money is to be applied, he must have the requisite sum."¹ Nevertheless, and for whatever reason, the widespread practice of including personal expenditure in the costs of farming does suggest a different definition of "loss" to that pertaining in manufacturing industry.

III

The reliability of the estimate for the particular farm would appear to be incontestable. When he was requested "to point out any mistake or overcharge," the tenant stated that: "as I am not afraid of my Landlord taking advantage of my admission I am free to say that I will not take One Thousand Pounds for the clear profit I shall make from my farm."² The wider applicability of this experience cannot be exactly established. But there is a considerable body of evidence to suggest that the absolute amount of profit was equalled or exceeded on a not inconsiderable number of farms, and that the rate of profit applied to a large proportion of the acreage of the Lindsey uplands.

The point in time at which the estimate was taken was not one in which abnormal profits were made by farmers. The pressure upon farm profits during the years from 1833 to 1837 was probably greater than at any other time between 1813 and 1837. The prices of wool and cereals were exceptionally low. And as a consequence of the fear engendered by the "Last Labourers Revolt" of 1830-1, which lingered on in Lindsey in the form of sporadic acts of arson during the winter months until the later 1830's, the money wages of agricultural labourers were maintained at an artificially high level. In 1836, according to Lord Worsley, the heir to the Yarborough estate, the labourer "was getting more than he was entitled to in proportion to the price of wheat."³

Farms on the Yarborough estate were considered to be "lower rented" than the majority of the uplands. Concerning one farm on the estate the steward observed in 1841: "I cannot

think how Atkinson [the tenant], can have the conscience to accept it at 25/- an acre which is what he pays." In the steward's opinion the farm would have been "cheap at 34/- or 35/- an acre, being tithe-free."⁴ However, by the mid-1830's the gap between the rents of farms on the Yarborough estate and the general average on the uplands had narrowed considerably; and, as Lord Yarborough's steward put it, farms on the Lindsey uplands were "generally very low rented."⁵ Moreover, the 40,000 or more acres of wold land contained in the Yarborough estate accounted for a substantial proportion of the entire acreage of the region, a region in which that estate exercised a considerable influence upon the level of rents that other landowners could demand.

Advanced farming methods on the Lindsey uplands after 1815 were not confined to a minority of farmers, whose prosperity contrasted markedly with the poverty of the majority. The particular reasons for much of the praise accorded to farming in the region by agricultural writers in the 1840's and 1850's were the high *general* standard and the uniformity of farming upon soils that were of inherently low fertility, and the pace at which agricultural progress and the dissemination of advanced farming methods had occurred. "What struck me particularly," Philip Pusey recorded of the Cliff in the early 1840's, "you not only see generally very high farming, but you see in 40 miles hardly any bad farming—scarcely two or three slovenly fields." The inherently low fertility of the soils of Lindsey uplands made the uniformly high standard of farming appear all the more remarkable, to the extent that, according to Pusey, it was not possible to "place . . . the general farming of East Lothian on a level with that of Lincolnshire, because it is the best land only of East Lothian on which such noble examples of farming are given, while in Lincolnshire, the barren heath and wold have been taught nearly equal luxuriance." When the Earl of Yarborough advised Lindsey farmers to go to Scotland to observe methods of growing

¹ *British Husbandry: exhibiting the Farming Practice in Various Parts of the United Kingdom, 1834-40*, I, p. 45.

² *L.A.O.*, *Yar.*, 5. ³ *L.R.S.M.*, 8 April 1842.

⁴ *L.A.O.*, *Yar.*, 5, 25 Sept. 1841; *B.P.P.*, 1836, viii, pp. 66, 76.

⁵ Pusey, *J.R.A.S.E.*, 1843, *op. cit.*, pp. 288, 299; *L.R.S.M.*, 12 April 1839, 21 Aug. 1840.

turnips, a former "Turnip-grower in Scotland" retorted: "I have known Scotch farming well, but I do not know 50 miles of which the farming is equal to the North of Lincolnshire." In 1839, in answer to a questionnaire drawn up by the Anti-Corn Law League, a group of Lindsey farmers conceded "that husbandry, as a skilled profession, is better understood generally in Scotland than in England." But they excepted their native county from the comparison. In particular, as the farmers stated: "With respect to the breeding and management of sheep, and the application of bones and tile underdraining, we deny [the Scots'] superiority; bones and drain tiles were extensively used in Lincolnshire long before they were used in Scotland."¹

James Caird, who made a brief visit to the Lindsey uplands during April 1850, was a notable exception amongst the chorus of praise emanating from agricultural writers on the farming of the wolds and the Cliff. In particular, Caird criticized the failure of the farmers to grow swedes in place of turnips. But this was a consequence of the nature of the soil, which was generally too light for swedes, of the adverse effect of a rich dressing required to grow swedes upon the following barley crop, and of the shortage and high cost of labour which prevented swedes, which were too tough for the teeth of ewes and lambs folded on the land, from being lifted and sliced. The only other specific fault that Caird was able to find with farming in the region was that the land was not "attended to with anything like the same neatness and care which distinguished the best farmers of West Norfolk." This shortcoming is quite understandable, however, when account is taken of the appreciably higher level of wages prevailing on the Lindsey uplands in comparison with West Norfolk. Moreover, Caird appears to have shared a common misconception amongst agricultural writers, both at that time and subsequently, that the appearance of a farm was synonymous with its productiveness and profitability, or with the real purposes of

farming. Like Lord Monson who owned an estate on the Cliff, Caird was under the "impression that the Tenant who grows the best Barley manages his Land best." But as one of his lordship's tenants observed: "this does not follow, indeed the reverse is often the case, for land very highly managed on the Cliff frequently grows too much to stand up and gets laid, and the Quality of the Corn is inferior, while land not so well managed, produces a standing crop which is of better Quality, and consequently of more value."²

Caird's scant praise for Lindsey upland farming, where it was not the result of ignorance of the particular conditions under which the farms had to be operated, arose from his preconceived notion of the necessity of leases for progressive and advanced farming. As leases were the exception on the uplands of Lindsey, he was incapable of conceding that advanced farming methods could be common. And the brevity of his stay in the county precluded him from being effectually contradicted by observation, and caused him to miss the salient feature of farming in the region, the high general standard of farming. Even to Caird, however, a striking characteristic of the farming of the region was the rapid progress that had been made within a limited period of time, or since 1815, and that one in which conditions had been far from favourable for agriculture. But only to Caird was "The agricultural reputation of Lincolnshire . . . due more to the stride it has made in a given time, than to any real pre-eminence above the best farmed counties."³

As "one of the most striking features" of farming on Lindsey uplands was "the equality of farming . . . throughout the whole district," it is possible to infer that the estimate of the profitability of a single farm in 1836 does not represent the results of an isolated instance of exceptionally good farm management. And, given the structure of landholding in the region, it is further possible to infer that the absolute amount of profit shown in the estimate was matched or exceeded by a not in-

¹ J. Caird, *English Agriculture in 1850-51*, 2nd edn, 1968, pp. 186-91, 194-6; L.A.O., Monson MSS. (Mon.), 25/13/10/2/7.

² Caird, *op. cit.*, p. 193.

³ L. Rawsthorne, *The New Husbandry*, 2nd edn, 1849, p. 29; Clarke, *J.R.A.S.E.* 1851, *op. cit.*, pp. 331, 336.

considerable number of farmers. At a public meeting held in the late 1840's at the market town of Caistor on the wolds, "there were present about 40 tenant farmers, to whom that town would be a convenient market, whose average occupation was 1100 or 1200 acres each." The whole of the 4,000 acres of the single parish of Great Limber was divided into four farms approximately equal in size.¹ All in all, there were probably as many as fifty or sixty separate farms on the Lindsey uplands that exceeded 1,000 acres in extent, and the largest contained 2,300 acres.

The absolute amount of the profit given in the above estimate for a wold farm applied at the most to a small minority of farms on the Lindsey uplands, although large farms of over 800 acres probably accounted for from 15 to 20 per cent of the farm acreage. Moreover, as the optimum acreage of farms in the region appears to have been from about 300 acres upwards, and as the standard of farming throughout the region was fairly uniform, the rate of profit per acre probably approximated very closely to the figure of £2 recorded in the estimate for 1836. The point at which optimum returns were realized, however, is extremely difficult to establish with any degree of precision, in consequence of a lack of farm accounts and other evidence for all categories of farms according to acreage. Nevertheless, circumstantial and other evidence tends to support the view that from 300 acres and upwards returns per acre were maximized. It was "generally found" of English agriculture in the 1830's "that from three to five hundred acres of tillage . . . are sufficient to occupy the most experienced husbandman." Within that range it was possible to keep the complement of horses and men required to till the land continually in employ, other than during inclement weather, and to minimize supervisory and managerial costs. For farms of over 300 acres, and at least up to 1,000 acres, the extra manual and team labour, and implements, required to work the land, appear to have been a constant multiple of the amount required on

a farm of 300 acres. The desirable ratio of labourers' cottages to cultivated acreage, for instance, was considered the same for a farm of 300 acres on the wolds as for one of 1,000 acres, and only on farms of over 2,000 acres were substantial savings considered to be possible in this regard. And on the larger farms it is probable that any other economies of scale, in marketing produce and purchasing inputs for instance, were more than offset by the "waste of labour" and horse-power involved in operating land that "must necessarily lie at an inconvenient distance from the homestead." In this respect, it is notable that on many of the larger farms on the Lindsey uplands, two or more farmsteads were located in different parts of the farms.²

If 300 and more acres of land were to mark the optimum acreage of farms on the Lindsey uplands, then a very large proportion of the farmers residing in the region enjoyed a rate of profit of at least £2 per acre in 1836. And the fact that a large proportion of the farms were of that size, in a region where many were carved out of former waste and extensive pastures on the eve of the Agricultural Revolution in the later eighteenth century, tends to support the view that such was the optimum. On the wolds, in particular, "with the exception of the dots of small freeholders" who were said to "seldom succeed for more than a generation," one observer put the average size of farms in the 1840's at "above 400 acres." Another writer, in 1850, was of the opinion that there was "scarcely a farm under the size of 300 acres."³ And, according to the definition of "farm" employed, in terms of size, neither of these observations appear to have been gross exaggerations. As table II below indicates, in the early 1830's on a part of the Yarborough estate encompassing 38,000 acres of land, of which the majority was located on the wolds, the average size of farms of over 49 acres was as much as 412 acres.

Admittedly, according to table II, 78 per cent of the tenants occupied less than the supposed optimum acreage for wold farms, or

¹ *British Husbandry*, *op. cit.*, I, p. 40; B.P.P., 1867-8, xvii, p. 280.

² S. Sidney, *Railways and Agriculture in North Lincolnshire*, 1848, pp. 63, 65; Clarke, *J.R.A.S.E.*, 1851, *op. cit.*, p. 330.

³ L.A.O., Yar., 5.

TABLE II

SIZE OF HOLDINGS ON PART OF THE ESTATE OF THE EARL OF YARBOROUGH IN 1831-2

<i>Acreage of holdings</i>	<i>No. of holdings</i>	<i>Total acreage of holdings</i>	<i>Average size of holdings</i>	<i>Proportion of total acreage (%)</i>
Less than 5 acres	66	89	1.3	0.2
5 to 9 acres	31	214	7	0.5
10 to 49 acres	46	1,067	23	2.9
50 to 100 acres	15	1,017	68	2.9
100 to 300 acres	23	3,944	171	10.4
300 to 500 acres	18	7,516	418	19.8
500 to 800 acres	21	13,052	621	34.3
Over 800 acres	12	11,049	921	29.0
Average	—	—	164	—
Total	232	37,948	—	100.00

over 300 acres of land. However, most of the 42 per cent of the tenantry occupying less than 10 acres of land were village craftsmen, agricultural labourers, and estate workers, whose holdings largely consisted of pasture.¹ Many of those occupying from 10 to 300 acres of land were publicans or millers, the owners or tenants of additional land not forming part of the estate, or the sons of tenants occupying larger farms on the estate who were serving a form of apprenticeship to farming.² Moreover, in a region in which a holding of 60 acres was offered for lease "To Gardeners," and in which a holding of 137 acres was referred to as a "little farm," occupiers of less than 50 acres of land scarcely merit the designation of "tenant farmers," and they were rarely recorded it. Over 80 per cent of the land on this part of the estate was occupied by farms of over 300 acres in extent, and nearly a third was divided between twelve large farmers. In this respect, the Yarborough estate was not atypical of the region of which it accounted for a large proportion of the total acreage. Large farms on the wold were not confined to

the large estates. The largest of all the wold farms, that of 2,300 acres at Withcall, was Lord Willoughby d'Eresby's only property on the Lindsey uplands. And a small estate of 1,936 acres on the wolds was divided into three farms of 1,054, 744, and 101 acres respectively, with the remaining 37 acres forming a plantation around the owner's residence.³

On the Cliff farms were generally smaller than on the wolds. In the late 1790's, according to Arthur Young, the annual rental of Cliff farms ranged from £50 to £300, or the equivalent of from 75 to 400 acres of land, with "some few much larger."⁴ However, there was the same tendency as on the wolds for a disproportionate share of the acreage to be allocated to the larger categories of farms. In 1842, for example, the Cliff estate of Lord Monson contained 5,724 acres of land, of which 5,500 acres was allocated between twenty-five holdings of 10 or more acres (see table III below). Only four farms on the Monson estate exceeded 500 acres in extent, but the four accounted for over 40 per cent of the farm acreage. The ten farms on the estate containing

¹ For example, in one parish a blacksmith occupied a paddock of 3 acres along with his shop.

² In one parish, for example, 10 acres were occupied with a windmill; and, in another, 88 acres were held with a public-house.

³ *L.R.S.M.*, 13 June 1828, 12 Oct. 1832, 1 Feb. 1839.

⁴ Young, *General View*, p. 42.

TABLE III
SIZE OF HOLDINGS ON LORD MONSON'S CLIFF ESTATE IN 1842*

<i>Acreage of farm holding</i>	<i>No. of holdings</i>	<i>Acreage</i>	<i>Proportion of total acreage (%)</i>
10 to 50 acres	8	139	2.5
50 to 100 acres	1	93	1.8
100 to 300 acres	6	844	15.4
300 to 500 acres	6	2,106	38.3
Over 500 acres	4	2,318	42.1
Average total	25	5,500	100.1

*L.A.O., Mon 8/64, In view of the foregoing remarks regarding table II, the occupiers of the 224 acres on the Monson estate divided into holdings of less than 10 acres each have been omitted from this table.

over 300 acres held 80 per cent of the total acreage allocated to holdings exceeding 10 acres in extent.

As a number of the farmers in Lindsey occupied or owned two or more farms each, the figures for tenants and holdings given in the above tables underestimate the actual proportion of large farmers. In 1837 Francis Iles, for example, owned a farm of 320 acres which he operated together with two rented wold farms, one of 330 acres, and the other of 957 acres included in table II above, and 60 acres of rented pasture land in the Lindsey marsh. John Dudding of Saxby on the wolds owned 500 acres of land in addition to the 1,000 acres that he occupied as a tenant in 1839. Richard Dawson, who occupied the largest wold farm of 2,300 acres at Withcall, also farmed an additional 700 acres in the 1830's. At Messingham on the Cliff in 1840, William Walker occupied "Skellow Farm" of 183 acres, "Messingham Farm" of 230 acres, and a further 147 acres "with a Cottage;" or, altogether, a large farm of 560 acres. In 1830, 800 acres of land was offered to potential tenants in the alternative forms of four separate farms or one single farm. According to "A Land-Owner," who expressed his opposition to "the evil of plurality of farms" through the columns of the local press, there were "hundreds" of farmers throughout Lincolnshire who occupied two

or more farms each. And many of the farms held in this manner were individually quite large. "If five or six hundred acres do not satisfy a farmer," the landowner asked, then "what quantity will?"¹

There would appear to be little reason for doubt that the rate of profit indicated by the estimate applied to a large proportion of the acreage and a large number of the farms on the Lindsey uplands. Moreover, the absolute profit yielded by the particular farm was equalled or exceeded by a not inconsiderable number of other farms, especially in years more favourable to agriculture than 1836. In turn, such profits resulted in the accumulation of substantial fortunes by a number of upland farmers. Richard Dawson, who occupied the farm of 2,300 acres at Withcall in the 1830's and 1840's, is said to have "left a large fortune at his death," but the amount is unspecified. George Nelson, who relinquished his farm of 865 acres on the Yarborough estate in the early 1840's, and retired to live at Hull, "did not care who knew he had made £80,000 on Lord Yarborough's estate." Jonathan Dent, a "respectable" farmer at Winterton on the Cliff, who was also a Quaker and admittedly an acknowledged "miser," amassed, according to his obituary, a fortune of £500,000 by the time of his death in 1834. Yet Dent had lost his own inheritance in a bank failure.²

¹ B.P.P., 1836, VIII, pp. 173-7; L.R.S.M., 19 March 1830, 24 Dec. 1830, 12 April 1839, 20 March 1840.

² G. Collins, *Farming and Foxhunting*, n.d., p. 13; L.R.S.M., 5 Sept. 1834, 30 Nov. 1838; Sidney, *op. cit.*, p. 72.

All the farmers on the Lindsey uplands were not as successful as Dent, Nelson, and Dawson, even in proportion to their acreage. Some, like the aptly-named Robert Bust, a Saxby farmer who was declared bankrupt in 1840, lost the capital they had possessed upon entering their farms. If the farmers' own public testimony is to be believed, "unparalleled Agricultural Distress" was prevalent throughout the period between 1813 and 1837. The extant evidence, however, would appear to suggest that the great majority of the farmers on the Lindsey uplands experienced neither bankruptcy nor "distress". On the wolds, in particular, as one observer remarked: "There are in this great district few small farmers, and I believe I may add, improvidence apart, no poor farmers." In fact, it is tempting to agree with Cooke Taylor when he wrote in the early 1840's that: "One is so accustomed to hear farmers talk of 'the badness of the times' at all times, that their complaints [ought to] have long since failed to excite attention."¹ Instead, attention ought to be focused upon those farmers who demonstrated the enormous capabilities of agriculture to yield profits under the most outwardly unfavourable of conditions.

IV

The above conclusion and the evidence presented tend to indicate that some of the "revealed truths" of British economic history ought to be re-examined, and particularly the prevalent view that manufacturing in the nineteenth century was far more profitable than farming. The evidence suggests that, at least on the uplands of Lindsey, the rate of return on capital investment could and did exceed that yielded by many contemporary manufacturing enterprises. Professor Perkin has stated that "[Robert] Owen's contemporaries were making with ease twenty per cent

or more on their capital."² Between 1803 and 1808, during an era of rapid inflation, the rate of profit produced by the activities of the large cotton firm of McConnell & Kennedy ranged from 9 to 37 per cent. According to Professor Rimmer, Marshall's of Leeds received "a return of 22 per cent" on turnover between 1829 and 1836, and this was a period of "success" for the company.³ In view of the fact that a farmer on the Lindsey wolds could realize a profit of 45 per cent on turnover and of 25 per cent on capital in the midst of an "agricultural depression," the profits of contemporary manufacturing concerns do not appear to have been outstanding even if they were "quasi-monopolistic."⁴

The profits realized, and the fortunes accumulated by farmers on the Lindsey uplands, if they are more generally applicable and can be extrapolated backwards in time to the eighteenth century for other regions of England, suggest that the currently accepted view of the chief source of capital accumulation in England during the era of the Industrial Revolution might be open to modification. The overwhelming bulk of the capital employed in modernizing the non-agricultural sectors of the economy is assumed to have been derived from mercantile and landed sources, insofar as investment in transportation and the provision of circulating capital for manufacturing industry are concerned, and from the profits of manufacturing which were reinvested in fixed capital assets.⁵ On the uplands of Lindsey, at least, it would appear that farming placed a sizeable surplus of capital in the hands of the tenant farmers.

That the returns of farming on the uplands of Lindsey were permitted to flow to the tenants on such a scale, instead of being largely diverted to the owners of the soil in accordance with the contemporary Ricardian theory of

¹ L.R.S.M., 28 Feb. 1840; L.A.O., Goulding MSS, 4/A/10/11; Sidney, *op. cit.*, p. 72; W. Cooke Taylor, *Notes on a Tour in the Manufacturing Districts*, 3rd edn, 1841, 1968, p. 87.

² H. Perkin, *The Origins of Modern English Society 1780-1880*, 1969, p. 140. See also A. J. Robertson, 'Robert Owen, Cotton Spinner, 1800-25', in S. Pollard and J. Salt (eds.) *Robert Owen: Prophet of the Poor*, 1971, esp. pp. 146-8.

³ S. Shapiro, *Capital and the Cotton Industry in the Industrial Revolution*, New York, 1967, Appendix 12; W. G. Rimmer, *Marshall's of Leeds: Flax-Spinners: 1788-1886*, Cambridge, 1960, p. 189.

⁴ Perkin, *op. cit.*

⁵ Cf. F. Crouzet, 'Capital Formation in Great Britain during the Industrial Revolution', in Crouzet (ed.), *Capital Formation in the Industrial Revolution*, 1972, pp. 219-20.

rent, is a fact that has complex origins. At least in part, however, it was the product of the structure of landownership in the region, which was dominated by a few relatively large estates, and of the character and circumstances of the larger landowners. Of Lincolnshire as a whole Caird observed in 1850: "rent . . . varies more according to the character of the landlord than its intrinsic qualities," and on the Cliff, in particular, rent was "scarcely thought a criterion of value." As a result of his experience in Lincolnshire and other parts of the country, Caird expressed scepticism of the practical value of the Ricardian theory of rent. "The rent of land," he wrote, "is defined by Mr. McCulloch to be 'the result of the unequal returns of the capital successively employed in agriculture.' But in practice we have found rent to be a capricious thing, often more regulated by the character of the landlord or his agent, and the custom of the neighbourhood, than by the value of the soil or the commodities it produces."¹

In respect of the relationship of the "character" and the circumstances of landowners and the level of rents, there does appear to have been a broad correlation between low rents and large estates that were often owned by peers. As one land agent observed in the early nineteenth century: "great owners and the nobility of this country, are the cheapest landowners of any persons in the kingdom." Originally, this correlation may have been largely the result of the pronounced concentration of great estates in regions of light or marginal soils, such as the uplands of Lindsey, where the rents reflected the annual value of the soil in an unimproved state. However, the persistence of low rents in relation to the value of the soil with improvement suggests that other factors were also at work. In some cases, of which the Earl of Yarborough is a good example, the large absolute income yielded by great estates released the owners from the need to maximize their rental incomes derived from land. On the Yarborough estate the level of the personal expenditure of the household was always regulated by economies or eased by borrowing, and never resulted in pressure

to raise the rental of the agricultural land of the estate. An outstanding characteristic of the owners of large estates, like the earls of Yarborough, was the extent to which they emphasized the non-pecuniary aspects of landownership. To them the ownership of land was as much a source of social prestige, and a satisfying way of life, as it was a source of income. And on the large estates on the Lindsey uplands, landlord-tenant relations retained at least a veneer of "feudal harmony" on top of the basic pecuniary contract. In the eighteenth century this veneer was reinforced by the elevation of some of the larger owners to the peerage, and by the growth of interest in foxhunting and horse-racing, and other activities of a social nature in which both owners and tenants participated. And, in the nineteenth century, its beneficial effects for the tenants were reinforced by the growth of public opinion, which was said to require "landlords to be very lenient to their tenants."²

To some extent low rents may have been the product of "the ignorance of the landlord of the worth of the land," which was especially a likely state of affairs in a region and at a time when rapid agricultural progress and fluctuating prices made it hard to assess the value of the land. In contrast to parts of Scotland, farms in Lindsey were never let by auction as a means of determining the market value of land, or at least the extent of the "hunger for land." And, as the annual turnover of tenancies even during periods of pronounced depression represented only a minute proportion of the total, and as the bargaining between landlords and potential successors was not conducted openly, no adequate alternative mode existed for determining the annual market value of land. Even when tenancy changes increased, during periods of exceptionally low prices for agricultural produce, conditions were far from optimal for determining land values for the longer term, or even for the acquisition of tenants on terms commensurate with the current value of the land. As Lord Monson was advised in 1851, when some of his tenants petitioned for a substantial reduction of their rents: "The test of the matter is, could you get the same rents

¹ Caird, *op. cit.*, pp. 188, 191, 476-7.

² Laverne, *op. cit.*, p. 247.

from new tenants—generally I imagine you could not—and that you would have to stand a reduction of rent and to find money for buildings and tiles which a new tenant would stipulate for.” Rather than negotiate the tenancy of a farm for a lifetime in the most unfavourable of conditions, landlords were generally prepared to go to considerable lengths to accommodate sitting tenants during periods of agricultural distress. Moreover, in most cases, the rent that a potential successor to a farm was prepared to offer was only one, and that within limits not necessarily the most important, of the criteria adopted by the landlord in the process of selection. In considering the respective merits of two applicants for a farm of 700 acres on the Monson estate, for example, the agent stressed that one applicant was “a very proper man . . ., both as regards his knowledge of farming and circumstances, but from enquiries I have made respecting the other applicant (Mr. Adams), I do not hear so favourable an account either as to his Capital or ability as a farmer.” And it was only after the rejection of the application from Mr Adams, that the bargaining over rent and conditions of tenure was commenced with the remaining candidate.¹

The structure of holdings and the nature of agricultural change on the uplands had marked effects upon the level and course of rents. The concentration of holdings in the larger size categories, where optimal returns were realized, and the large capital required to convert the land from pasture to tillage, and to operate the resulting mixed farming system, tended to limit considerably the number of potential tenants for the farms. And, after 1813, when the prices of agricultural produce fell, the number of potential tenants was further reduced on account of the high level of skill and ability that was required to operate the farms successfully. In the words of a German visitor to England in the mid-1830's: “The times are past when a wholly ignorant person might . . . manage a large farm. The person and capital are of more importance than ever.”² Even for those who possessed the requisite skills, such as

small farmers and labourers, there was virtually no farming “ladder” on the Lindsey uplands after 1813. The initial capital resources required to occupy a large farm on the uplands were too large, and the difficulties that small farmers faced after 1813 permitted few of them to accumulate capital. The latter, in large numbers, appear to have preferred to relinquish their holdings and emigrate to the U.S.A. and the colonies, where land was cheap and a substitute for capital, rather than face the alternative of submergence in the agricultural proletariat. On the uplands, on the other hand, the bargaining power of the sitting tenants was considerably enhanced as the number of potential successors narrowed. This was reflected in the ability of the tenants to wring the concession of a tenant right to unexhausted improvements from an initially reluctant body of landlords during the years immediately following 1813. And, the existence of tenant right reinforced the desire of landlords to accommodate sitting tenants rather than face the prospect of taking farms “in hand” for a period. As Lord Monson was informed by his agent early in March 1850, when a large farm on the estate was as yet untenanted:

it is now well known about here, that the Farm is not let, and I begin therefore to fear we shall not succeed in getting a Farmer in this neighbourhood to take it at Lady day & if a Tenant should not be found very soon, I need hardly inform your Lordship that it will be necessary to agree to the usual arrangements being made with reference to the Claim of the Outgoing Tenant for his Tenant Rights, w.^h will be considerable.³

While the rental incomes of the landowners on the Lindsey uplands were never maximized in pecuniary terms they did increase substantially, at least in real terms, during the first half of the nineteenth century; and this was one reason for their satisfaction with the existing low returns in relation to farm profitability. On the Cliff estate of Lord Monson rents were raised by an average of 70 per cent in 1803, and

¹ L.A.O., Mon. 25/13/10/3/46, 52; 25/13/10/1/34, 35.

² L.A.O., Mon. 25/13/10/2/36.

³ F. von Raumer, *England in 1835*, 1836, I, 168.

a further overall increase of 23 per cent in 1809 brought the average rent of land on the estate to 21s. The rental of the estate, which incorporated a large area of low-lying land, which was acutely affected by falling prices and outbreaks of the "rot" or liver fluke amongst sheep, fell by 15 per cent between 1813 and 1818. However, by the early 1840's the rentals of the two remaining parishes on the estate were 7.5 and 20 per cent respectively above the level of 1810. Yet between 1810 and the early 1840's a substantial fall had taken place in the price level generally, and in the prices of agricultural produce in particular.¹

In contrast to the Monson estate on the Cliff, where the lag of rents behind farm profitability was of short duration, although the level of rents was fixed "with a view to the reasonable comfort and profit of the several occupiers," the rental of the Yarborough estate on the wolds was not significantly increased until the 1830's. This substantial time-lag of rents behind agricultural progress appears to have originated as a deliberate decision on the part of the owner. As the steward of the estate observed in the mid-1830's: "the land wanted sub-dividing and bringing into cultivation, the expense of these improvements, to a certain extent, fell upon the tenants, but they were suffered to remain at this low rent until such time as it was considered that they were fairly remunerated for their outlay." In practice, however, the policy appears to have been prolonged for a longer period of time than was originally intended, and helped to establish a low level of rents in relation to farm profitability as a custom of the estate. In 1833, when the estate realized a gross income from the rent of agricultural land of £44,829, or an average of 17s. per acre, and the wold land was let for as little as 10s. to 12s. per acre, a valuer put the total value of the agricultural land on the estate at £72,237 per annum. And although rents were raised following the valuation, and the rent of wold land in particular was increased to 20s.-21s., and in some cases to 27s. per acre, the amount of the increase was substantially less than that justified by the

valuation or by the real value of the land.² Nevertheless, by the mid-1830's, and within a matter of forty years, the gross income of the estate increased more than threefold, and in real terms the amount of the increase was substantially greater, although it did not consume more than a small proportion of the returns actually accruing to the farmers.

Little is known of the manner in which the "clear profit" of farming on the Lindsey uplands was employed. In the early years of agricultural progress a large proportion was probably reinvested in farming, to bring more and more pasture under the plough, to provide implements for arable farming, and to acquire or hire bloodstock of improved breeds of cattle and sheep. As regards the latter, for example, Philip Skipworth of Aylesby paid 600 guineas for the hire of a New Leicester ram for a single tupping season, and, in 1812, four farmers raised 1,000 guineas between them for the hire of a ram for Buckley of Normanton in Leicestershire.³

By the 1820's it is evident that the opportunities for reinvesting capital on the farms were declining. The deadstock on the farms generally lasted a lifetime or longer, most implements were comparatively inexpensive, and there were few significant innovations in implements between 1815 and the later 1830's. Economies were achieved in the utilization of implements as the acreage of the tillage land on the farms increased and the efficiency of the farming system improved. Substantial savings in the cost of fertilizers were achieved by bulk purchases, and by experiments which indicated that a reduction in the quantity applied did not reduce yields. And, after the 1820's, the Lindsey uplands became a net exporter of improved types of livestock, for which farmers in other parts of the county, and subsequently in England and the world, were willing to pay high prices. At the dispersal sale of William Torr of Aylesby in 1875, for example, 84 head of shorthorns sold at the average price of £500 each, and the 2,160 guineas paid for a single cow established a record price for England up to that time. Admittedly, Torr

¹ *Ibid.*, 19/2; 8/64; 19/8/1.

² *Ibid.*, 19/2; L.A.O., Yar. 5; B.P.P., 1836, viii, p. 72.

³ Collins, *op. cit.*, pp. 32, 35.

was "one of the greatest breeders of shorthorns that ever lived in England." Nevertheless, apart from purchases of shorthorns at Christopher Mason's dispersal sale in County Durham in 1826, and individual purchases from amongst the "tribe of shorthorns" of Thomas Booth of Worlaby in Yorkshire, few significant additions were made to the bloodstock of Lindsey after 1815. And, by 1840 at least, the county was a source of stock for improving the breeds in other parts of the country.¹

The farmers do not appear to have squandered the increasing surplus of profit, beyond that required for investment in farming, upon forms of conspicuous consumption. Admittedly, the larger farmers lived "in the manner of the best country squires." The standard of accommodation to which they were accustomed was a "capital and superior Residence seated on a Lawn," and throughout the Yarborough estate "the residences of the tenants [were] more in the style of small mansions than farm-houses." But such accommodation was provided at their landlord's expense, and the rent and costs of upkeep were included in the costs of farming.²

Many of the larger farmers were said to be "able to hunt in scarlet, riding the best of horses, [and] to keep valuable racehorses." Foxhunting appears to have been a particular, and apparently expensive, passion amongst the larger occupiers on the uplands, who took the field with the Burton, Brocklesby, and South Wold hunts. However, foxhunting was in fact a comparatively inexpensive pastime for upland farmers. The feed of their hunters was available at wholesale prices, and the breeding of hunters contributed to the profits of many farms by producing surplus stock adapted to team-work on the light soils of the region, and by the sale of superior progeny at Horncastle horse fair. The latter

was always well attended by the representatives of the continental foxhunting nobility, and by the English aristocrats who hunted the "shires." In 1832 a tenant on the Yarborough estate disposed of six hunters at the fair for a total of £1,000.³

During the first half of the nineteenth century, very few Lindsey farmers appear to have applied their savings to the purchase of land. In 1838 Samuel Slater purchased the entire 1,795 acres of the parish of North Carlton on the Cliff from Lord Monson for £80,000, after he had "for many years paid but 1 £. per acre to Lord Monson for the principal part of this property." To meet the purchase price Slater had to sell his prize flock of New Leicester sheep.⁴ However, his example does not appear to have been widely emulated, and the particular instance was largely brought about by Lord Monson's decision to sell part of his Lincolnshire estate in order to recoup the losses made by his predecessor, who had the misfortune to purchase three "rotten" boroughs in Kent shortly before the Reform Act of 1832. The number of estates in Lindsey coming on to the market was not very large, and most of these were purchased either by existing landowners or by "outsiders." The low pecuniary return from landownership, especially in comparison to the profits of farming, induced very few Lindsey tenants to make the transition to owner-occupiers before the 1850's.

A cursory survey of limited and readily accessible material does not indicate a sizeable flow of farm profits into manufacturing investment. In 1840 two farmers joined with a surgeon to erect and operate the first oil and cake mill to be built at Lincoln. But, by the mid-1850's the mill had been sold to a company without agricultural origins. Three of the five directors of Sowerby & Co., linseed cake manufacturers at Grimsby, were wold

¹ J. Sinclair, *History of Shorthorn Cattle* 1908, pp. 222-6; R. Smith 'Report on the Exhibition of Livestock at Chester', *J.R.A.S.E.*, xix, 1858, pp. 362, 365.

² Collins, *op. cit.*, p. 9; *L.R.S.M.*, 17 June 1842; *The Date Book for Lincoln and Neighbourhood from the Earliest Time to the Present*, Lincoln, n.d., p. 343.

³ Collins, *op. cit.*, p. 9; Sidney, *op. cit.*, p. 78; *L.R.S.M.*, 24 Aug. 1832. Working horses were disposed of in large numbers at Lincoln April Fair. In 1838 a wold farmer sold twenty-three such horses at this fair for 1,700 guineas. (*L.R.S.M.*, 27 April 1838).

⁴ *L.R.S.M.*, 3 Aug. 1838.

farmers.¹ However, such examples were not numerically significant, and the projects themselves appear to have been undertaken more for the purpose of ensuring an adequate supply of good quality farm inputs at reasonable prices, than as an outlet for surplus capital. Given the high level of profit and the lack of

sizeable outlets for funds in farming or local manufacturing, it is likely that the bulk of surplus farm profits were channelled into government securities, mortgages, and other relatively secure assets. But this hypothesis will have to be tested by future research.

¹ L.R.S.M., 4 Dec. 1840; H. W. Brace, *History of Seed Crushing in Great Britain*, 1960, p. 138; L.O.A., Yar., 5.

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