

The Agricultural Statistics for 1854: An Assessment of their Value

By PHILLIP DODD

AS A SOURCE of agricultural information, the statistics collected in 1854 have been neglected by most students of the period other than the present writer. In his wide-ranging study of agricultural sources, Coppock¹ reported somewhat adversely on the degree of opposition encountered in the collection of the statistics, although subsequently he tended to modify his opinion.² However, anyone taking heed of Coppock's assessment could be forgiven for putting aside any intention of making use of the data.

In their original form, the Agricultural Statistics of 1854 for England and Wales³ were of rather limited value inasmuch as they were compiled by Boards of Guardians and presented for the individual Poor Law Unions of the eleven counties concerned. The following extract for Suffolk is typical of the manner in which the statistics were presented (Table 1).

The geographical composition of these Poor Law Unions is somewhat obscure and initially it becomes necessary to identify the area represented by each union, parish by parish.⁴ Further, it is essential to determine by the same means the actual acreage of each union in order to assess the accuracy of the return as made, and to discover the extent of inclusion or exclusion of certain parishes and townships in the case of unions on the border of two or more counties.

Figures 1 and 2 illustrate the plotting of the several Poor Law Unions once their area has been determined. Poor Law Unions are administrative units and by their nature usually do not provide meaningful topographical areas for employment in discussion of land use. The examples given for Suffolk indicate how to overcome such difficulties and so map the relevant features extracted from the statistics, in this case arable and the livestock densities per 1000 acres of total area.

Most of the counties contain unions which overlap other counties, as for example the West Riding which included the unions for Worksop and Bingham — both in Nottinghamshire — and with parishes in both counties. For Norfolk, Thetford Union of some 115,000 acres embraced 40,000 acres of Suffolk parishes. In the case of Shropshire, for Oswestry Union some 17,000 acres of Denbighshire were included while for Newport Poor Law Union 15,000 acres of Staffordshire were embraced. Andrew Doyle, the Poor Law Inspector responsible for both Denbighshire and Shropshire, made no reference to these discrepancies in either of his Reports. Further, Doyle's return for Ellesmere Poor Law Union was given as complete except for one 'Schedule A' involving 104 acres, whereas in actuality there were some 47,000 acres unreturned. Moreover the report was so worded that the impression was given that the position in some unions, notably Drayton, was worse than actually was the case. Fortunately Doyle was the exception. Less fortunately for the student of British agriculture, he surfaced again in 1880 as the Assistant Commissioner responsible for the

¹ J T Coppock, 'The Statistical Assessment of British Agriculture', *Ag Hist Rev*, IV, 1956, pp 12-13.

² Personal communication from J T Coppock in the light of my observations on the 1854 Reports.

³ BPP Reports by Poor Law Inspectors on Agricultural Statistics (England) House of Commons Sessional Papers 1854-55, Cd 1928.

⁴ Return of Union averages, House of Commons 490, 11 August 1854.

TABLE I
Agricultural Statistics for Blything Union, Suffolk, 1854

Name of Union	No of Parishes	Number of acres under grass				Total
		Clover, lucerne and other Artificial Grasses	Permanent Pasture	Irrigated Meadows	Sheep Walks and Downs	
Blything	49	ARP 7972 0 0	ARP 16,159 0 0	ARP 992 0 0	ARP 4026 0 0	ARP 29,149 0 0
No of acres in Houses, Gardens Road, Fences etc.		No of acres in Waste (if any) attached to the Farm		No of acres in Wood and Plantation		No of acres in Commons belong to the Parish
ARP 5309 0 0		ARP 1274 0 0		ARP 3126 0 0		ARP 925 0 0
No of acres in Holdings of less than two acres		No of acres (if any) not accounted for		Total		
ARP 1052 0 0		ARP 155 0 0		ARP 11,841 0 0		

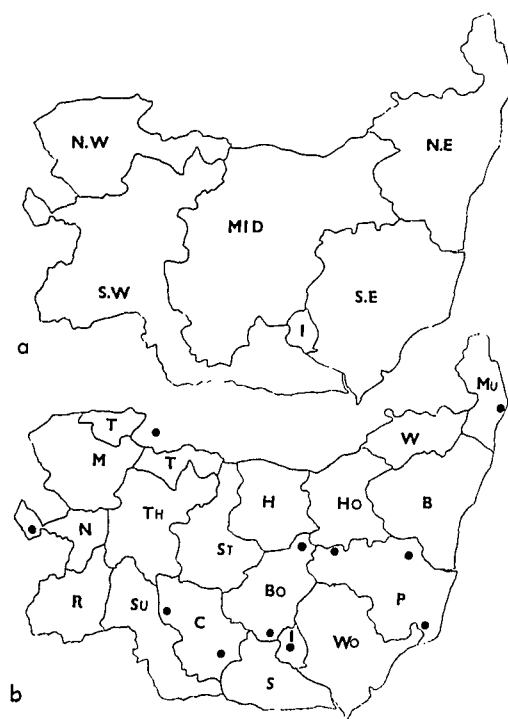


FIGURE 1
Agricultural regions and Poor Law Unions for Suffolk, 1854

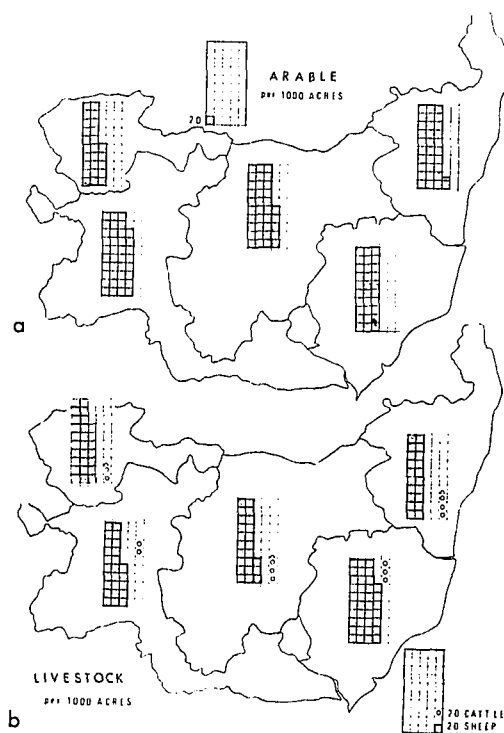


FIGURE 2
Regional variation in land use, Suffolk, 1854, arable acreage and livestock level

reports for Wales and the West Midlands relating to the depressed state of agriculture. His reports were based on questionnaires, the content of which bore little reference to agriculture as such. When compared with commissioners like Druce and Coleman who actually took notes first-hand throughout their counties, one is left very conscious of Doyle's incompetence.

At ground level the Poor Law officials responsible for collecting the statistics were concerned at the poor rate of remuneration offered and the obstruction to their normal duties. In the instance of Worcestershire, collection of the schedules was hampered by the wintry weather and in Worcester Union a late return was made because of 'the cholera which prevented the enumerator, the Relieving Officer, from proceeding with his duties'.⁵ There was also concern that new duties were to be imposed which were hardly relevant to those of the administration of the Poor Law proper. There was some justification for this view as Dr Kay, a former Assistant Commissioner for the Poor Law, had, in his capacity of Secretary to the Privy Council Committee of Education (1838-44), shown signs of developing the educational activities of the Poor Law Unions. The prospect of another department, the Board of Trade, saddling the unions with responsibility for collecting agricultural statistics was obviously one to be resisted.

Some factions were opposed to the Aberdeen government and in all probability many persons were anti-Gladstone. Certainly, in 1854 he was hardly a popular figure with country landowners and occupiers, having imposed in his capacity as Chancellor of the Exchequer an increase in income tax during the summer as a means of meeting the cost of the Crimean War. He refused to exempt the agricultural interest from the tax and there was also a sense of betrayal

due to repeal of the Corn Laws, which was still fresh in the minds of many, who were resentful of the failure of the government to afford them compensation for removing protection from agriculture.⁶ Certainly the opposition to, and actual failure to make, the 1854 Returns in several Poor Law Unions in some of the counties concerned, stemmed from those who had earlier been vigorous proponents of the Corn Law lobby, the Agricultural Protection Societies.

In Shropshire, this opposition was demonstrated in North Shropshire, and in the Ludlow Union was clearly attributable to occupiers who were known members of the Shropshire Agricultural Protection Society. In Shrewsbury and north Shropshire the campaign was given Parliamentary support by Disraeli, then member for Shrewsbury. Similarly, in Berkshire the hand of the Agricultural Protection Society was clearly to be seen.⁷ However, one must not exaggerate the degree of opposition to the collection of the agricultural statistics. The great majority of occupiers complied with the request to complete 'Schedules A' and in those cases where there was a shortfall in the numbers returned, the enumerators went out and made up the details from actual inspection of farms and from parish rate books. In cases where there was a deliberate intention to conceal the facts this was most likely to occur in the return made for livestock. The statistics employed by the present writer are expressed in terms of densities per 1000 acres of the total acreage of each union. Discrepancies clearly show up when comparing one union with another, or one county with another. Thus the deficient returns from Wantage, Bradfield, Newbury and Hungerford Unions of Berkshire tended to depress the overall sheep density of the county and the resultant

⁵ J Phillip Dodd, *Worcestershire Agriculture in the mid-Nineteenth Century*. Worcestershire Historical Society, Occasional Publications, 2, 1979, p. 7.

⁶ *Hansard*, adjourned debate on Corn Laws, 17 February 1846, 1099.

⁷ J Phillip Dodd, 'Agricultural Protection in Berkshire and Opposition to the Collection of Agricultural Statistics', *Southern History*, 1986.

county total of 601 sheep per 1000 acres may quite properly have been of the order of 700 per 1000 acres, when one compares the situation with what prevailed on similar lands in Wiltshire and Hampshire.

I

However, before the total acreage of any county can be assessed for 1854, the true acreage has to be established. This is not as easy as might be imagined, as county acreages tended to fluctuate considerably, particularly as accurate returns did not become available until the advent of the Land Use Surveys of the 1930s. Where there were appreciable discrepancies between the acreage returned for 1854 and the better established acreage of the Land Use Survey, invariably the acreage not returned closely approximated to the acreage of unenclosed mountain, heath and rough grazing existent in 1854, but which was a land category not requested in 1854. This category of rough grazing was missing from all June returns until 1892, while the acreage of mountain and heath in each parish was not listed until the 1901 June returns. Only when the 1854 acreage is adjusted to take note of this category of land in rough grazing does it become possible to establish what the true 1854 return should have been and what in effect was missing from the acreage as returned. To take a case in point, the 80 per cent cover of Shropshire in 1854 makes the return a viable statistical source as a base for analysis. Further, when one notes that the 80 per cent comprises some 640,000 acres whereas the June return of 1866 relates to 621,000 acres of crops and grass, it reinforces the view that the 1854 statistics were more comprehensive for all the counties concerned in the 1854 collection than those of the early June returns compiled before 1873. Detailed analysis of all the factors involved makes it possible to affirm that the statistics for the 1854 returns are a viable source for assessment of contemporary land use. Reinforcement of this point may be

gathered from the present writer's analysis for Norfolk.⁸

The problem of defining the county area is general for all counties throughout the nineteenth century. Even in the present day it is not unknown for discrepancies of 1,500,000 acres in statistics for England and Wales to arise.⁹ As far as Norfolk is concerned, for want of more precise information we may take a figure of 1,350,000 acres as a working basis for the period covered by this discussion.

In his final report, Sir John Walsham stated that the Norfolk figures, after making appropriate adjustments, were within a few thousand acres of the 1851 Census acreage. In working over the statistics and making the same adjustments I find a difference of about 100,000 acres between the size of the 1854 Return and the total county area. The difference of 100,000 acres,¹⁰ in a county the size of Norfolk with such an extensive coastline, is not of especial significance, and can be attributed to lands not included in the Return eg coastal marsh, saltings, mudflats, stretches of inland water such as the Broads and ornamental lakes, fenland, dykes, railways, sandlings, estuarine marsh, and park-land.

In this respect the 1854 Returns afford a coverage which compares very favourably with later Returns (Table 2).

The 1854 figures showed 16,834 acres of parish commons, a total which was confirmed by the Commons Report of 1873¹² which listed 16,406 acres. Parish commons do not appear in the Board of Agriculture Statistics but a Return of rough grazings was commenced in 1892 when

⁸ J Phillip Dodd, 'Norfolk Agriculture in 1853-4', *Norfolk Archaeology*, XXXVI, Part III, 1976, p 255.

⁹ R H Best, 'The Statistical Pattern of Land Use in Great Britain', *Geography*, XLIV, 1959, p 199.

¹⁰ Inland water representing 43,000 acres, and 15,000 acres of marshland in the Northern Alluvial Plain, account for 60 per cent of this total.

¹¹ Includes Suffolk portions of Thetford Union, an area nearly equivalent to the deficient portions of Flegg, Giltcross and Wisbech Unions.

¹² BPP, House of Commons, Paper 85, *A Return of Waste Lands — 1873, 1874.*

TABLE 2
Comparison of 1854 statistics with later Board of Trade June statistics

1854	Total crops and grass	1,021,059 acres ¹¹
1866	Total crops and grass	1,009,087 acres
1870	Total crops and grass	1,048,929 acres
1875	Total crops and grass	1,067,829 acres
1888	Total crops and grass	1,095,195 acres

(This was the largest Return ever made for Norfolk)

The figures for crops and grass made up of the acreages of tillage including rotation grass, and of permanent grass including irrigated meadow, exhibit reasonable agreement with those of later Returns.

		<i>Acres</i>		<i>Acres</i>
1854	Total arable	812,389	Permanent grass	208,670
1866	Total arable	800,215	Permanent grass	208,872
1870	Total arable	834,450	Permanent grass	214,479
1875	Total arable	836,807	Permanent grass	231,022
1888	Total arable	811,515	Permanent grass	283,680

32,798 acres were listed under this head. The 1854 Returns showed this information as farm waste, and parish commons, which total 31,000 acres. Some 55,000 acres of sheepwalk listed in 1854 brings up the rough grazing figure to 86,200 acres, not so dissimilar from the 1934 total of 84,144 acres; 51,221 acres of woodland were listed in 1854, a figure which closely corresponds with later Forestry Returns. The Land Utilization Survey of 1935 total, less Thetford Chase afforestation, shows 57,000 acres. Strangely enough the sum of woodland and rough grazings (including sheepwalk) in 1854 yields a total of 137,421 acres which tends to confirm the earlier estimate of 143,346 acres, reported by Arthur Young as 'waste' in 1795.¹³ In addition to woodland and rough grazing, the 1854 Returns give details of the acreage of houses, gardens etc, an item which does not appear in later Returns.

II

The counties concerned in 1854 were Denbighshire and Breconshire for Wales, Shropshire, Worcestershire, Hampshire,

¹³ *Annals of Agriculture*, XXIV, 1795, p 10.

Wiltshire, Berkshire, Norfolk, Suffolk, Leicestershire and the West Riding for England (Figs 3 & 4). Scotland was treated in a much more efficient manner than in the scheme applied to England and Wales. The returns were made on a county basis which could be broken down into more satisfactory geographic regions for each county.

On the question as to what lay behind the intention of the Board of Trade to select these eleven counties, one may only presuppose that an attempt to compare land use in different geological and topographical conditions was a prime consideration. Brecon and Denbighshire comprise a view of Wales while in England, Worcestershire and Shropshire may be held to balance conditions of land use on the far side of England in Norfolk and Suffolk. The West Riding represents northern upland England and Berkshire, Wiltshire and Hampshire present a contrasting picture of the land use of the Chalk of Southern England.

Leicestershire provides the example of a livestock-orientated county and only one major geological conformation, that of the Jurassic rocks, was left out. This was unfortunate and Gloucestershire could well

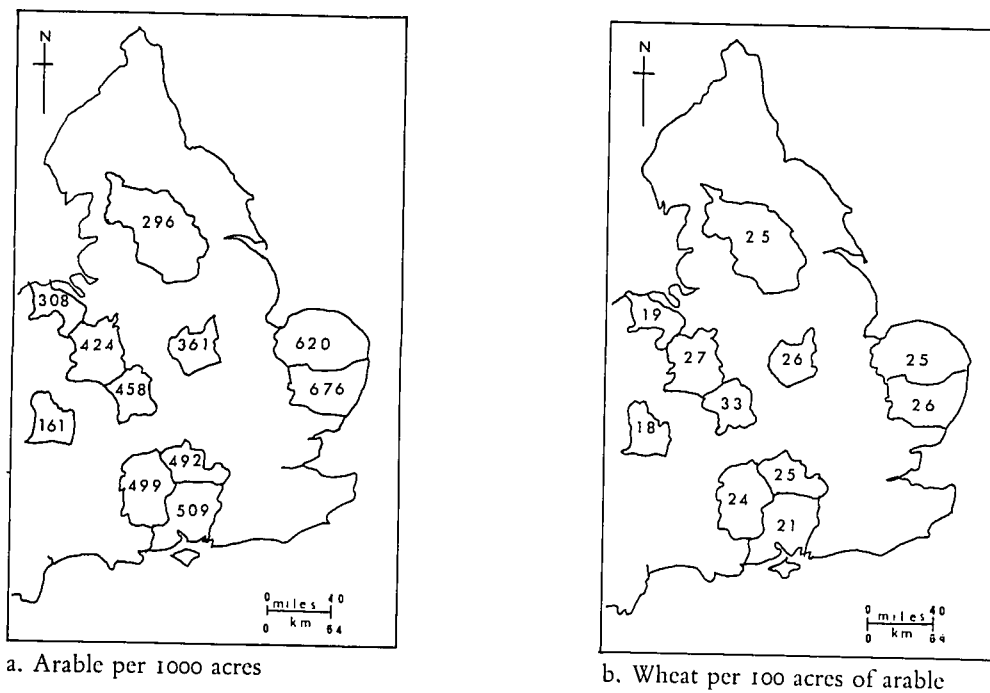


FIGURE 3
Counties embraced by the collection of Agricultural Statistics, 1854

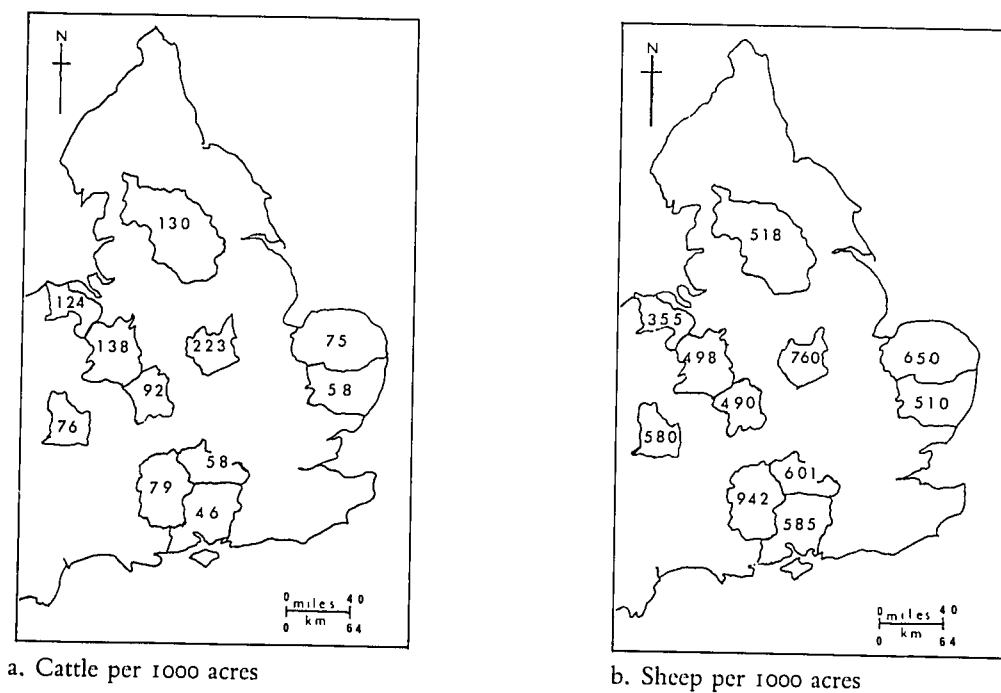


FIGURE 4
Counties embraced by the collection of Agricultural Statistics, 1854

have been included in place of one of the southern Chalk counties.¹⁴

In many ways the 1854 statistics provided much more information than was contained in the later June returns. The information was presented under some forty headings. Thirteen of these related to tillage crops, ten concerned aspects of land use comprising land in bare fallow, ley crops such as clover, lucerne and other artificial grasses, permanent pasture, irrigated meadows, sheepwalks and downs, number of acres in waste attached to the farm, number of acres in commons belonging to the parish, number of acres in wood and plantation, number of acres in holdings of less than two acres, in houses, gardens, roads, fences (ie urban land use).

Livestock were presented under ten headings. Horses and colts may be examined to determine whether breeding was a feature of any particular union. By relating the number of horses to the acreage in cultivation one may also discover whether the stock was in excess of what was necessary to work the land, which in turn may point to the employment of the excess stock for some non-agricultural use such as in traction for quarries and coal mines or in carriage at ports or urban centres. The influence of the urban population of the textile towns between the Calder and Aire could be seen to affect land use in more ways than one;¹⁵ with insufficient arable to justify a horse population of any consequence, it was obviously the industrial factor which raised the horse stock to 18 per cent of the total for the Riding. At Goole, Selby and York, for reasons no doubt connected with port communications, the horse ratio rose to one to 16 acres.

Other categories of livestock were listed as milch cows, calves and other cattle including working oxen. For sheep there

was individual listing of tups, ewes, lambs and other sheep. Swine were also noted. Analysis of the statistics for cattle and sheep provides an insight into the nature of the livestock economy. Allowing for the fact that the statistics were made up after the Martinmas and Michaelmas livestock sales, it can be determined whether dairying was a significant activity, whether breeding and rearing was a feature and what the fertility range of the cow or ewe stock may have been. In the London Basin region of Hampshire dairy cattle represented 52 per cent of total cattle stock and stores about 24 per cent. For store cattle the expense of winter keep and the factor of distance from the market could be seen to modify the overall average; thus in Kingsclere stores formed 16 per cent of the stock, while in Farnborough the proportion was 34 per cent, indicative of the influence of the Reading and Aldershot meat markets.¹⁶

With sheep the proportion of tups to ewes could be informative and this may be exemplified in the return for Uppingham Union in south-east Leicestershire.¹⁷ Tups were in the ratio of one to fifteen ewes, a high proportion which must have contributed to successful fertilization. The relation of lambs to ewes likewise indicates flock fertility and the relative incidence of lamb mortality. At Uppingham ewes comprised 29.8 per cent of the total sheep stock and lambs 30 per cent, thus fertility-survival rate for lambs to ewes was one to one. The analysis of flock composition also is worthy of study to reveal whether rearing and fattening were of significance. At Uppingham the stock being carried on formed 38 per cent of the flock thus indicating that feeding and fattening were features of the sheep economy in this union.

¹⁴ J Phillip Dodd, 'Gloucestershire Agriculture 1801-1854', *Transactions of the Bristol and Gloucestershire Archaeological Society*, 97, 1979.

¹⁵ J Phillip Dodd, 'The West Riding Crop Returns for 1854', *Yorkshire Archaeological Journal*, 51, 1979, pp 125-6.

¹⁶ J Phillip Dodd, 'Hampshire Agriculture in the mid-Nineteenth Century', *Proceedings of Hampshire Field Club and Archaeological Society*, 35, 1979, pp 243-4.

¹⁷ J Phillip Dodd, chapter in *The Adaptation of Change: Essays upon the History of Nineteenth Century Leicester and Leicestershire*, ed Daniel Williams, Leicester, 1980, p 131.

III

The statistics yield no information on the size of farms and one has to adopt other approaches. Although statistically unsatisfactory, by dividing the acreage of a particular union by the number of 'Schedules A' completed, one is able to obtain a projection of mean farm size by which to compare one union with another. In Leicestershire for example, one is able to say that the farms in the SW region were the largest in the county with an average of 65 acres, but with only about half this figure in the Hinckley area. For the Soar-Wreake Valley farms were small units averaging 33 acres while in north-east Leicestershire, in Bingham Union farms were medium-sized at an average of 46 acres, but in Grantham Union they were somewhat larger at an average of 53 acres.¹⁸

The statistics for holdings of under two acres together with the urban acreage for each union are obviously of considerable value in discussing land use. In Worcestershire the average of holdings under two acres was 26 per 1000 acres. However, in the Black Country the percentage increased to 130 per 1000 acres. This was a direct development from the 1845 Chartist Land Colonization Scheme at Dodford near Bromsgrove: 'in the Stourbridge area there are numerous land societies which have come into existence within the last few years, by means of which a great portion of land has been divided into small lots, varying from one rood to one acre in extent, and is chiefly cropped with culinary vegetables.'¹⁹

The policy of presenting the statistics in terms of 1000 acres of total area enables one to isolate and discuss various features of the contemporary land use of unions. A case in point is that of the nature of crop rotations being followed. One speaks of the Norfolk rotation which in 1854 in virtually every

Norfolk union was wheat, barley, turnips, leys (Table 3).²⁰

In like manner soil differences may be picked out which influenced the nature of the cropping. In the Avon Valley of Worcestershire the presence of heavier soils could be seen in the rotation followed per 100 acres of arable (Table 4).²¹ The high incidence of beans and bare fallow at the expense of barley and turnips pointed to a difficulty in working the heavier soils.

The role of the Chalk downland as a determinant in the land use of Southern England is brought out in Fig 5. The

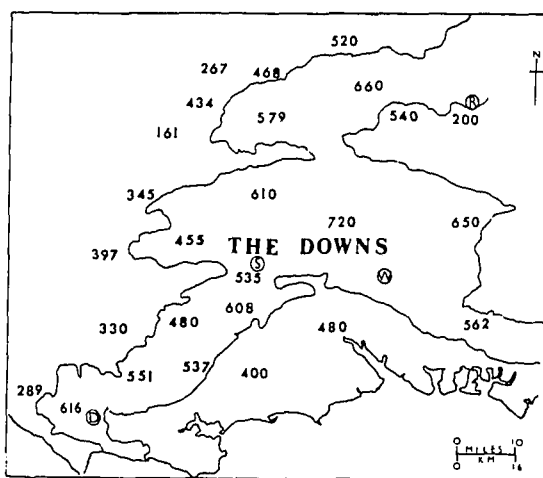


FIGURE 5

Arable acreage per 1000 acres
on the South Downs, 1854
R = Reading S = Salisbury
D = Dorchester W = Winchester

Tertiary sands, gravels and clays south of the chalk illustrate the marked decline in arable working of the land, while on the clays to the west the reductions are even more in evidence. In North Berkshire in the Vale of White Horse the outcrop of the Corallian Beds operated to push up the arable acreage to 52 acres per 1000.

The management of sheep was a strong feature of the farm economy of the chalk but analysis of the statistics reveals significant

¹⁸ *Ibid.*, pp 126-8.

¹⁹ William Ackroyd, 'Report on the 1854 Statistics from Stourbridge Union. 16 January 1855'.

²⁰ Dodd, 'Norfolk Agriculture', *op cit.*

²¹ J Phillip Dodd, 'Worcestershire', *op cit.*, pp 21-2.

TABLE 3
Sample cropping in Norfolk Poor Law Unions in 1854

Union	Wheat	Barley	Turnips	Leys	Other	
Aylsham	25	24	23	24	4	Per 100 acres of arable
Walsingham	25	23	23	23	6	Per 100 acres of arable

TABLE 4
Sample cropping in Worcestershire Poor Law Unions in 1854

Union	Wheat	Barley	Turnips	Leys	Beans	Fallow	Other crops
Alcester	35	5	5	22	11	17	5
Evesham	36	8	7	15	12	12	10
County	33	9	9	16	10	13	10

differences in the stocking densities of the chalk counties themselves. Thus Wiltshire, containing a larger volume of downland than Hampshire, produced a sheep density of 942 head per 1000 acres, whereas for Hampshire the total declined to 585 per 1000. Cattle densities for the whole of the counties involved in the 1854 collection averaged 104 head per 1000 acres. In the instance of these two Chalk counties, the emphasis on cattle was markedly subsidiary to that placed on sheep and this is clearly demonstrated in the total of 79 head for Wiltshire and 46 per 1000 acres in Hampshire.

Obviously, the Chalk was far from being the only important factor in land use. Norfolk, with 620 acres of arable per 1000 compared with 509 for Hampshire, stocked cattle at 75 head and sheep at 650 head per 1000 acres.²² In Leicestershire, where the arable content fell to 361 acres, the livestock totals were 223 head of cattle and 760 head of sheep per 1000 acres.²³ Cross-analysis of the data between counties reveals other features of interest. In north Shropshire, where the Whitchurch area practised cheese making as virtually a monoculture, the cattle density was 239 per 1000 acres. This was higher than most other regions in the

kingdom and matches the average enjoyed by the whole of Leicestershire. However, with cattle stocking at 355 head per 1000 acres in the Market Harborough region of that county, the comparison serves to underline the differences in the contemporary attitude towards grassland improvement in the two counties.²⁴

Similarly in the West Riding, the traditional importance of the woollen industry encourages belief that the limestone uplands of Craven would carry sheep in such numbers as to contrast favourably with most other mountain grazings. On investigation this proves not to be the case: for example on the Old Red Sandstone Uplands of east Breconshire,²⁵ and on the same formation in Radnor Forest, sheep densities were 50 per cent higher than in Craven. In either region the land is above 1000 feet OD and conditions of exposure are if anything more severe than in Yorkshire. However, the key to the difference in systems and densities probably derives in some measure from the nature of the feed available. Holliday and Townsend observe that 'the Calluna-Erica-Nardus blacklands provide the main diet in autumn and winter, and that absence of Nardus and Eriophorum reduces wintering

²² J Phillip Dodd, 'Norfolk Agriculture in 1853-4', *Norfolk Archaeology*, XXXVI, part III, 1976.

²³ J Phillip Dodd, 'Leicestershire', *op cit*, 1980.

²⁴ J Phillip Dodd, 'High Farming in Shropshire 1845-1870', *Midland History*, VIII, 1983, p 161.

²⁵ J Phillip Dodd, 'The Brecknockshire Crop Returns for 1854', *Brycheiniog*, VI, 1960.

capacity'.²⁶ As these are all species found on the Old Red Sandstone but not on the limestone of Craven, where *Festuca-Agrostia* form the diet element in the ground vegetation, this indicates the answer.

IV

Prior to the commencement of the June Returns of the Board of Trade in 1866, there is a great statistical gap in the knowledge of the land use of the country. The case being made for the 1854 agricultural statistics extends coverage back for twenty years to the Tithe Returns, but what then? Much has been made of the 1801 Returns, but these are of very limited value. Often the county cover is far from complete and if one is familiar with the detail at parish level, the 1801 recorded acreages may turn out to be an underestimate. The returns provide information on the acreages of the basic cereals, wheat, barley and oats. There is also detail of turnips or rape but these were bracketed together so one is left to assume which was implied. Occasionally other crops are noted if the person making the return thought fit. Often the most valuable information occurs in the comments appended by some incumbent or their curates which may give information on other features of land use.

No information was provided on artificial grasses or leys nor on bare fallow, thus it is not possible to discuss the arable acreage. It is true that one dedicated writer has expended much time and energy in attempting to estimate the arable acreage of the country based on the meagre statistics given.²⁷ However, as leys could represent between 20 and 40 per cent of the arable acreage according to whether a four-course or a five-course rotation was employed while bare fallow could vary from 15 to 30 per cent of the arable acreage, it is clear

that faced with such variables no arable projection is viable. The majority of commentators from Minchinton and Henderson onwards²⁸ have been content to present the statistics and discuss what can be determined as to crop ranking.

However, to formulate information of value one needs to plot the parish ranking, say for wheat, on a county map before it becomes possible to discern any sub-regional pattern for the county.²⁹

Fig 6 for Herefordshire indicates how the data can be presented in map form, in this case with regions developed from the data.

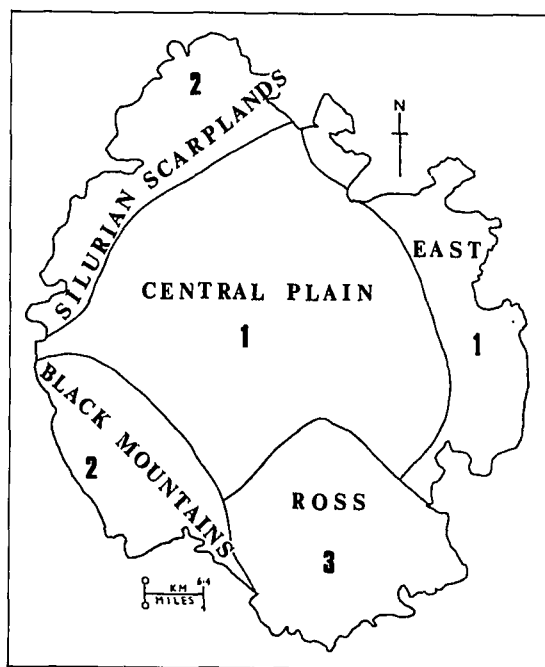


FIGURE 6

Agricultural regions in Herefordshire in 1850

Regions 1850

- 1 = virtual monoculture of wheat in 1801
- 2 = wheat and oats with barley a poor third
- 3 = wheat and barley more or less equal

²⁶ R Holliday and W Townsend, *York, a Survey*, British Association for Advancement of Science, 1959, Leeds, p 84.

²⁷ Michael Turner, 'Arable in England and Wales: estimates from the 1801 Crop Returns', *Journal of Historical Geography*, 73, 1981, pp 291-302.

²⁸ W E Minchinton, 'Agricultural Returns and the Government during the Napoleonic Wars', *Ag Hist Rev*, 1, 1953, pp 29-43. H C K Henderson, 'Agriculture in England and Wales in 1801', *Geographical Journal*, 118, 1952, pp 338-45.

²⁹ J Phillip Dodd, 'Gloucestershire', *op cit*; Dodd, 'Agriculture and Politics in the East and North Ridings', *Yorks Arch Jnl*, forthcoming, 1988.

In 1844-45 agricultural statistics were requested from the Poor Law Unions of Hartley Wintney and Basingstoke, and from Midlothian in Scotland, also Bailieborough Union in Ireland.³⁰ For Hampshire, only Hartley Wintney made a return, which, compared with the later return of 1853, was markedly deficient (Table 5).

obviously restricted the degree of comment possible.³¹

For informed appreciation of the changes taking place in the cultivated area of England one really needs to start with the data from the Tithe Surveys for those counties available for study. As an indication of what these may show, the following sample,

TABLE 5
Agricultural statistics for Hartley Wintney, Hampshire
in 1844-45 and 1853

Hartley Wintney	Wheat	Barley	Oats	Turnips	Fallow	Leys
1844-45	3230	1840	1215	1664	1007	1626 acres
1853	4550	2887	2120	2830	1396	3212 acres

A further attempt was made to collect statistics in 1853 from Hampshire and Norfolk and in Scotland from Sutherland, Haddington and Roxburgh. For the latter Haddington and Roxburgh on the whole were satisfactory but this could not be said of Sutherland. In England opposition was encountered both in Norfolk where three unions refused to make returns while some parishes in Downham and Thetford Unions were deficient; there was a similar story in Hampshire but in both counties the efforts of the enumerators were successful in overcoming most of the difficulties. This was just as well because for Hampshire the 1853 statistics were useful in supplying deficiencies in those unions which opposed collection in 1854. However, for Hampshire the collections for both 1853 and 1854 were deficient for the Isle of Wight which

meagre though it undoubtedly is, may be instructive (Table 6).

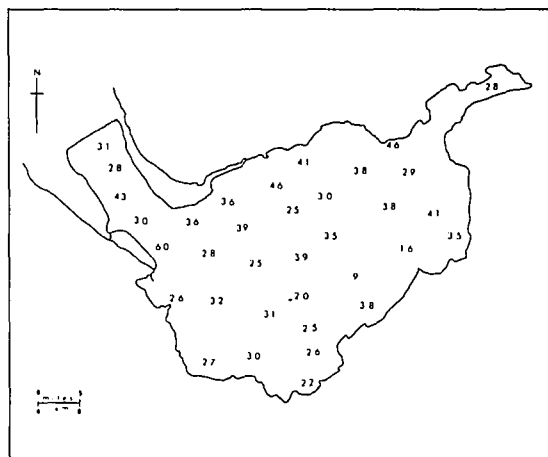


FIGURE 7
Percentage distribution of non-viable
(20-49 acre) farms in Cheshire, 1840,
extracted from the Tithe Survey

TABLE 6
Comparison of Tithe arable for selected counties
with 1854 statistics and the 1875 June Returns

County	Tithe per 1000 acres	1854	1875
Herefordshire	420 arable	—	379
Cheshire	245 arable	—	249
Wiltshire	462 arable	499	501
Shropshire	494 arable	424	374

³⁰ BPP, House of Commons Sessional Papers, 1847, LIX, 468, 1-9. ³¹ Dodd, 'Hampshire', *op cit*, p 251.

It can be seen that without more data it is extremely unwise to make inferences as to long-term change.

The only firm basis on which to rest assumptions as to what was taking place in respect of land use in England and Wales from 1850 onwards is the body of solid fact contained in the agricultural statistics for 1854. The statistics for 1854 represent one-third of the acreage of England and Wales covering all types of land and a great diversity of physical conditions.

If one analyses the changes in land use taking place between 1854 and 1875, the following picture emerges (Table 7).

It will be observed that although total arable proportions hardly varied over the

two periods, the wheat acreage did show a decline. Although data have not been extracted for all the counties for 1875, the difference for wheat was taken up by an increase in the ley proportion accompanied by a virtual phasing out of land in bare fallow.

In conclusion one can but reiterate that the 1854 Crop Returns make an important contribution to the study of agricultural history inasmuch as they represent a statistically viable source relating to one-third of the acreage of England and Wales and that 1854 must be regarded as the base-line for evaluation of later national statistics, particularly from 1875.

TABLE 7
Comparison of agricultural statistics for counties contained in the 1854 collection with those for the Board of Trade 1875 statistics

County	Arable		Wheat		Cattle		Sheep	
	1854	1875	1854	1875	1854	1875	1854	1875
Shropshire	424	374	110	96	136	166	492	576
Worcestershire	458	430	150	137	92	127	490	485
Leicestershire	361	344	94	87	223	267	760	886
Yorkshire, WR	296	263	74	56	130	144	518	426
Norfolk	620	617	158	146	75	80	650	537
Suffolk	676	653	174	155	58	69	510	501
Hampshire	509	516	119	105	46	60	585	578
Wiltshire	499	501	119	112	79	103	942	872
Denbigh	308	313	57	41	124	150	355	664
Brecon	161	150	28	20	76	79	580	1013
Berkshire		570		132		78		669
Per 1000 acres	431	430	108	99	104	120	535	721

Berkshire data for 1854 is not adequate for inclusion in this table.