

Wiltshire Agriculture in 1854 — the value of the Board of Trade Returns

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In 1854 was commenced the first collection of agricultural statistics in England and Wales on modern lines. A pilot scheme involving the counties of Norfolk and Hampshire was organised in 1853, and the comparative success of this lent encouragement to the Board of Trade to extend operations to eleven counties in the following year. These counties were, Hampshire, Berkshire, Wiltshire, Norfolk, Suffolk, the West Riding of Yorkshire, Leicestershire, Worcestershire, Shropshire, Denbighshire and Brecknockshire.

This decision represented a partial measure of success for those agricultural writers, statisticians and economists, who had for long years been lobbying to this end. Among the earliest of these one might count Arthur Young, who attempted to collect information himself in 1788, 1789 and in 1795.¹

There was not a little opposition to the 1854 Collection and many farmers as in 1801² feared that the information so gathered might be the prelude to increased tithe or tax assessment. Nevertheless Bills were introduced in 1856 and again in 1857, with the effect of initiating an official system of collection of agricultural statistics. Neither of these Bills received a second reading and it was not until 1866 that the Board of Trade was empowered to obtain Agricultural Returns through the agency of the Board of Inland Revenue.

Much of the credit for this successful conclusion of a long fought battle must go to G.R. Porter and a group of progressive Members of Parliament. The more prominent of these were, James Caird, C. Wren Hoskyns, J.D. Dent and H.S. Thompson whose Bills and writings³ kept the issue before the public until victory was achieved.

The 1854 Agricultural Returns

As collected these were presented solely in the form of raw statistics

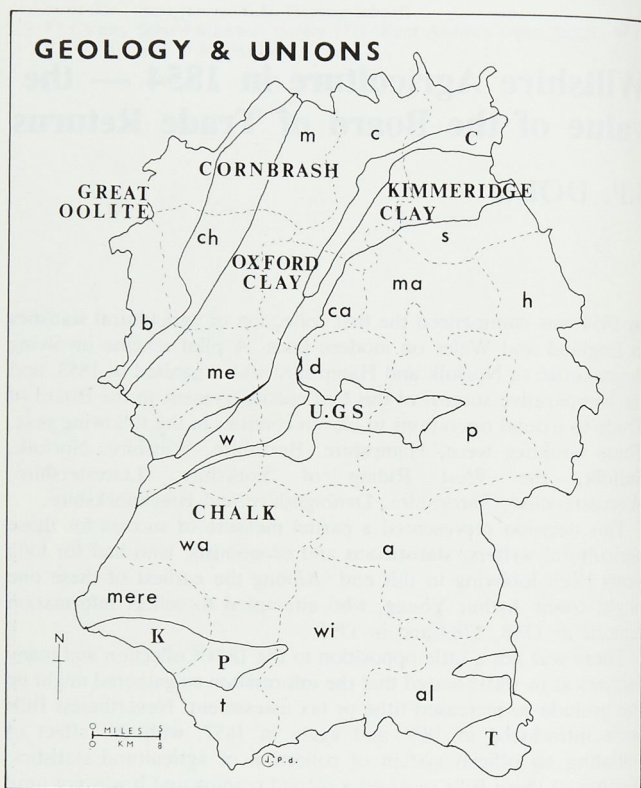


Figure 1. Geology and Unions

Key

Geology

C = Corallian, U. GS = Upper Greensand, K = Kimmeridge Clay, P = Purbeck Beds, T = Tertiary

Unions

m = Malmesbury, c = Cricklade, ch = Chippenham, b = Bradford on Avon, ca = Calne, s = Swindon, ma = Marlborough, h = Hungerford, me = Melksham, d = Devizes, w = Westbury, p = Pewsey, wa = Warminster, a = Amesbury, t = Tisbury, wi = Wilton, al = Alderbury

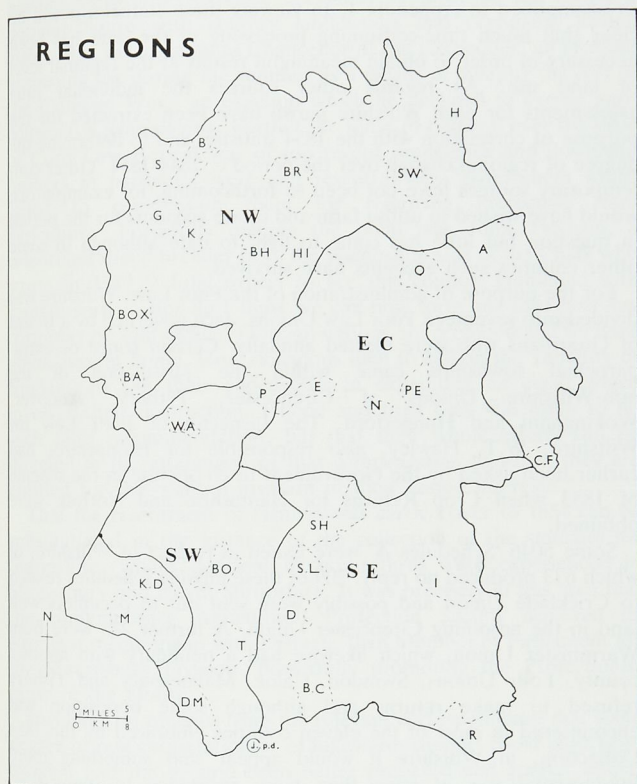


Figure 2. Regions

Key - Regions

NW = North-west

EC = East-central

SW = South-west

SE = South-east

Sample parishes S = Sherston, B = Brokenborough, C = Cricklade, H = Highworth, G = Grittleton, K = Kingston St Michael, BH = Bremhill, HI = Hilmarton, O = Ogbourne St George, A = Aldbourne, B.A. = Bradford on Avon, W.A. = West Ashton, P = Poulshot and Potterne, E = Etchilhampton and Stert, N = North Newton, PE = Pewsey, KD = Kingston Deverill, M = Mere, BO = Boyton, T = Tisbury, DM = Donhead St Mary, SH = Shrewton, SL = Steeple Langford, D = Dinton, CF = Chute Forest, I = Idmiston, B.C. = Broad Chalke, R = Redlynch and Landford

as exemplified in Appendix 1. In viewing these statistics it will be clear that much time-consuming processing of the data has been necessary in order to obtain meaningful results at the regional level of land use. As regards other sources the individual tithe assessments for each Wiltshire parish have been extracted for the purpose of correlation with the 1854 statistics and to determine the degree of regional change over the period c. 1844-1854. Other contemporary sources have not been so forthcoming, for example one would have wished to utilise farm and estate accounts for the period in question but little has come to light to date although in some other counties such accounts have survived.

For the purpose of administration of the Poor Law, Wiltshire was divided into seventeen Poor Law Unions, each governed by a Board of Guardians who were elected annually. Certain fringe or extra-parochial townships came within the jurisdiction of the non-Wiltshire Unions of Cirencester, Tetbury, Andover, Wokingham and Hungerford. The Inspector of Poor Law for Wiltshire, W.T. Hawley, also responsible for Hampshire, had earlier been asked by the Government to co-operate in the scheme of 1853 when Crop Returns for Hampshire and Norfolk were obtained.

Some 5046 'Schedules A' were issued in respect of Wiltshire, of which 633 produced no reply. 209 of these missing schedules related to Cricklade Union and possibly were sent out to occupiers with land in the adjoining Cirencester Union. A further 225 were from Warminster Union, which likewise had a boundary with another county. Four Unions, Swindon, Calne, Malmesbury and Tisbury refused to make returns and although some opposition was encountered in most of the eleven counties embraced by the 1854 Collection, in Wiltshire it would appear that something more fundamental was at issue than mere resistance to innovation. Hawley evidently considered this to be the case and indicated that some of the opposition was politically motivated. 'Amongst - - a small class, consisting of owners as well as occupiers of property, hostility has been prompted by party and political feelings; and in a few instances the former have not scrupled to use the influence which their position as landlords has armed them with to prevent the occupiers (in some instances of whole parishes) from exercising their own discretion in making the returns.'⁴

The political issues of the day were undoubtedly reflected in the contemporary Wiltshire scene. Some factions in the county 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,⁵ an exaction which he declined to excuse agriculturalists from paying. Further the sense of betrayal over the issue of Corn Law Repeal was of too recent occurrence and downland farmers in particular were still resentful of a government which failed to compensate them for removing Protection from agriculture. Forcefully making the point was John Twynam, a celebrated sheep breeder from the Hampshire side of the Chalk who wrote in 1847 'I fully expect to see this country inundated with foreign corn — nor do I think we can now form any idea how low corn may be sold (while?) foreign nations are prepared and we have abundance at home. How ridiculous then to call on the Tenantry of England to use their endeavours in expediting an event which involves their destruction. I hope and trust they will listen to no such false recommendation, but that their whole efforts will be directed to the attainment of that compensation to which they are entitled for this wanton invasion of their vested interests'.⁶

That the resentment of farmers was carried over to 1854 can be substantiated in the instance of the collection of the statistics for Shropshire, where deficient or non-returns were experienced in Shrewsbury and North Shropshire. It was precisely in this area that the contemporary Agricultural Protection Society achieved its strongest membership with Disraeli, then Member of Parliament for the Shrewsbury division, powerfully promoting the Protectionist cause in the House.

It is likewise obvious from the relevant correspondence that some degree of non-cooperation or of lukewarm support could have been avoided had the ground been better prepared and greater efforts made to discuss the scheme with individual groups of occupiers. The harshness attendant on Chadwick's reorganisation of Poor Law relief twenty years earlier was too recent to have been forgotten, and farmers and the smaller occupiers could be forgiven for feeling somewhat distrustful of the intentions of a government operating through the machinery of the same Poor Law. Thus in Devizes Union, occupiers protested against the collection of information on produce and livestock 'as unjust and injurious to the cultivators of the land, unless conducted in such manner as to prevent the exposure of their private affairs'.⁷

Fear of the intentions of Big Brother was likewise evinced by the

Clerk of Marlborough Union who wrote that the Committee had no doubt that nearly the whole of the Return would have been completed by the occupiers themselves, if they 'could have been assured that individual returns would have been destroyed here when the aggregate of the parishes should have been made up'.⁸ The same suspicions were expressed in Warminster Union where a strong protest was registered over the lack of privacy but that occupiers would have no objection 'to make a joint return for the whole parish in one schedule, or for three or more persons to make their return in a joint schedule'.⁹ As Poor Law Inspector, Hawley was also made aware of the dissatisfaction of Poor Law officers with the scale of remuneration for these additional duties, which in many cases required them to leave their cosy offices and to investigate personally faulty returns in the countryside in somewhat bleak weather conditions in the winter of 1854-5. He commended the excellent Returns made by Chippenham and Devizes but advised that 'Union Officers should receive better remuneration - - and there should be statutory enactment if the experiment was repeated'.¹⁰ Possibly there would have been more opposition in Wiltshire had not the editors of the county press warmly advocated the promotion of the Collection.

Further it seems clear that in view of the fact that Hawley, having had the advantage of making a trial run in 1853, was somewhat ham-fisted in his approach. As a Poor Law Inspector he appears to have aroused considerable ill-feeling in Sussex¹¹ and it is conceivable that some degree of non-cooperation could be attributable to antagonism towards Hawley himself rather than to the Collection as such.

In all 12½ per cent of occupiers refused to cooperate and, having discussed the grounds for such objection, it may be of point to assess the quality of the Returns actually made. The total acreage of the Return amounted to 444,074 acres which first requires to be assessed against the county acreage. This as in the instance of most counties, is not particularly easy to elucidate. John Houghton in 1693¹² estimated the county to contain 876,000 acres, in 1808 it was stated to be 768,000 acres,¹³ in 1811 it reached a peak of 878,000 acres,¹⁴ and estimates continued to fluctuate even after the institution of the Board of Agriculture. Thus in 1870 the acreage was given as 865,092,¹⁵ in 1873 the figure was 869,233,¹⁶ and in 1875 it stood at 859,303.¹⁷ One has plenty of choice and even in the present day it is not unknown for discrepancies of c.1,500,000 acres to arise in the instance of statistics for England and Wales.¹⁸

The differences between the acreages contained in the respective Returns quoted and the true area in each case, is to be explained as comprising the non-agricultural land. Under this category may be noted, inland water, roads, public works, railways, houses and gardens, and unenclosed mountain and moorland. The 1854 statistics contain acreages for houses and gardens, which the later Board of Agriculture do not, but information on land in industrial use such as factories, and quarries, sand and clay workings was not included. As some of the latter categories are of some consequence in a county like Wiltshire, it follows that the Returns will be discrepant to some degree, which however is not easy to estimate.

Turning now to the 1854 acreage, the Inspector ignored the four Unions which failed to produce a Return and quoted a figure of 516,843 acres. The difference between this and the acreage quoted earlier, arises from the fact that in the two Unions of Cricklade and Pewsey, the respective Returns totalled 49% and 55% of what was thought possible. Thus the actual Return represents 86% of what was regarded as the total for the thirteen returning Unions. No acreage is quoted for the other four Unions but by totalling the individual parish acreages in these Unions I estimate this as being about 20%¹⁹ of the county area. However, in the absence of a firm base line, one needs must restrict evaluation to the acreage actually returned and determine whether this 86% total adequately stands up.

If one attempts this through comparison with acreages contained in the Board of Agriculture statistics commencing in 1866, problems immediately arise. For example, the total cultivated area in 1870 is quoted at 722,551 acres, and in 1875 at 743,334. Arable is given as 421,357 in 1870, and 430,783 in 1875 and so with all figures quoted in the Returns. Some differences have in the past led commentators committed to the Prothero view of agricultural history,²⁰ to make statements such as 'agricultural statistics — showed in 1870 in England --- the greatest extent the tillage area had yet reached--- the area under wheat a year or two before in 1869, was the greatest ever known'.²¹ All that the June Crop Returns of the Board prove is not that there was a persistent wobble from year to year, but that there were changes in the psychological attitudes of farmers towards the compilation of their Returns.

Topley in 1871²² took the sensible line by reducing the statistics to a percentage basis and in a review of the 1869 Returns, to cite one illustration, noted arable as occupying 48.3 acres per 100 of the total area of the county. If one compares the 1854 Returns in this context

for a given number of key categories of land use the position is as illustrated below.

Table A Arable and Corn per 1000 acres

<i>Year</i>	<i>Arable</i>	<i>Temp. Grass</i>	<i>Wheat</i>	<i>Barley</i>	<i>Oats</i>	<i>Total Corn</i>
1854	499	93	119	79	35	233
1870	487	88	113	79	38	230
1875	501	95	112	83	39	234
1840s	462					
Tithe ¹⁹						

One could continue the exercise with all the years from 1866 to 1875 but the net result would be to demonstrate the unreliability of the Returns until after 1870. What does stand out is that the 1854 Statistics betray no glaring inconsistencies but do bear comparison with 1875 when the official national Returns were beginning to settle down. The point which also emerges is that a change was taking place in the significance of wheat in the rotation. The higher proportion for this crop in 1854 had sound economic reasons. One of course was the interference with imports from the Baltic occasioned by the war with Russia, and the other was the upswing in prices in the 1850s, and the fact that 'the seasons were uniformly favourable, harvests were good, fair or abundant, the wheat acreage of 1854, as estimated by Lawes, rose to a little over four million acres'.²³

As regards some of the other categories of land use included in the 1854 Returns, a comparison is inhibited because important acreages such as that of rough grazing, which in a county like Wiltshire would largely equate with downland sheep walk, do not appear in the Board of Agriculture Returns until 1892. Similarly woodland and commons are missing from the official national statistics although information on these is presented in the 1854 Returns. However a slight comparison may be undertaken in the instance of common or waste. The 1854 Returns quantify under each head which together provide a combined land use of 12 acres per 1000 of total area in this category. The 1873 survey of waste lands²⁴ when assessed in the same manner, yields a figure of 10.6 acres per 1000, thus affording reasonable validation of the 1854 figure bearing in mind that by 1873 some of the earlier proportion of 'waste' may have been converted to other use.

Although it is unfortunate that a more substantial Return was not forthcoming covering the whole county, I believe that for the area actually presented in the statistics, the 1854 Returns provide a statistically valid source and a valuable insight into the contemporary land use of Wiltshire. Moreover in several respects the 1854 Returns are of greater value than the later national statistics, inasmuch as they contain information on woodland, land in urban occupation, fragmented parcels of land under two acres, wastes, commons and sheep walk, not included in the Board's Returns. A general view of the chief items of land use for the county as a whole is given below.

Table B *Land Use in Wiltshire in 1854*

% of						
County area	Arable	Grass	Grazing	Wood	Urban	
	49.9	25.3	14.5	6.6	1.7	
Tithe 1840s	46.2	34.6	11.1	5.6	2.5	

Table C *Average density of the chief crops and livestock per 1000 acres of the County area in 1854*

Temp.						
Grass	Wheat	Barley	Oats	Turnips	Fallow	Bare
93	119	79	35	88	33	
		Total	Total			
Horses	Milch Cows	Cattle	Sheep	Pigs		
28	52	79	942	63		

Regional Land Use

In discussing regional land use one has to reconcile two sets of data viz, the statistical evidence derived from the 1854 Crop Returns presented for seventeen Poor Law Unions, and the physiographical features of the county which as far as land use is concerned essentially relate to the geology and the soils derived from the underlying rocks. The Poor Law Unions were administrative block-units which ignored considerations of geology and as previously noted also tended to overlap county boundaries. (Figure 1). As the major part of the county, South Wiltshire, is comprised of the Chalk it might be thought that geology and administrative units would easily correlate but the situation is hardly so simple. In Wiltshire the Chalk forms a huge upfold which near Swindon, for example, gives

rise to the escarpment overlooking the Vale of the White Horse and the Vale of Avon. Southwards from the escarpment the strata dip to the southern boundary of the county where the Chalk passes beneath the Tertiary rocks of the Hampshire Basin. In the west of the county at Pewsey, Warminster and the Vale of Wardour, other upfold structures have been denuded of the overlying Chalk to expose younger rocks such as the Upper Greensand and the Purbeck Beds. Obviously soils derived from these rocks differ from those of the Chalk and the nature of the land use changes accordingly. These structural features as illustrated in Figure 1 have been taken into consideration for the purpose of compiling the map of regions. (Figure 2). A number of sample parishes have been inserted based on the evidence extracted from the Tithe Apportionments to illustrate changes in land use as related to the structure.

The North-West Region

In northern Wiltshire the relationships between the geology and the Poor Law Unions are much more complex. The Jurassic rocks are exposed in a series of north east-south west bands across which the Unions lie so that each Union comprises elements of three geological formations each of which has effected change in the nature of land use. Only in the instance of Melksham has it proved possible to isolate one rock formation, the Oxford Clay, as a dominant factor. Thus even more so than in the case of the southern Chalk, the necessity arises to utilise sample parishes in illustration of the differences in mid-century land use. The land use response at the mid-century clearly reflects the nature of the soils derived from each formation, as appears in the following table based on the sample parishes in Figure 2.

Table D *Arable acreage per 1000 acres of total area*

<i>Union</i>	<i>Great Oolite</i>	<i>Cornbrash</i>	<i>Oxford Clay</i>	<i>Corallian</i>	<i>Kimmeridge Clay</i>
Malmesbury	359	227	128	—	—
Chippenham	568	397	—	—	—
Bradford	546	396	—	—	—
Cricklade	—	—	128	—	—
Swindon	—	—	—	420	237
Calne	—	—	196	372	—
Westbury	—	—	—	291	—
Melksham	—	—	161	—	—

The contrasts in the pedological composition of the various Unions are obvious if one extends the view to take in the land use of each, that is averaging out the differences demonstrated in Table D.

Table E *Land Use per 1000 acres of total area*

<i>Union</i>	<i>Arable</i>	<i>Permanent Grass</i>	<i>Wood</i>	<i>Down</i>
Malmesbury	267	660	27	
Chippenham	434	462	48	
Bradford	334	470	107	
Cricklade	196	605	87	
Swindon	468	440	10	73
Calne	386	511	34	50
Westbury	346	460	49	100
Melksham	161	749	5	5

Swindon, as may be seen from Figure 1, extended well across the Chalk so that downwash from this on the southern side and from the Corallian on the north tended to ameliorate the heaviness of the intervening Kimmeridge Clay. The greater extent of arable in Swindon sharply contrasts with the situation of Melksham almost entirely lying on the Oxford Clay.

The permanent grass of the region attracted comment from several observers, Davis in 1811, noted the 'rich grazing land on the banks of the Lower Avon and the Thames',²⁵ while Cobbett some twenty years later considered that all around Cricklade were 'some of the very finest pastures in all England'.²⁶ For an objective view it is possible to take the evidence from the Tithe Files of the 1840s²⁷ which quote the rents for grassland thus enabling one to estimate the quality of the meadows. The highest rents of 31s-40s for good quality grass were to be found in Bradford and Melksham Unions although Calne and Chippenham had some of this quality. The grassland of Swindon, Cricklade, Westbury and in parts of Malmesbury, Chippenham and Calne was assessed at the lower rating of 21s-30s. With such a large proportion of the region down to permanent grass the emphasis of the farm economy was inevitably directed towards livestock and particularly to the management of cattle.

Although stock figures are not available for 1854 in the case of Malmesbury, Calne and Swindon it is possible to make use of the Tithe Files to remedy the deficiencies.²⁸

TABLE F *Livestock densities in N.W. Wiltshire per 1000 acres.*

<i>Union</i>	<i>Milch Cows</i>	<i>Percentage of Cattle (Total)</i>	<i>Total Cattle</i>	<i>Ewes</i>	<i>Percentage of Total Sheep</i>	<i>Pigs</i>
Bradford	118	75%	159	276	60%	93
Chippenham	53	50%	106	294	43%	95
Westbury	119	75%	158	166	39%	78
Melksham	203	83%	244	66	26%	130
Cricklade	107	60%	178	101	46%	72
Calne			152			
Swindon			89*			
Malmesbury			104			
Wiltshire	52	66%	79	468	50%	63

*For Swindon the figure may be depressed by a low sample, in the adjoining region of Berkshire the 1854 density was 113 cattle per 11000 acres. The dairying element in total cattle densities clearly overwhelms other aspects of the cattle economy and implies that the bulk of the calves were cleared from the farms very soon after weaning. Cheese-making was the basic consideration and all other elements in cattle management were very much subservient to this end. According to Caird²⁹ the cheese was marketed in 1850 as 'Double Gloucester' and was then selling at '50s a cwt'. Davis in 1811³⁰ considered that calves were being fatted for the London veal trade to the detriment of local cheese production, however by 1845 the practice was to fat all calves 'which fall early enough to be fattened before grass time'. After that they were sold to dealers for grazing in other counties and all the milk was utilised for cheese.³¹

As the calves were disposed of it follows that the dairy stock had to be provided from outside the region as relatively few dairymen bred their own, although on the poorer grassland the herds were kept up to strength by a few heifers from the home stock. The universal practice was to buy in heifers at the fairs and markets to which large droves were brought from the northern counties.³² Although sheep were of considerably less importance in north-west Wiltshire than cattle (Table F) the presentation of the statistics in block for Unions as opposed to individual parishes tends to obscure the higher densities which prevailed on the arable land, in particular on the Great Oolite and Cornbrash. For example Box on the Great Oolite was part of Bradford Union but as may be seen from Table G its land use was vastly different from that of the Oxford Clay parishes.

TABLE G. *Land use per 1000 acres*

	<i>Tillage</i>	<i>Grass + Rotation grass</i>	<i>Cattle</i>	<i>Sheep</i>
Bradford Union	270	534	159	458
Box parish	454	487	40	1208

Management of the sheep differed somewhat from that of cattle inasmuch that more lambs were fed on for a later market than was the case with calves and in Melksham the feeding side appears to have been the dominant feature.

TABLE H. *Lambs and two-year sheep in 1854*

<i>Union</i>	<i>Lambs</i>	<i>Other sheep</i>	
Bradford	32%	7%	percentage of total flock
Chippenham	36%	19%	"
Cricklade	36%	17%	"
Melksham	18%	53%	"
Westbury	30%	29%	

Except on the Stonebrash along the Gloucestershire border arable farming was subservient to the stock side of the economy. Davis commented, 'land so cold and wet-- as a great part of the vale land of this district, can never be permanently improved while under the plough'.³³ The amount of land still described as in bare fallow in 1854 underlines the difficulties of arable cultivation in most of the Unions. In Bradford 44 acres fallowed per 1000 of total area contrasted with the 93 acres of wheat, the major crop. In Cricklade the proportions were 20 acres fallow and 55 wheat, Chippenham 21 to 118 acres of wheat, and in Westbury 31 acres to 105 of wheat, which may be compared with the county averages of 33 acres of fallow and 119 of wheat. In Melksham the stiff clays made beans the second crop after wheat but elsewhere the presence of heavy clay-land could also be seen in bean acreages which closely corresponded with those for bare fallow. In general barley ranked second to wheat but Cobbett remarked on the fine hops grown in the Blunsdon area.³⁴

Little reported in 1845 that the condition of the arable on many farms left much to be desired³⁵ while Cobbett from personal observation implied that there was a failure to keep down thistles in the corn crops. Viewing the cornfields in late August after the wheat had been carried, he remarked that all the way from Malmesbury to Crudwell he saw fifty times as many goldfinches as he had ever seen before at one time. 'The favourite food of the goldfinch is the seed of the thistle'.³⁶

South-west Wiltshire

This region comprising the Unions of Warminster, Tisbury and Mere is mainly chalk downland except where in Mere and Tisbury the Vale of Wardour exposes the stiff Kimmeridge Clay and the Purbeck Beds. The effect of this on the arable acreage was to reduce that of Mere to 397 acres per 1000 of total area compared with 455 acres for the rest of the region. (Figures 1 and 2)

TABLE I *Crops and Livestock per 1000 acres*

Union	Arable	Wheat	Barley	Oats	Turnips	Leys	Down	Sheep	Cattle
Mere	397	87	55	37	63	82	180 acres	944	115 head
Rest of Region	455	113	69	35	76	74	202 acres	959	59 head

On the lighter soils of the region soil differences were marked by the larger acreage for barley and turnips while in Mere the effect of the heavier clays was seen in the bare fallow acreage of 47 as compared with 30 acres over the remainder of the region. On the high down, woods such as High Ridge are indicative of the residual deposits of Clay-with Flints of the Upper Chalk. This was reflected in the differences in the woodland cover e.g. 126 acres per 1000 in contrast to the 82 acres of Mere Union. The change in soils also showed up at the parish level thus Mere parish on the Kimmeridge Clay (Figure 2) had 473 acres per 1000 in arable while in the adjoining parish of Kingston Deverill, largely on the Chalk, the arable acreage increased to 522 acres. So also with Tisbury on the Purbeck Beds with 490 acres per 1000 under the plough compared with the 591 acres of Donhead St Mary on the Chalk.

The density of the sheep population as given in Table I related to the averages for stock carried over the winter but like all averages other trends are concealed. Some farmers with large flocks such as Henry King of Chilmark stocked through the winter at a density of 1625 per 1000 acres.³⁷ On the down farms few sheep were wintered for fattening, no more than 9 per cent of the flock but in the Vale of Wardour the practice was different and with more water-meadows available the supply of hay and meadow grazing between drowning of the pastures, enabled farmers to fat 19 per cent of their flocks. Judging from the numbers of lambs kept through the winter most of the survivors were fed on until after the next year's wool clip. However the combined effect of barren ewes and lamb mortality was such that reckoning one lamb per ewe, the potential lamb yield

was reduced by some 25 per cent.

On other soils as in the Vale of Wardour cattle were more significant than sheep (Table I) and the emphasis was decidedly on dairying. In Mere Union 69 per cent of cattle were milch cows while calves represented a little over one sixth of the number which would have been on the farm in November had all the yield been retained. It should be added that as with sheep the same proviso as to barren stock and mortality is to be inferred. In the down parishes 41 per cent of the stock were milch cows and by November some 35 per cent of the potential calf yield was still on the farms. From Cobbett's description of the meat market at Warminster it is clear that this was the destination of many of the calves and lambs from the farms of the region. 'I was delighted and greatly surprised to see the *meat*. The very finest veal and lamb that I had ever seen'³⁸

Allowing three to four horses per 100 acres of arable, the horse stock of the region in 1854 was adequate to the demand without any reliance on oxen. If one then views the stock of cattle of two-years and over it is obvious that the feeding and fattening of cattle was much more important in the downland parishes than it was in those on the clays and heavier soils. It might be expected that the reverse would be the case but the problem of obtaining adequate supplies of straw was an important factor in determining the economic return to be derived from wintering store cattle. Store cattle were primarily viewed as a means of making manure for the arable land by treading and manuring straw in the yards. On the light-land arable farms there was an adequate supply of straw and a bonus of spoiled or poor tail corn for feeding in seasons of depressed prices. On the claylands straw was in short supply as may be deduced from viewing the corn acreage for Mere, as compared with the rest of the region. Thus in the latter 'other cattle' numbers equated at 45 per cent of total herd strength compared with milch cows at 41 per cent but in the case of Mere the proportion of 'other cattle' was no more than 18 per cent the reason being partly the problem of straw but more particularly the overriding importance of dairying as the focal point of the farm economy. Cheese and butter production was the essential aim and had been for centuries. In the Vale of Wardour in the early seventeenth century yeomen such as Anthony Targett of Tisbury had as much as 12 per cent of their domestic estate composed of cheese and butter. His inventory contained 'one hundred three stone and six cheeses, three dozen of butter and one fitch of bacon — prized at £5'.³⁸ In addition his dairy equipment brought up the value of his commitment to dairying to 25 per cent of

the total value of the inventory. The Vale formed part of the dairying region of the Vale of Blackmoor where by the eighteen forties, 'Local farmers preferred well-tended grasslands-- not only were milk, butter, cheese and hay profitable products, but by refusing to plough, farmers often avoided the burdensome necessity of paying tithes in kind'.⁴⁰

East Central and South-East Wiltshire

Much of this eastern portion of the county is composed of the Upper Chalk. In the East Central region the downs rise to 900 feet O.D. in the west and decline to 700 feet O.D. near the Berkshire border. In the south-eastern region levels are somewhat less, downland heights varying between 400–600 feet O.D. At heights in excess of 500 feet O.D the thin downland soil is replaced by Clay-with-Flints with large tracts carrying woodland as, for example, Savernake Forest and in the south-east Grovely Wood. In the south-east the plateau is markedly dissected by the Avon and its tributary streams with the result that along the river valley sides the Middle Chalk is exposed. This is a much more fertile soil than that at higher levels so that the percentage of arable land is higher in the south-east. A further consequence which arises is that these valleys gave farms a valuable stretch of water-meadow and at the same time facilitated access to the downland pastures. These differences are to be seen in the following table.

TABLE J. *Land Use per 1000 acres*

	Arable	Water Meadow	Grass	Wood	Down	
East Central region	579	26	138	90	140	acres
South-east region	610	35	60	70	191	acres

Other variations were observable where the soils were not dominantly chalk or where the plough-up of downland had been more vigorous. Table K illustrates some of these features.

TABLE K. *Land Use per 1000 acres for sample parishes*

<i>Parish</i>	<i>Soils</i>	<i>Arable</i>	<i>Downland</i>
Potterne	Kimmeridge Clay	240 acres	
Pewsey	Greensand-Chalk	776 acres	
Shrewton	Chalk	468 acres	477 acres
Dinton	Chalk	646 acres	302 acres

As illustrated in Idmiston and many other parishes, the breaking-up of downland had a long history even before the Napoleonic Wars. Defoe had remarked it in 1724,⁴¹ while the passing of the Tithe Commutation Act gave fresh impetus to conversion. Caird writing of the Salisbury Plain area in 1850 stated 'the greater proportion of this extensive tract had been brought under tillage since the passing of the act for the commutation of tithes. In this way lands not worth more in their natural state than 3s 6d or 5s an acre were raised to 15s or more'.⁴²

Various rotations were followed, four — five — six course, partly based on soil differences and partly due to the preferences of individual farmers.

TABLE L. *Arable land use per 1000 acres.*

Region	Wheat	Barley	Oats	Turnips	Leys	Bare Fallow	
East Central	151	63	39	96	87	33	acres
South-eastern	124	115	46	130	133	37	acres

A decline in oats was discernible as early as 1828 when William Brown of Broad Hinton, among others,⁴³ reported that few oats were sown. The like point was made by Cobbett in 1830⁴⁴ while railways reduced the demand for oats as horse fodder, 'horse-corn being so little wanted since the completion of the railways, more attention is given to the growth of green crops and less to that of oats and beans, which formerly made one field in the course; and the sheep stock is thereby considerably increased'.⁴⁵

Cattle were relatively unimportant other than in Devizes Union, where nearly half the land was on the Kimmeridge Clay. Equally important was the location of the area at the junction of the downland and the northern plain with access to several urban markets for dairy and fatstock products, a circumstance facilitated by the branch link to the Great Western main line, which by 1854 must certainly have influenced the decision making of many farmers.

For the light soils farmers of the downlands, corn production, especially wheat, was the basic aim around which the entire farm organisation revolved. Throughout the nineteenth century in the course of evidence presented to the several Select Commissions from 1820 onwards the recurrent theme was that downland farmers could only prosper by producing wheat and to do that on the thin soils of the Chalk it was essential to carry as many sheep as possible

to provide the manure to maintain soil fertility. Thus in 1828, William Pinkney attested that downland could not be maintained in cultivation without sheep. 'I generally fold my sheep on the land, having no other manure but half-made dung, which we call muck, in the yard. The sheep are our principal dependence for supporting our crops, indeed I could not occupy my land without a flock.'⁴⁶

The system showed little change in 1845 'Of the different manures used by South Wiltshire farmers, the sheepfold stands first. It is not confined to any one crop, for the sheep are regularly folded all the year through, whether feeding in the water-meadows on the artificial crops or on the down only'⁴⁷ Table M indicates the emphasis given to sheep as compared with cattle.

TABLE M. *Livestock densities in 1854 per 1000 acres*

	Total cattle		Total Sheep		Summer density of sheep	Ewes
East Central region	27	head	1031	head		46.0%
Devizes region	88	head				
Pewsey					1724 head	
Broad Hinton					1300 head	
South-east region	27	head	1250	head		

Conclusion

Between the beginning of the nineteenth century and 1854 the Wiltshire countryside manifested signs of considerable change. Most striking to the eyes of the contemporary observer would have been the virtual disappearance of the system of common field farming so that by the time of Little's report in 1845 no more than a handful of such parishes survived.⁴⁸ Whatever the merits of enclosure in terms of enhanced and more efficient food production the effect on the deployment of human resources was to throw a considerable proportion of the labour force of the county off the land and reduce them to the status of unemployed paupers. Samuel Capper of Potterne Manor confirmed in 1820 that there was considerable unemployment in the county while those in employment had had their wages reduced by one fifth as the result of cuts made in 1817 and 1819. He gave as the cause of so much employment 'the inability of the farmers to pay their wages'.⁴⁹ Unemployment also occurred in the manufacturing districts in consequence of the introduction of textile machinery in place of the domestic system, a point made in the 1828 Select Committee on the Wool Trade⁵⁰ and one which obviously concerned towns such as Bradford on Avon and others in

the Avon Valley. This too operated to increase the poor rates, the greatest incidence of which fell on the occupiers of land.

Most farmers presenting evidence before this Committee complained of the increasing burden of the poor and other rates but the farmers on the Chalk were even more disturbed by the inability to sell their wool. Prices had first fallen, Pinkney said, from 17d in 1824 to 8d in 1828.⁵¹ Henry King of Chilmark sold wool at 2s 10d in 1814 which by 1824 had fallen to 1s 3d per lb. In 1825, 1826 and 1827 he had not sold any of his clip.⁵² Many other farmers had large stocks in hand some because they were wedded to the old practice of withholding supplies from the market until price levels suited them others because they could not find buyers even at 8d a lb. The crux of the problem was, even though most seemed not to realise this, that they were stocking the wrong kind of sheep. The old Wiltshire horned sheep had been dispensed with and the South Down had been introduced from Sussex and later modified to suit Wiltshire downland conditions. All agreed that the downs could not be cultivated for wheat without the sheep and all affirmed usually in vigorous terms that they could not fat sheep instead. Farmers kept sheep primarily as manure machines but also anticipated profit from the wool sales.

By 1828, the wool, the bulk of which had supplied the West Riding woollen mills, was unsaleable yet imported wool was selling at a shilling a lb. However the crisis of 1828 was overcome and the sheep stock of the county continued to increase. William Pinkney increased his flock by 36 per cent between 1803 and 1824, due to sowing more turnips which enabled him to winter his lambs instead of disposing of them in the autumn as he had done previously.⁵³

The county stock of sheep appears to have risen by 6 per cent between 1800 and 1828⁵⁴ and by a further 10 per cent by 1854. This is what one would anticipate from the pattern of change in the countryside occasioned by the continuing breaking up of the downland thus contributing to a higher sheep population. The consequent increase in the arable acreage between the compilation of the Tithe Survey and 1854 can be instanced as some 7 per cent for Wiltshire as a whole. The onset of the Crimean War cut off Russian grain imports from the Baltic and the Black Sea ports with the result that lacking restraint from external competition, wheat prices went from 72s 5d in 1853-54 to 74s 8d in 1854-55. Wiltshire farmers in common with those in the rest of Britain began to enjoy the best of both worlds with several years of abundant harvests from an expanded acreage and with continuing high prices.

Appendix A

The 1854 Agricultural Statistics are without textual comment and are no more than raw statistics as in the sample below.

Union	Total acres	Wheat	Barley	Total Tillage	Clover etc	Permanent Grass	Oats
Alderbury	51528	5990¼	5404½	22544	6754¼	5204¾	2232¾
Sheep							
Walks	Horses	Colts	Cows	Calves	Other	Swine	Tups
3824¼	1270	120	1799	346	158	2944	883
Ewes	Lambs	Other					
26607	18322	2889					

Notes

¹ *Annals of Agriculture* Vol. XXIV (1795).

² J. Phillip Dodd, 'The State of Agriculture in Shropshire 1775-1825', *Trans. Shropshire Arch. Soc.* (1954) pp. 1-31.

³ G.R. Porter, *The Progress of the Nation* (1851); for Dent, Hoskyns, Caird and Thomson see the *Journals of the Roy. Ag. Socy. of E. and Roy. Stat. Soc.* for 1854, 1856 and 1863.

⁴ Parliamentary Papers (PP):

W.T. Hawley in *Reports of Poor Law Inspectors on Agricultural Statistics* Cd 1828 (1855).

⁵ E.L. Woodward, *The Age of Reform. 1815-1870* (1938) 1946 edition pp. 160-161.

⁶ J. Twynam (1845-7). Farming Accounts and Diary MS Personal photocopy supplied by courtesy of the Library of University of Reading.

⁷ PP (1855), Report by the Clerk to Devizes Union, noted in Hawley.

⁸ PP (1855), Letter to W.H.T. Hawley by the Clerk to the Marlborough Union.

⁹ PP (1855), Report from Warminster Union, in Hawley.

¹⁰ PP (1855), Report of W.H.T. Hawley.

¹¹ Personal communication from Mr. J.R. Lowerson.

¹² John Houghton, 'An account of the acres--- of each county--- presented to the Lords and Commons 1693.'

Printed in *Somers Tracts* (1809-1815) pp. 596-7.

¹³ J. Cary, *Communications to the Board of Agriculture*, Vol. VI (1808) p. 228.

¹⁴ T. Davis, *General View of the Agriculture of Wiltshire* (1811).

¹⁵ PP *Agricultural Returns of Great Britain* C 223 (1870).

¹⁶ PP House of Commons Paper 85, *A Return of Waste Lands — 1873* (1874).

¹⁷ PP *Agricultural Returns of Great Britain*. C.1635 (1875).

¹⁸ R.H. Best, 'The Statistical Pattern of Land Use in Great Britain', *Geography* Vol. XLIV (1959) p. 199.

¹⁹ R.E. Sandell, *Abstracts of Wiltshire Tithe Apportionments* (1975) Devizes. (I have processed and re-constituted into Poor Law Union areas, the individual parish land use acreages as given by Sandell, in order to facilitate correlation with the 1854 data).

²⁰ R.M. Prothero, *English Farming Past and Present* 4th edn (1927).

²¹ W.H.B. Court, *A Concise Economic History of Britain* (1954) p. 164.

²² W. Topley, 'Comparative Agriculture of England and Wales 1869' *Journal of Royal Agricultural Society of England*, VII (1871).

- ²³ 'English Agriculture in the time of Queen Victoria', *J.R.S.E.* 62 (1901) p. 28.
- ²⁴ PP Waste Lands (1874).
- ²⁵ Davis *Gen. View* (1811) p. 13.
- ²⁶ W. Cobbett, *Rural Rides* (1830, Everyman edn. 1956) pp. 92-3.
- ²⁷ E.A. Cox and B.R. Dittmer, 'The Tithe Files of the Mid-Nineteenth Century,' *Agricultural History Review* XIII (1965) pp. 1-16.
- ²⁸ Dittmer A.H.R. (1965).
- B.R. Dittmer in an intensive study of the Tithe Files produced a dot distribution map of cattle in those parts of North Wiltshire for which Tithe File evidence was available. By reworking this data it has proved possible to indicate cattle densities per 1000 acres of total area thus equating with the 1854 evidence.
- ²⁹ J. Caird, *English Agriculture 1850-51* (1851) p. 77.
- ³⁰ Davis, *Gen. View* (1811) p. 250.
- ³¹ Edward Little, The Farming of Wiltshire. *J.R.A.S.E.* 5 (1845) pp. 161-172.
- ³² Little, *supra* p. 175.
- ³³ Davis, *Gen. View.* (1811) p. 250.
- ³⁴ Cobbett, *Rural Rides* (1830) Everyman edn. 1912 p. 85.
- ³⁵ Little, *J.R.S.E.* (1845) p. 173.
- ³⁶ Cobbett, *Rural Rides* (1830) pp. 96-100.
- ³⁷ PP *Select Committee on the State of the Wool Trade* (1828) (515) VIII 445 Evidence of Henry King p. 90.
- ³⁸ Cobbett, *Rural Rides* (1830) p. 77.
- ³⁹ Wiltshire Record Office, Inventory of Anthony Targett (1626).
- ⁴⁰ Barbara Kerr, *Bound to the Soil* (1968) pp. 170-71.
- ⁴¹ D. Defoe, *A Tour through England and Wales* (1724) Everyman edn. 1959 p. 282.
- ⁴² Caird *Eng. Ag.* (1851) p. 80.
- ⁴³ *S C Wool*, (1828), Evidence of W. Brown p. 97.
- ⁴⁴ Cobbett, *Rural Rides* (1912) p. 41.
- ⁴⁵ Little, *J.R.S.E.* (1845) p. 164.
- ⁴⁶ *S.C. Wool*, (1929), Evidence of W. Pinkney p. 1.
- ⁴⁷ Little, *J.R.S.E.* (1845) p. 168.
- ⁴⁸ Little *J.R.S.E.* (1845), p. 178.
- ⁴⁹ PP *Select Commission on Agricultural Distress* (1820) 255 II 101 Evidence of S. Capper.
- ⁵⁰ *S C Wool* (1828), p. 92.
- ⁵¹ *S C Wool* (1828), p. 1.
- ⁵² *S C Wool* (1828), p. 91.
- ⁵³ *S C Wool* (1828), p. 4.
- ⁵⁴ *S C Wool* (1828), Table of Quantity of Sheeps Wool in 1800 and 1828 pp. 232-3.