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HAMPSHIRE AGRICULTURE IN THE MID-NINETEENTH CENTURY

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INTRODUCTION

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 (1795) who attempted to collect information himself through a questionnaire in the Annals of Agriculture.

There was much opposition to the 1854 collection and many farmers as in 1801 (Dodd 1954) 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 (1851) 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 writings kept the issue before the public until victory was achieved.

THE RETURNS FOR 1853 AND 1854

The Poor Law Inspector responsible for the collection of the agricultural statistics for Hampshire in 1853 and again in 1854 was W. H. T. Hawley. When the Board of Trade decided to obtain statistics from two sample counties in 1853, Hawley was given a free hand in selecting which county he considered most suitable for the purpose in his district. As he had a long connection with the county both as Poor Law Inspector and as a magistrate he opted for Hampshire as 'no locality could be selected, in which, from the variety of soil and greater difference in the mode of cultivation could be exhibited, or where agriculture had made greater progress' (Hawley 1855, 19).

The landlords as a body supported the scheme, as did the whole of the county press and Lord Ashburton wrote a letter advocating the benefits to be derived 'which would place the small farmer more upon an equality with the great dealer upon the Corn Exchange'. Also the trade would receive accurate information which 'would diminish the danger of those fatal speculations ... which bring ruin on all concerned' (Hawley 1855, 19).

Hawley called on many of the 'most intelligent and influential agriculturalists' and found them favourably disposed but 'a body of opponents was speedily organised through the instrumentality of certain agricultural clubs ... whose zealous hostility created subsequent difficulties'. However of the 8599 Schedules 'A' sent out only 693 were not completed and of these 428 related to the Isle of Wight.

In view of the success of the 1853 collection,

it was decided to make use of Hampshire in the 1854 extension of the experiment to embrace eleven counties. With the benefit of hindsight it is clear that Hampshire should have been dropped in 1854 and perhaps Sussex or Dorset tried instead. Hawley realised himself, that it had been a mistake to use Hampshire for a second run, actually for Hartley Wintney Poor Law Union, a third as an earlier scheme had been tried there in 1847. The opposition generated in 1853 gathered strength in 1854 and wrecked the collection of statistics in the Poor Law Union areas of Andover, Basingstoke, Hartley Wintney, Headley, Stockbridge and New Winchester. As in 1853, the 1854 Return for the Isle of Wight was deficient.

While several Boards of Guardians took the view that the scheme should be made a statutory obligation, a point made in many other counties, they gave Hawley their cooperation and in several instances the statistical cover was better than in 1853. However in the six Unions noted above, it was clear that the opposition was politically motivated, so Hawley (1855, 6f) wrote, 'there is a small class, consisting of owners as well as occupiers of property whose 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 occupiers (in some instances of whole parishes) from exercising their own discretion in making the returns'.

Hampshire was divided into 28 Poor Law Unions plus a Board for the Isle of Wight and a parochial Board for Aldershot. Thus for 1854 the statistics for 22 Poor Law Unions and Aldershot parish were completed to a satisfactory standard, but were not forthcoming in the case of the six other Unions. As the six Unions represented 31% of the 1853 total area one is presented with a problem in respect of the use to be made of the deficient return for 1854. Two options are available (a) to discuss the land use of the county in 1854, less the appreciable area of the missing Unions or (b) to augment the 1854 statistics with the 1853 data in respect of the six missing Unions. Taking the view that if one is to play Hamlet it is best to include the Prince of Denmark, the second option has been adopted.

In the case of Petersfield and Havant Unions the 1853 statistics quote more woodland than in 1854, and as in the instance of the area noted as common land in Portsea a similar position arises, the 1854 acreages have been adjusted to correct these shortcomings in the returns. In both 1853 and 1854 an extensive acreage is noted as not returned in the case of the New Forest Union. It is evident from the statistics that this refers in each instance to a considerable proportion of the Crown Forest lands, which were apparently not returned by the Commissioners because it was presumably considered that such land did not fall within the purview of a scheme administered by the Poor Law Inspectorate. If this acreage is deducted, the resultant total for the 29 Unions plus Aldershot, yields a 96% return for the county area stated as possible in the Returns in 1854.

This would appear to present a satisfactory view of the land use of the county but one which necessarily requires comparison with other evidence, to assess the extent to which the 1854 Returns are statistically valid. With all counties it is a problem to discover what figure should be accepted as the county area. For example in 1808 (Cary 1808, 228) the total was quoted as 985,600 acres, in the General View of 1813 (Vancouver 1813) it was 1,062,149 acres, in the Agricultural Returns for 1870 the figure was 1,070,216 acres, in 1873 the area was said to be 1,027,673 (PP 1873), and in 1875 it rose to 1,032,105 acres. (PP 1875).

Hampshire has more problems than most counties in this respect inasmuch as it has a long stretch of coastline, subject to the processes of marine erosion and coastal accretion, and also includes the Isle of Wight where such changes in area are even more acute. Even in the present day it is not unknown for discrepancies of c. 1,500,000 acres in statistics

for England and Wales to arise (Best 1959, 199).

For the present purpose the 1875 acreage will serve as a suitable base line and compared with this the actual acreage of the 1854 statistics represent 79%. A sizeable proportion of the other 21% relates to the missing acreage of the Isle of Wight and to the 92,365 acres (PP 1958) of the New Forest Lands. In addition there are categories of land not included in the 1854 statistics as for example, water, railways, roads, sand pits, gravel workings, chalk quarries, clay pits and land in industrial use including docks, also non-agricultural land such as marshes, saltings and so on.

If the size of the Returns is regarded as acceptable for discussion it still remains to evaluate the validity of the land use as presented in the 1854 statistics. Again it becomes necessary to discover a suitable yardstick and the Board of Agriculture statistics commencing in 1886 ought to be appropriate for the purpose. However, samples of these give results as follows.

Year	*Cultivated Area*	*Arable*	*Permanent Grass*	*Wheat (per 1000 acres)*	
1870	682,800	531,357	151,443	111,041	acres
1875	699,738	532,489	167,249	108,362	acres

If the acreages are extracted from 1866 to 1875, for example, one finds comparable fluctuations in each year, which do not however, mean that the area and land use of Hampshire actually wobbled up and down with such inconsistency. What the variations do indicate is that the psychological response of farmers changed over the years and that the official statistics only become a reliable source some time after 1870. If the statistics are presented in terms of acreage per 1000 acres of total area it becomes possible to measure the 1854 statistics with some hope of successful appraisal.

Year	*Cultivated Area*	*Arable*	*Permanent Grass*	*Wheat (per 1000 acres)*
1854	652	509	143	119
1875	678	516	162	105

If one takes into consideration a figure of 28 acres per 1000 of waste attached to the farm itemised separately in 1854, which would have been returned as grass in 1875, the acreage virtually matches. As the statistics suggest an increase in the arable acreage over the twenty years but a reduction in wheat it may be of interest to view the disposition of the corn acreage in the two years.

Year	*Wheat*	*Barley*	*Oats*	*Corn Total*	*Grass Temporary*
1854	119	72	65	256	117
1875	105	68	61	234	107

These changes in the relative importance of corn and temporary grass in the arable acreage are to be seen elsewhere over the same period. In Suffolk (Dodd 1979) the corn acreage declined from 346 to 329 per 1000 acres between 1854 and 1875 and in both Norfolk (Dodd 1976) and Suffolk (Dodd 1979) wheat, oats, and temporary grass experienced decreases comparable with those in Hampshire. In these counties however, some of the acreage went over to barley at the expense of other grains. The wheat acreage of 1854–5 was probably the highest at any time between the plough-up activity of the Napoleonic period and the similar campaign in 1940. This was a feature associated with certain economic factors such as the interference with grain imports from the Baltic occasioned by the war with Russia, and an upswing in prices during the 1850's, combined with the fact that the 'seasons were uniformly favourable, harvests were good, fair or abundant, the wheat acreage of 1854, as *estimated* by Lewes, rose to a little over four million acres' (Prothero 1901, 28).

These changes in focus between 1854 and 1875, as might be expected, are underlined by alterations in the degree of emphasis placed on livestock within the agricultural economy. With a decline in the corn acreage there was a decreased need for horse power, which in turn lowered the demand for oats. The traditional view of 'Down Corn, up Horn', was reflected in changes in the numbers of sheep and cattle. Sheep as an integral feature of the

sheep—corn system could be expected to show a decline, and that these changes did occur, can be seen from the following Table.

Year	*Horses*	*Oats*	*Cattle*	*Sheep*	*Corn*	*Pigs*
1854	33	65	46	585	256	73
1875	27	61	60	578	234	61

All per 1000 acres

The 1854 statistics embraced three categories of land use not included in the later Board of Agriculture Returns. These were, waste attached to the farm, commons and sheep walk. Although one cannot compare the 1854 acreages of these items with those for 1875 it is possible to employ other data drawn from the Report of the New Forest Commitee (PP 1947) and the Return of Waste Lands. (PP 1873). Discounting the farm waste previously assumed to be contained in the 1875 permanent grass acreage, the other categories are as follows

	**1854*	*1873*	
*Common	66944	41502	acres
Sheep Walk	21529		acres
New Forest commons		46245	acres
Total	88473	87747	acres

*It should be remarked that these acreages could be higher in view of the 1853 statistics which quoted 89,630 acres in commons or waste.

Wherever it has proved possible to evaluate the 1854 Returns, they have compared favourably with the evidence drawn from other appropriate sources. Thus from the preceding discussion, it is not unreasonable to accept the 1854 statistics as a statistically viable source for assessment of the land use of Hampshire at this date.

Regional Land Use

The twenty-nine Poor Law Unions, made up of varying numbers of parishes, although presumably functioning well enough as administrative units, do not match the physiographical divisions of the county (Fig. 1). However, it has proved possible to map the county in the form of land use regions made up of from two to five Unions. This is not as satisfactory as would be the case if the data was available on a parish basis. Further while the statistics do not contain direct information as to the size of farms, the attempt has been made to obtain a mean acreage for each Union in order to indicate average farm size. This has been effected by dividing the total acreage by the number of completed Schedules 'A'. Admittedly the device is crude but does allow comparisons to be made as between one Union and another.

The regions, as mapped for 1854, follow the general scheme for those of the Land Use Survey but although not as diverse, retain the advantage of enabling a fruitful comparison to be made with the land use of some eighty years later (Green 1940). A view in effect immediately preceding (a) the Crimean War and (b) World War II.

The London Basin

As may be seen from the map (Fig. 1), the region occupies the northern border of Hampshire with Berkshire, and although relatively narrow in the west broadens considerably to the east. It is for the most part low-lying, below 200 feet O.D. and composed largely of the London Clay and the Bagshot Beds. Soils vary from unproductive gravels to the strong clays of the London Clay and on parts of the Bagshot outcrop, arable sandy loams. Even today a considerable amount of woodland and tall hedgerow timber persists and justifies the description of the region as 'The Woodlands'. In 1848, it was stated to be 'very heavy strong wet land' (PP 1848).

Aldershot, Farnborough and Hartley Wintney Unions comprise the region together with the northern parts of Basingstoke and Kingsclere Unions. Farms averaged 100 acres but on the poorer land along the Berkshire border many were were more likely to be around 50 acres. On such farms the rotation was wheat and beans alternately for six years, then left in fallow for a year. Yields of 3 quarters for wheat and $3\frac{1}{2}$ for beans indicate the poor quality of the land although when drained and chalked a 25% increase could be obtained and a four course or even an eight course

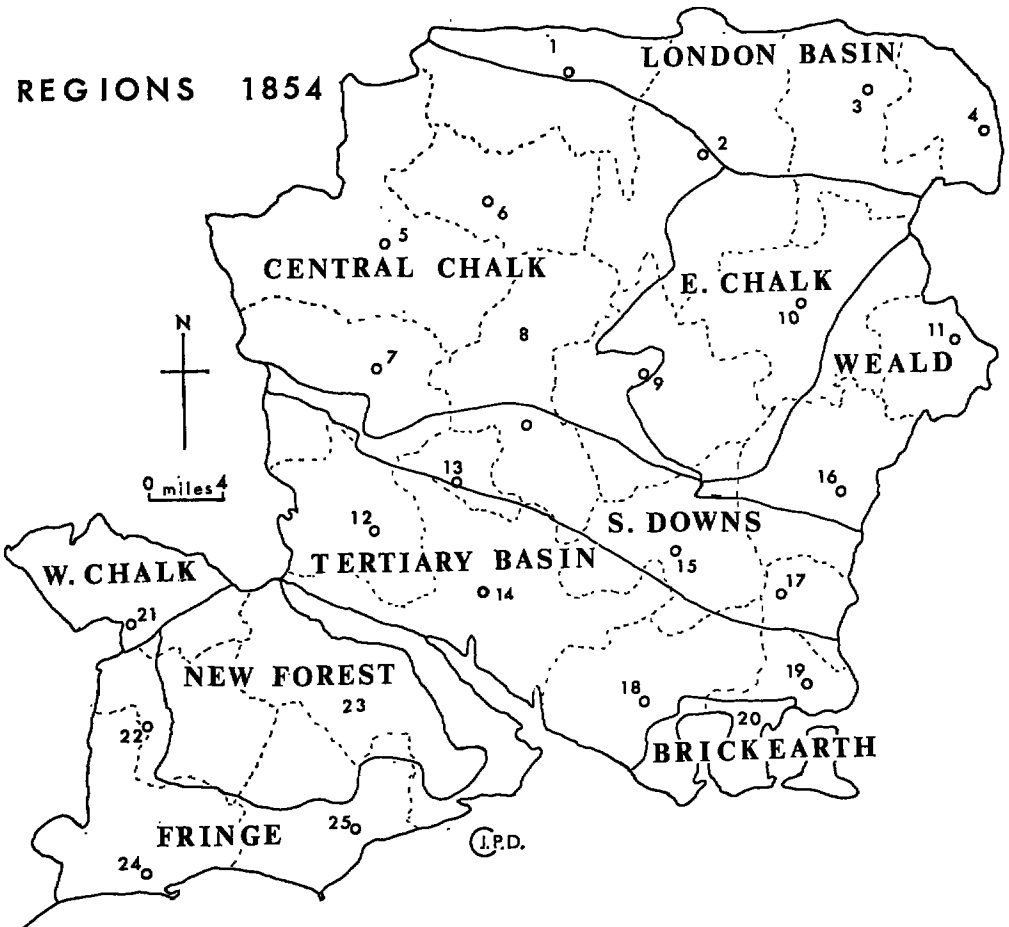

Fig. 1. Hampshire: Map showing Poor Law Unions; 1. Kingsclere, 2. Basingstoke, 3. Hartley Wintney, 4. Farnborough, 5. Andover, 6. Whitchurch, 7. Stockbridge, 8. Winchester, 9. Alresford, 10. Alton, 11. Headley, 12. Romsey, 13. Hursley, 14. South Stoneham, 15. Droxford, 16. Petersfield, 17. Catherington, 18. Fareham, 19. Havant, 20. Portsea, 21. Fordingbridge, 22. Ringwood, 23. New Forest, 24. Christchurch, 25. Lymington.

system introduced. In 1854, horses were at a density of 1 to 16 acres which accords with the 1861 report of 7 per 100 acres in general but 1 to 22 acres on the improved land. (Wilkinson 1861, 258f).

Crops and Livestock per 1000 acres

Arable	*Wheat*	*Barley*	*Oats*	*Leys*	*Turnips*	*Sheep*	*Cattle*
545	120	78	63	89	86	449	36

The general pattern was of small scale mixed farming with cereals taking up 47% of the arable acreage and livestock occupying a role which varied with local conditions and the interests of individual farmers. Thus although dairy cattle represented 52.0% of total cattle stock and ewes 42.0% of all sheep, stores in either case formed about 24.0%. With sheep the policy was to buy in a 'few tegs, half starve them and sell them out again the following year' (Wilkinson 1861, 259). For store cattle the expense of winter keep and the factor of distance from the market can be seen to modify the overall average, thus in Kingsclere stores formed 16% of the stock, while in Farnborough the proportion

was 34.0%, indicating the influence of the Reading and Aldershot meat markets.

Similarly with pigs, which overall showed a density of 110 per 1000 acres, but in Hartley Wintney at 132, were almost twice the county density. On the smaller farms many farmers developed horse breeding as a cash sideline. Wilkinson (1861, 159) says that at two years the young stock were put to the plough and when four years old the better animals were sold off.

CENTRAL CHALK REGION

The Unions of Winchester, Andover, Whitchurch, Stockbridge and parts of Kingsclere and Basingstoke form this region, which extends across the considerable tract of Chalk in the north west of the county. For the most part the region has a height of about 300 feet O.D. but this increases in the north to reach 974 feet at Walbury Hill. Soils, of the Andover and Icknield Series, are shallow, of rendzina type, free draining and thus tend to be low in potash but of high phosphate content, falling within the Ministry category of medium quality, light land (Land Classification 1950).

The downland for centuries had been subjected to ploughing-up for conversion to arable. Defoe (1724 Tour, 282) stated that many thousands of acres in Dorset, Wilts and Hampshire had been broken up and sown with wheat. A century later, Cobbett (1830, 199) said that between Winchester and Andover there were 'hundreds of acres of ground that was formerly most beautiful down, which was broken-up in dear corn times (Napoleonic Wars), and which is now a district of thistles and other weeds'. On Lord Bolton's estate at Nether Wallop, 283 acres were ploughed up in the same period, and downland at St. Mary Bourne and Hurstbourne Tarrant was under the plough between 1772 and 1816 (Jones 1960, 13).

In 1854 with wheat prices again high, this region had more acres under the plough than any other part of the county and was strongly committed to a sheep—wheat economy as the following Table indicates.

Crops and Livestock per 1000 acres

Arable	*Wheat*	*Barley*	*Oats*	*Leys*	*Turnips*	*Sheep*	*Cattle*
720	144	90	95	150	180	626	18

Average size of Farms

Stockbridge	*Andover*	*Whitchurch*	*Basingstoke*	
217	151	228	137	acres

Farms were large units and arable farming was based on the fold-course and there were slight variations in the rotations as between one Union and another, as for example in Andover where the acreage in leys reached 214 acres, with barley taking up 107 acres, obviously at the expense of the oats acreage. Sheep flocks were dominantly breeding units with ewes forming 49.0% of the stock and stores 14.0%.

However, the point should be made in respect of all references to livestock densities in the 1854 Returns, that these statistics were compiled at the latter end of 1854 i.e. at a time when farmers had disposed of much stock and were down to numbers possible to carry through the winter. Thus John Twynam farming near Stockbridge in 1846 disposed of 10 dry ewes in February and a further 50 culled ewes at the end of July. Between June 19—26 he sold off 173 lambs. With three ewes sent off in April his total disposals represented 28.0% of the breeding flock and 76.0% of the lambs for 1846 (Twynam 1845–7). Study of the Tithe Files indicates summer stocking densities of 1425 sheep per 1000 acres in Whitchurch parish, 1200 in Abbots Ann, and 1287 in Weyhill (Tithe Files 1840). With such evidence in mind it is clear that the early summer stocking on the central chalk was of the order of 1400 sheep and lambs compared with the winter density of 626.

Some correction of the distortion inevitable in averaging the size of farms may be instanced in the case of Houghton in Stockbridge Union. Analysis of the 1851 Census yields an average farm size of 270 acres. However, this conceals an acreage range from 53 to 800 acres (Census 1851). Farms of 800 acres were not uncommon on the Chalk (PP 1833–7). Whitchurch had a number of 300 acre farms (PRO 1R 18), 24.0% of farms in

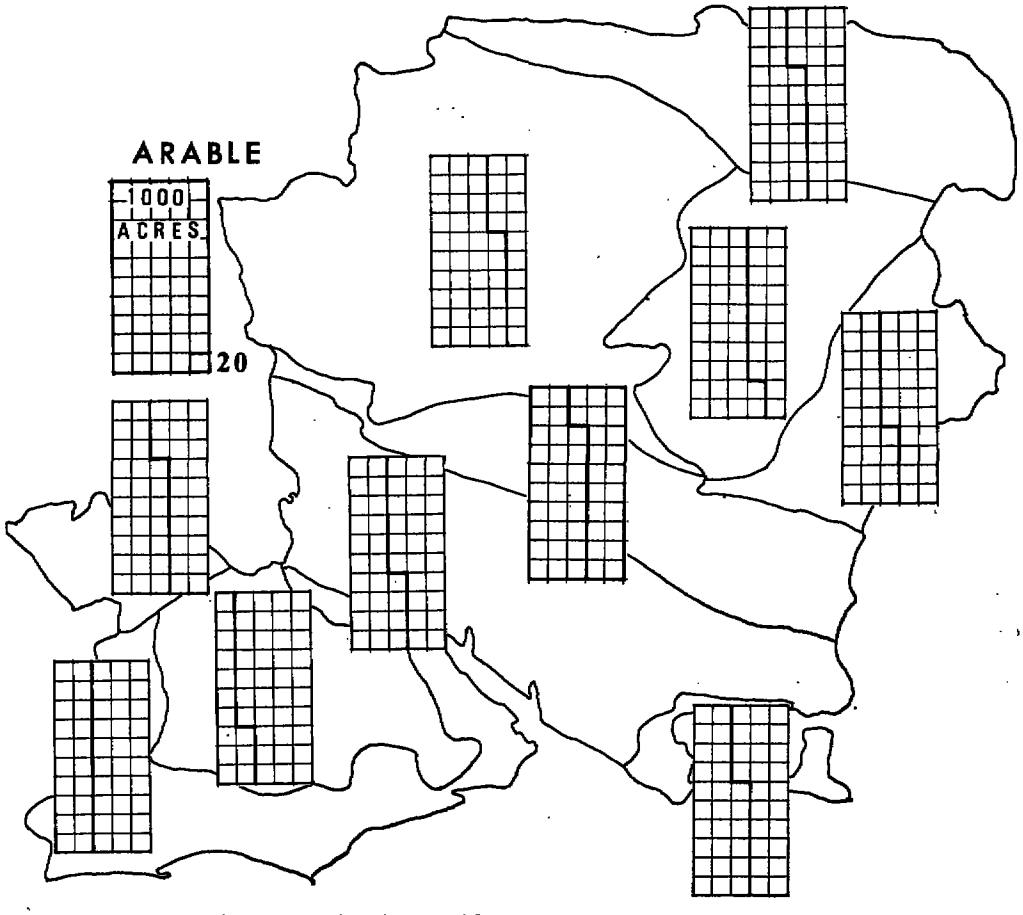

Fig. 2. Hampshire: Map showing arable acreages per 1,000 acres in 1854, regions as Fig. 1. (Scale as Fig. 1).

Hampshire were of 300–500 acres and 31.0% were over 500 acres in 1875 (PP 1882).

EASTERN HIGH CHALK REGION

The region, coincident with most of Alton, Alresford and part of Basingstoke Unions, differs from the previous region in that it is much higher while the Chalk has also a residual capping of Clay-with-Flints, albeit in discrete patches. The latter carries a natural vegetation of woodland extending from Alton to Basingstoke and southwards from Alton towards Alresford and West Meon. From the Candovers in the west at c.400 feet O.D. the Chalk rises to 793 feet O.D. near Froyle and to 721 feet O.D. near Medstead, north and south of Alton respectively.

In 1768 Arthur Young noted that some of the downland was rather poor and that sheep were folded on turnips. At Brown Candover, typical of the lower land, in 1840 the parish was 68.0% arable and had 19.0% in woodland. The soil was described as chalky and below average quality. A five course system was followed with barley, seeds, rye or vetches for two years, which were fed off, then turnips followed by wheat (Tithe Files).

Some of the downland was broken up during the Napoleonic Wars, a process which

continued intermittently, near Basingstoke for example, 500 acres were ploughed up between 1836 and 1846 to increase the arable acreage by one third (Wilkinson 1861, 291). A little earlier Cobbett after riding across the southern part of the region said of Lord Northesk's estate at Longwood, 'On about twenty acres of this land, sown with wheat, I should not suppose that there would be twice twenty bushels of grain! A man must be mad to... sow wheat upon such a spot. The down itself was poor; what then must it be as corn land!' (Cobbett 1830, 114). Wilkinson (1861, 291) commented that once broken up and cropped, some form of soil enrichment was needed because the downs 'once overcropped and impoverished, cannot easily be restored to their former condition'. This was precisely what happened to much of the down broken up during the ploughing campaign of the Napoleonic Wars and which incited Cobbett's wrath whenever he encountered such land which either had been allowed to revert or was being pared and burned for cropping.

The fold course employed in conjunction with irrigated valley land materially improved the whole farming economy where its practice was possible. Sheep stocking densities were higher with benefit to the fold-course arable and the differences are to be seen in the following comparison between Alton Union and Alresford which had a considerable tract of lower land in the Itchen Basin.

Crops and Livestock per 1000 acres

Alton

Arable	*Wheat*	*Barley*	*Oats*	*Turnips*	*Leys*	*Sheep*	*Cattle*
629	145	46	83	100	118	650	32

Alresford

Arable	*Wheat*	*Barley*	*Oats*	*Turnips*	*Leys*	*Sheep*	*Cattle*
699	132	62	98	131	174	888	36

As in the greater part of the county, ewes represented 43% of the flocks but many of the lambs had already been sold off the farms by the time the statistics were made up.

	Farms	*Ewes*	*Lambs*	*Other Sheep*
Alton	134 acres	43.0%	32.0%	25.0%
Alresford	165 acres	43.0%	27.0%	29.0%

If one assumes a flock culling of the order of around 28.0% it is evident that at Alresford some 19.0% of 1854 lambs and 28.0% at Alton were being wintered additional to those required for flock replacement.

THE WESTERN CHALK UPLAND

This region forms a bastion projecting into Wiltshire and is composed largely of Chalk downland averaging about 300 feet O.D. Fordingbridge Union which largely coincides with the area under discussion also contains an appreciable tract of the Avon Valley, a factor of some consequence in the farming pattern of 1854.

Kerridge (1954, 289) makes the point that irrigation made it possible to have earlier lambing and increased sheep densities. It further 'ensured a supply of hay in times of drought, and by integration with the sheep-corn husbandry... promoted increased yields of corn, particularly of barley'. After the floodings of January and February, the grass was sufficiently advanced by late March to take the ewes and lambs until about the second week in May. After a further flooding, the meadows were mowed in July and during the autumn the cattle could be put on the meadows, probably up to Christmas (Stamp 1962, 80).

Upgrading of sheep densities is a feature which immediately comes to notice when the comparison is made with the 626 sheep per 1000 acres typical of the dry central chalk country and the 686 of the Fordingbridge area where flooding was possible.

Livestock per 1000 acres

Cattle	*Cows%*	*Sheep*	*Ewes%*	*Lambs%*	*Other%*	*Pigs*
77	74.0%	686	52.0%	41.0%	7.0%	83

The high ratio of dairy cattle reflects the hay potential of the Avon meadows but in the absence of rail links to the coast, the end product was butter and cheese. Wilkinson (1861, 286) notes the contemporary practice of letting to dairymen, which he considered a contributory factor to the poor quality of dairy livestock. The existence of this subletting is to be seen in 1854 in the relatively

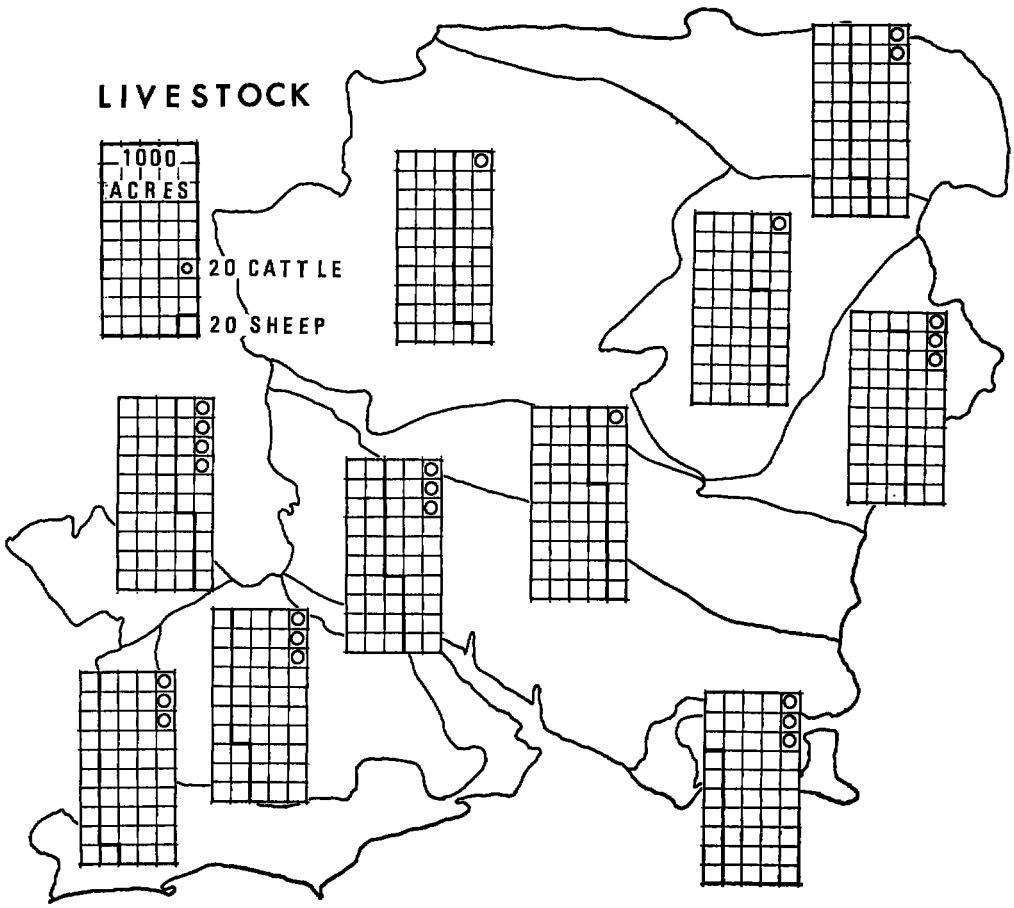

Fig. 3. Hampshire: Map showing livestock numbers in 1854, regions as Fig. 1. (Scale as Fig. 1).

high proportion of holdings of two acres and under, averaging 45 acres per 1000 and in marked contrast to the county average of 21 acres per 1000. In the case of sheep, the ratio of lambs to total stock indicates the wintering capacity of the downland arable utilised in association with the spring grazing of the irrigated meadows. The point is further emphasised in the tithing of Fordingbridge parish, wherein the Vicar notes 600 sheep agisted on 600 acres of common (Tithe Files).

The same source describes soils as being fine loams and with cropping organised on the Norfolk four course of wheat, barley, clover and turnips. The heavy stocking of sheep was obviously related to the acreage of arable devoted to wheat and particularly barley, which occupying 20% of the arable was the highest ratio in Hampshire.

Land Use per 1000 acres

Arable	*Irrigated*	*Wheat*	*Barley*	*Oats*	*Turnips*	*Leys*
536	74	130	106	52	92	102

The Tertiary Basin

Extending from the Wiltshire border to that of West Sussex, Fig. 1, the region is transitional as between the downland Chalk and the Tertiary sands, clays and gravels extending southwards to the edge of the Basin marked by the Solent coast. Soils are developed from the London Clay, Reading Beds,

and the Barton and Bracklesham Beds. The soils, on the whole, are more favourable for agriculture than those of the London Basin with the London Clay providing a more tractable tilth than that in the north of the county, tending to be a relatively fertile medium loam, while the Reading Beds are a rather heavier loam. Conditions are further ameliorated in the broad alluvial valleys of the Test and Itchen with one observer claiming the soils in the latter to be among the best in the county (Wilkinson 1861, 249). In this view he was supported by Cobbett who stated that where the valley widened 'the corn-lands are excellent and on the valley floor about 5,000 acres of meadow were regularly watered', moreover the Vale of Itchen was one of the most fertile areas in the kingdom (Cobbett 1830, 198).

The Bracklesham Beds were 'not bad working land', (Wilkinson 1861, 269) but the eastern part of the region was distinguished by high hedgerows with much standing timber. As might be expected the less fertile areas were left in natural woodland, heath and common, while the result of the Basin receiving the drainage from the major rivers was to be seen in the amount of irrigated meadow in the region. The five Unions of Romsey, South Stoneham, Fareham, Havant and Hursley in their land use clearly reflect the influence of the physical topography and of local soil conditions.

Land Use per 1000 acres

Union	*Wood*	*Common*	*Waste*	*Arable*	*Irrigated*
Hursley	285	108	11	374	19 acres
Romsey	179	19	17	536	51 acres
Havant	152	9	33	534	25 acres
Fareham	138	68	35	534	22 acres
S. Stoneham	41	88	130	451	12 acres

The woodland at Hursley was even more extensive in Defoe's time when he noted that the estates in this part of the county were 'so over-grown with wood, and their woods so full of large full grown timber, that it seemed as if they wanted sale for it.... In one estate at Hursley... they might have cut twenty thousand pounds worth of timber down and yet have left the woods in a thriving condition' (Defoe 1724, 140). The general impression of unproductive woodland was remarked by Wilkinson (1861, 268) who said that one quarter of the area consisted of underwood and coppice, while the small farms had their irregular fields much overshadowed by hedgerow timber.

In this region improvement of the valley bottoms by draining and the floating of meadows had a long history and by 1714 the Test had contractors who specialised in the work, while on the Itchen, John White, agent to Sir William Heathcote, was promoting schemes from 1724 onwards. Inevitably such schemes for water control conflicted with the interests of other riparian occupiers, notably millers. Irrigation schemes at Pittleworth and Brook on the Test provoked a number of disputes with the owner of Mottisfont Mill (Jones 1960, 6). On the Avon there were said to be twenty watermills between Warminster and Salisbury, many of which 'are very injurious to the water meadows below them, and frequently prevent the making of new ones' (Davis 1811, 253).

The improvements effected by the floating of meadows on the one hand and the obstacles imposed by the presence of extensive tracts of heath and woodland on the other, are illustrated by the contrasts in the livestock population of the several Unions.

Livestock per 1000 acres

Union	*Cattle*	*Cows*	*Sheep*	*Ewes*	*Lambs*	*Other*	*Pigs*
		%		%	%	%	
Hursley	45	53%	483	42%	38%	20%	80
S. Stoneham	42	71%	320	30%	11%	57%	91
Romsey	66	65%	633	41%	30%	27%	111
Havant	74	57%	465	50%	13%	31%	133
Fareham	76	56%	535	44%	25%	26%	100

Stocking densities were higher in the valley Unions with a tradition of floating meadows and over the greater part of the region, dairying was the chief consideration as regards cattle management. In South Stoneham where dairymen could travel to farms within range, milk was collected twice daily for the Southampton market, elsewhere the

end product was butter and cheese. A particular development associated with the railway linking Southampton and Reading was the monthly cheese market held at Bishopstoke station. This was of sufficient importance as to attract imported cheese from further afield, notably Somerset, and at the big September and October markets some 200–250 tons was put on sale.

A side-effect was the upgrading of dairy stock in respect of quality. Over most of the region cows were inferior half bred animals but in the Itchen Valley especially around Bishopstoke, a good quality shorthorn was favoured. As the Table indicates, pig densities were high and Wilkinson (1861, 268) notes the urban demand for bacon especially from Portsmouth, a feature demonstrated by the Havant figure of 133 which contrasts with the county average of 62 per 1000 acres.

The higher incidence of meadow irrigation in Romsey was reflected in the sheep density compared with some other parts of the region. Both here and in Hursley a large number of lambs were being carried on for sale in May–June 1855. In contrast at South Stoneham and Havant the lambs were designed for flock replacement, with the major interest at South Stoneham lying with the fatting of drafted ewes and two year stores for the Southampton market. Wilkinson (1861, 268) mentions a variety of practices with some farmers buying ewes, lambing them and then selling off both, others fatted both ewes and lambs while some bought in tegs for wintering, selling them in the following summer.

In the instance of arable farming the four course system was paramount with high acreages of wheat and barley registered in most parts of the region. In the case of Romsey, the fold course in combination with flooding of meadows was a factor but for the other Unions except for Hursley, the facility with which town manure could be obtained was of considerable importance. Landlords permitted tenants to sell straw and hay at Southampton and Portsmouth provided artificial manure or stable dung of equal value was carried back to the farm (Wilkinson 1861, 270). However, the use of town manure had a long history in the southern part of the region. By the late eighteenth century, Titchfield parish near Fareham was receiving 3000 cartloads of dung, ashes and other town refuse annually from Portsmouth by sea. A considerable quantity was also carried overland from Gosport. Turnips were grown in quantity and the wheat yield was given as 4½ quarters (Waller 1787).

In Fareham Union also, poor land enclosed from the common was growing good crops in 1823, being 'conveniently situated for the receiving of manure from Portsmouth' (Cobbett 1830, 185).

Crops per 1000 acres

Union	*Wheat*	*Barley*	*Oats*	*Turnips*	*Ley*	
Romsey	114	92	55	108	103	acres
S. Stoneham	110	88	43	83	67	acres
Fareham	135	81	51	97	103	acres
Havant	142	96	50	75	86	acres
Hursley	77	55	48	68	86	acres

What influence on yields the differing systems may have had is not possible to judge from the 1854 data. Although Unions were asked to provide estimates of yields only eight complied and these did not include those under discussion except South Stoneham. However by contrasting the latter with a purely chalk Union like Alresford one may infer that support could be found for the view expressed by Kerridge (1954, 289). Thus South Stoneham with a relatively low acreage of irrigated meadow anticipated a wheat yield of 3¾ quarters and of 4¾ for barley compared with the 3 and 3½ quarters respectively for Alresford. As against this the evidence of the Fareham yields of 4½ quarters suggests that town manure where available, and this could be the case for parts of South Stoneham, was much more significant than the product of the fold course and irrigation.

The Brickearth Region

This small region, comprised of Alverstoke and Portsea, is residual from the post-glacial drowning of the old Solent River coast. Soils

vary accordingly with extensive post-glacial spreads of marine clays, silts and alluvium tending to ameliorate the Tertiary Beds common to the area. In some instances, notably in Alverstoke Union, this materially increased the amount of land under the plough in 1854. A second factor of considerable importance in the direction taken by the agricultural economy of the region, was the existence of large urban communities, as for example Portsmouth. In the case of Portsea, the somewhat low acreage of arable at 443 acres was partly affected by the 175 acres of common which brought the total grass up to 532 acres per 1000 acres. As the following Table indicates wheat was the significant crop in the rotation over the region.

Crops per 1000 acres

Union	*Wheat*	*Barley*	*Oats*	*Turnips*	*Ley*
Portsea	145	46	15	23	42 acres
Alverstoke	174	98	50	70	117 acres

Of the wheat, Cobbett (1830, 182) in viewing the south side of Ports Down commented, 'It is impossible that there can be, anywhere, a better corn country than this.... From Bedhampton to Fareham ... you have brought under your eye not less than eight square miles of corn fields ... on average, from twenty to forty acres each in extent. The land is excellent.... No beans here. No peas. Scarcely any oats. Wheat, barley and turnips'. Thirty years later as the Table proves, the cropping was unchanged. Whether Wilkinson (1861, 249) first studied his copy of Cobbett before penning the following is arguable but his eulogium is uncommonly like, 'the alluvial soil stretching towards the sea is of better quality ... there is a fine tract of corn land, nearly eight miles long, and with the average breadth of one, which for good farming ... and the earliness of its produce ... ten days in advance of other parts, is not surpassed in the county, except be it at Bishopstoke'.

As discussed in relation to the previous region, the ready supply of town refuse contributed greatly to the maintenance of high fertility and concentration on wheat production. As early as 1730 a Mr Waller and a Mr Poore began to use Gosport dung for their Alverstoke farms. At that time the citizens paid for its removal from the town. As the practice grew a charge of one shilling a load was made, which by 1788 because of the great demand was increased to nine shillings. The yields of wheat and barley were said to be great (Waller 1788). From Portsmouth, town manure was carted to the Portsdown arable with similar results (Vancouver 1813, 31).

The emphasis on wheat was especially strengthened by the fact that here was the naval arsenal for England, which drew its grain and meat supplies' from the adjacent region. At Portsmouth, whatever the local food situation might be, the naval granaries were kept filled with ship's biscuit made from local wheat. Thus in August 1800, the bakers of Portsmouth with only sufficient flour to last a day or so complained 'The Government storehouses are known to be full of Flour and Biscuits and hold a stock for 6 months at least' (PRO 1800).

With the biscuit 'hard tack' went the Navy's salt pork which suggests correlation with the high density of the pig population of the region.

Livestock per 1000 acres of total area

	Cattle	*%Cows*	*Sheep*	*%Ewes*	*Pigs*	*Horses*
Portsea	51	75%	33		118	51
Alverstoke	90	78%	353	50%	130	56
County	41	54%	585	41%	73	31

Urban influences were observable in a number of other directions, e.g. the emphasis on dairying was obvious. The towns further generated a demand for horses which was augmented by that of the docks. As horses in agriculture in this region were employed at three to the plough and more often only two (Wilkinson 1861, 270) while the 1854 density was 9 horses per 100 acres of arable, plus a stocking of one colt to 12 horses, it is clear that the horse population had significance as an indicator of the demand for horses in the towns.

Urban encroachment on agricultural land was a continuing disaster in this small region inasmuch as it took place at the expense of the brickearths, which as in the similar spoliation of the Lower Thames Valley, destroyed some of the best agricultural land in Britain. In 1854, urban land use, 39 acres per 1000 for the county, was of the order of 42 acres in Alverstoke and for Portsea 59 acres. It was even then a longstanding process, being reported in 1788 that there was less arable than in 1730 and that much had been converted to gardens, meadow, pasture, i.e. accommodation land for the towns, and for the siting of forts (Waller 1788).

The Isle of Wight

The Island, physiographically is a continuation of the Hampshire Basin, separated from the mainland by the breaching of the Chalk between the Needles and the Purbeck Downs and the associated drowning of the former basin of the Solent River.

Insofar as the discussion of the land use of 1854 is concerned it is unfortunate that the Isle of Wight consisted of a single Union, a division into north and south would have concentrated the differences between the Tertiary sands, clays and gravels of the northern half as contrasted with the Chalk and Greensand of the rest of the Island. As it is, the statistics indicate a pattern of smallish farms, 64 acres, following a mixed farming system, with a strong dairying interest dictated by the twin factors of the presence of several urban populations and the need, as an island, for self sufficiency in this respect. The 287 acres of heath and common plus 142 acres of wood, brought the arable acreage down to 373 acres per 1000, with wheat, 90 acres, the chief element in the rotation.

The common, mostly sheep walk, indicates the influence of the central and south western Chalk outcrops, seen in the stocking of sheep at 434 per 1000 acres. Cattle at 74 head per 1000 acres although high, would, like the sheep, have proved to be considerably denser on the ground had it been possible to view the island in terms of north and south.

The South Downs and Chalk border

The region forms a transitional zone between the high Chalk Downs and the Tertiary Beds of the Hampshire Basin, which latter overlap the Chalk all along the southern fringe of the region. Age-long downwash from the high Chalk has greatly modified the area of junction with the Tertiaries with ensuing advantage to the region in general. As the map shows, (Fig. 1), the region trends west-east and is relatively narrow. Although the South Downs average some 400 feet O.D. much of the southern part of the region is about a hundred feet lower. Two Unions, Droxford and Catherington, are largely coincident with the area and as has been instanced elsewhere there was a long tradition of breaking up of the downland.

Thus in Catherington Union, the Duke of Beaufort's tenants had leave to plough the common pasture in 1756, when the price of wheat was such as to encourage them to forego the use of down which stinted 742 sheep to 304 acres (Jones 1960, 13).

Where the downland remained as such, its stocking capacity was of a high order. In 1826 Soberton Down was described as being the very greenest grass in the county, and 'there could not have been many less than a thousand sheep in the three flocks that were feeding upon the down . . . I do not speak with positiveness as to the measurement of this down, but I do not believe it exceeds six hundred and fifty acre' (Cobbett 1830, 193).

These sheep were probably the Southdowns or a Southdown–Hampshire cross, from which the Hampshire Down breed derives. The Southdowns were to be seen at Soberton as early as 1799 when Thomas Edwards bought in stock and these sheep were joined by others at Hambledon and Buriton in 1801. Another flock was built up near Basingstoke by Thomas Terry in 1801 (Jones 1960, 16).

In 1854, farms were medium sized holdings of about 110 acres which represented the county average. Wheat and temporary grass were the chief elements in the rotation, closely

followed by turnips, although in Catherington, wheat occupied third place after turnips. The regional averages are as follows—

Crops per 1000 acres

Arable	*Wheat*	*Barley*	*Oats*	*Turnips*	*Leys*
562	127	63	71	118	135

Livestock per 1000 acres

Cattle	*%Cows*	*%Calves*	*Sheep*	*%Ewes*	*%Lambs*	*Pigs*
27	65.0	28.0	726	49.0	32.0	77

Dairying was the principal cattle interest although as far as fresh milk was concerned the outlets were severely limited to Winchester at the western end of the region and to Petersfield in the extreme east. With sheep, breeding and the operation of the fold course were the chief aspects of management as is evidenced by the importance attached to rotation grass and turnips in the rotation.

THE WEALD

The two Unions of Headley and Petersfield are located on the westernmost border of the Sussex Weald, in an area drained in the north by headstreams of the Thames such as the Selborne and Blackdown which fall into the Wey, and to the south by streams tributary to the Rother. The western upland of Upper Chalk is at about 680 feet O.D. near Langrish and this extends northwards through Selborne to Wheatley where the general level is around 500 feet O.D. As is typical along the northern rim of the Weald, geological formations outcrop in quick succession giving rise to narrow bands of terrain, which vary considerably in the opportunities offered to the agriculturalist.

Gilbert White described the topography as 'a vast hill of chalk . . . divided into sheep down, the high wood and a long hanging wood. . . . At the foot of this hill lies the village . . . in a sheltered vale . . . divided from the hill by a vein of stiff clay (good wheat land). . . . the houses stand on a rock of white stone . . . north west, north and east of the village is a range of fair enclosures . . . on a white malm, which turned up to frost and rain, moulders to pieces and becomes manure to itself. This soil produces good wheat and clover. . . . To the south west is a rank clay . . . and a fine perennial spring. . . . As the parish inclines down towards Wolmer Forest; at the junction of the clays and sand the soil becomes a wet sandy loam, remarkable for timber and infamous for roads. . . . Beyond the sandy loams the soil becomes a hungry lean sand till it mingles with the forest and will produce little without the assistance of lime and turnips' (White 1768, 13).

Thus described we have the succession of Upper Chalk, the Malm or Upper Greensand, Lower Greensand comprising the wet Gault Clay, the sandy Folkestone Beds, followed by sands of the Bargate and the Hythe Beds.

In 1854 land use on this diversity of soil conditions was as below

Land Use per 1000 acres

Arable	*Common*	*Wood*	*Wheat*	*Barley*	*Oats*	*Turnips*	*Leys*
444	203	124	113	56	49	94	97

Livestock per 1000 acres

Cattle	*%Cows*	*Sheep*	*%Ewes*	*%Lambs*	*Pigs*
52	48.0	590	50.0	33.0	57

The fact that almost one third of the region was classified as common and woodland provides a fair indication of the poverty and difficulty of working the soils derived from the Lower Greensand. White (1768, 15) stressed the need for lime to counteract the acidity of these soils but his further comment on the difficulties of access, reveals that bringing the chalk from the Downs was quite a different matter. The application of organic material to correct the extreme free-draining nature of these light sands seems to have been considered by some farmers. Rags procured from Portsmouth were carted to the Petersfield area and used as manure on the light soils at the rate of 7 cwt to the acre (Cobbett 1830, 199).

From the crop acreages given above it is clear that a four course system was still operated with wheat, rotation grass and turnips as the chief elements. Farms were relatively small scale units, averaging 154 acres in Headley and 110 in Petersfield. Vancouver (1813) stated that there were a number of very small occupiers of two to three acres with farming as an ancillary occupation

to carting peat and wood to the towns. The 1854 category of holdings under two acres fails to provide much support for this observation. Headley, 22 acres per 1000 which is about the Hampshire average and Petersfield 7 acres, hardly suggest the existence of a large number of very small subsistence units.

This is not to say that the reverse was the norm. If one breaks down the statistics listed above, a hypothetical unit of 110 acres in Petersfield would have 51 acres of arable, with 13 acres of wheat, 5 of barley, 8 of oats, 11 acres of turnips and 11 in rotation grass. The farm livestock would comprise 5 cattle, 2 of these being dairy cows, and 59 sheep of which 30 were the ewe flock with 19 lambs and 10 stores for wintering and sale in the spring. Six pigs and a few poultry would complete the tally. From this it would appear that sheep were the farm staple and with no railway facility for disposal of milk, the dairy output was largely for domestic subsistence, any surplus butter being carried to Haslemere or Petersfield. Calves went to the same markets but stores were more likely to be picked up by the drovers contracting to Portsmouth. As a cash crop the holding might have half an acre of hops on the friable malm along the foot of the Chalk. Holdings entirely on the Lower Greensand could make something from their copses and hedgerow timber in the form of hurdles, hop poles and firewood, with osiers from the wet river meadows, which land in 1813 let at 50/- compared with tillage land at 15/- (Vancouver 1813, 81).

The New Forest and forest fringe

The whole region extends to the south coast and to Southampton Water, and westwards to the Avon Valley. The central forest core has an average height of 200–300 feet O.D., the surrounding lands gradually declining to sea level. Soils are entirely developed on the Barton and Bracklesham Beds consisting of rather acid sands and clays with extensive areas of Plateau Gravels. The four Unions of Christchurch, Lymington, Ringwood and New Forest comprise the region and in view of the reservation made earlier regarding the New Forest Union, it should be noted that in the absence of the Crown Lands, the statistics for New Forest Union must be taken to refer to the land fringing the Forest. As the latter is dominantly wood and heath, the omission of the Crown lands is not significant beyond inflating the proportion of the region comprising the cultivated area.

As one would anticipate from the nature of the country rocks, heath, common and wood were well in evidence in 1854. If one views Ringwood and the New Forest as the northern element and the other two Unions as the southern, certain differences in land use appear, as is shown below.

Land use per 1000 acres

	Waste	*Common*	*Wood*	*Arable*	
North	22	368	138	233	acres
South	59	162	157	392	acres

It follows from this that with such large acreages of wood and heath, crop acreages would be depressed in keeping with the low amount of land available as arable.

Crops and Livestock per 1000 acres

Union	*Wheat*	*Barley*	*Oats*	*Turnips*	*Ley*	*Cattle*	*Sheep*	*Pigs*
Forest	67	46	31	50	56	56	298	71
Ringwood	37	29	16	27	103	50	170	46
Lymington	96	63	40	43	71	63	197	111
Christchurch	82	72	31	64	77	62	239	60

The acreage in temporary grass at Ringwood operated to reduce that of other crops in the rotation, and at Lymington also there were differences from the cropping in other Unions in that 62 acres were in bare fallow and 26 in beans, neither of which were of significance elsewhere.

Although on the face of it, this was a region of small farms engaged in mixed farming and having a keen interest in dairying, the special circumstances attached to land use in the

Forest area, on examination tend to present a picture markedly different from that of the rest of Hampshire.

	Forest	*Ringwood*	*Lymington*	*Christchurch*	
Farm size	90	76	58	106	acres
Cows					
% of stock	61%	56%	59%	66%	
Ewes					
% of stock	36%	42%	35%	38%	
Land, 2 acres		per 1000 acres of total area			
or less	95	40	46	50	

The figure indicating average size of farm as in other regions, conceals the fact that some farms were much larger units and correspondingly many holdings were very small indeed. It would be true to say that in the Forest region as a whole the very small unit was the characteristic feature in land use. Many of the small closes of land of two acres or less, were occupied by smallholders, who were able to pursue a system of subsistence farming. With the large acreage of heath, common and wood available, it would probably be reasonable to assert that most occupiers enjoyed rights of common. The latter not only entailed the usual facilities for pasturing stock but also rights of turbary, estover and pannage which enabled even the commoner with the traditional 'two acres and a cow' to survive.

By 1854 the right to dig marl seems to have lost importance for the commoners but other customs continued such as the cutting of bracken for bedding and litter, gorse for fodder, and of cutting gorse faggots for firing pottery kilns, a saleable item at 3d to 6d a hundred, which brought in a small cash income. Beech mast was a particularly valued item and the commoner's objective was to buy in as many pigs as possible early in the year and to keep these until September 25th. It was possible to recoup the outlay threefold in a good mast year (Tubbs 1965, 34).

Briscoe Eyre (1883, 36) stated that one commoner who, unusually, kept accounts, occupied 6 acres, with a cottage, cowpen and pigstye. Stock comprised three cows, a heifer and a weanling calf. Profits from butter, new milk and skim milk, were £39–18–6 for the year. 24 pigs bought in during the pannage season made a profit of £21–13–3. Annual profit fluctuated between £77 and £59.

Tubbs (1965, 31) quotes from the Select Committee of 1875 on the size of holdings, and by reworking from these figures it is possible to draw up a Table as follows.

New Forest Holdings in 1875

1 acre	*1–4*	*4–10*	*10–20*	*20–30*	*30–80 acres*
17%	17%	10%	4%	4%	48%

Little, reporting on Hampshire (PP 1882, 191) presents a Table which shows that in 1875 owners of 1 acre or less represented 0.6%. of the County total and those with 1–100 acres formed 8.4%. By relating the numbers quoted by Tubbs to a second Table showing occupiers as distinct from owners only, a rough calculation indicates that the New Forest share of the County total approximates to 10% of holdings under 50 acres or 17.0% of those from 1–100 acres. Unsatisfactory though the calculations may be they do support the view that the majority of New Forest occupiers were very small subsistence farmers indeed.

Conclusion

Although up to this point the principal preoccupation has been an analysis of the 1854 Crop Returns, other sources deserving of mention include the 1801 Crop Returns, the Tithe Survey c. 1840, the Select Committees of 1833–7 and 1848, and for a post 1854 impression, Wilkinson's Prize Essay of 1861.

The 1801 Returns (PRO HO 67) have been discussed by Pelham (1953) who reproduced the statistical data by parishes in an appendix. As with all the 1801 Returns which have survived, area coverage varies considerably. Thus for Shropshire (Dodd 1954) there is 80.0% coverage of the county but important regions in north west and in eastern Shropshire are lacking. For Hampshire no Poor Law Union is complete, for example, Andover has 16 returns for a total of 29, Catherington has 3 returns out of a possible 9, but Droxford is short of only 2 out of 11.

All students of these Returns since Hoskins (1948) have been frustrated by the omission of statistics of the acreage of clover and rotation grass, and of bare fallow from the Returns.

For Hampshire, the difficulties can be demonstrated by reference to the attempt to correlate the data with that of the 1853 Crop Returns. Nominally one should be able to subtract rotation grass and bare fallow acreages from the total arable for 1853 and thus effect a comparison with the total Return made for 1801 in terms of the proportion of the acreage devoted to corn. For 1801 this emerges as 82.0% for the county contrasted with 64.0% at the later date. The position in 1801 is further complicated by the considerable extension of the cereals acreage in that year following on the failed harvests of 1799 and 1800 (Dodd 1965, 102). For these and other statistical reasons any comparative analysis needs must be restricted to a view of the rank order of the three grain crops, wheat, barley, oats in the corn acreage for the two years in question.

	1801			1853–4		
	Wheat	*Barley*	*Oats*	*Wheat*	*Barley*	*Oats*
Hampshire	43.0%	32.0%	25.0%	48.0%	29.0%	23.0%

With Repeal of the Corn Laws occupying a midway position in time between the Tithe Survey and the 1853–4 Crop Returns, a comparison of the two sources, in theory, should afford valuable evidence as to the effect of Repeal on a corn growing county like Hampshire. The Tithe Files (PRO 1R, 18) are available for much of Hampshire although in several instances there is no cover due to earlier commutation or of extinguishment of tithes resultant on enclosure. Moreover, a fair proportion of the Files available present little information of value in the agrarian context. Naish, who made an exhaustive study of this source, is reported by Cox and Dittmer (1965) as saying that the information where available, 'was generalised and inaccurate'.

A survey made by the present author, after discarding those Files without relevant data, resulted in a sample representing 14.1% of the 1853–4 acreage. The impression gained was that the comments made by Naish, were fully justified. Although firm conclusions cannot be drawn, other surveys of the whole of the Tithe Schedules for Wiltshire and for Shropshire (Dodd 1978–9), when compared with the 1854 Crop Returns for those counties, have yielded results which may be of point in the context of Hampshire.

In Shropshire, already disposed towards livestock rearing and mixed farming, arable acreage declines overall by about 4.0% between 1840–45 and 1854. However, in the case of two of the regions in the arable corn growing East of the county, there were increases of 4.0% and 2.0% respectively. With regard to Wiltshire, although some parishes contained downland, which as in Hampshire, had been enclosed and ploughed up, the county as a whole evinced an upswing in arable acreage of some 3.0% or possibly 4.5%.

Insofar as the evidence may be related to what was occurring in Hampshire, two sets of Wiltshire regions are worthy of comment, (a) those having a common border with Hampshire and (b) the great Chalk arable regions. Amesbury and Alderbury Unions, occupy south east Wiltshire, terrain which continues eastward as Andover, Stockbridge and the Central Chalk Region. (Fig. 1). For Amesbury there was an upswing of 9.5% and for Alderbury 3.0%, in the arable acreage for 1854. It may be of point to note that the area we are discussing relates to some 108,000 acres. On the High Chalk, much of which is over 600 feet OD and which at Tan Hill rises to 964 feet OD, comprising some 102,000 acres, the increase in arable acreage in 1854 represented 2.0%. As the region correlates with Hampshire's Eastern Chalk Region, one could anticipate a like increase there in 1853–4.

Fordingbridge and the Western Chalk Region has no suitable Wiltshire counterpart. However, the farming pattern in 1853–4, has strong points of resemblance both in terms of arable and livestock densities with that of Chippenham in north west Wiltshire. As the

change there, on over 55,000 acres was a 6.0% increase in arable, similar advance may have transpired in Fordingbridge.

James Caird (1851) made a brief visit to Hampshire in February 1850, probably better described as a day trip, whilst en route between Salisbury and London, via Basingstoke. He may have changed trains at Eastleigh or at Southampton but his comments on the county are restricted to what could be seen from the coach windows, with passages such as—'the sylvan beauty of the New Forest', and 'the bare landscape of the chalk, the arable lands in large fields frequently unenclosed'. 'Flooding frequently occurs on the low-lying land besides the streams'. Other remarks were pretty much a crib from the evidence presented at the 1848 Select Committee.

Caird also noted that Portsmouth, Gosport and Southampton were the markets for consumption of vegetable and animal produce, but potatoes were imported from France. Such generalised remarks on urban markets are worthless without substantiation and the 1854 Crop Returns hardly back-up Caird when he does commit himself. The Table given below having reference to the hinterland of these towns shows—

	Droxford	*Fareham*	*S. Stoneham*	*Portsea*	*Romsey Unions*
Carrots	28	20	48	30	15 acres in 1854
Cabbage	158	146	124	168	54 acres in 1854

As may be seen from Fig. 4, this was an area of progressive farming and in view of Wilkinson's remarks (1861) that at Botley such items were fed to stock, the probability is that except for Portsea, most of this acreage was grown as fodder for stock rather than the urban market.

Although there was undoubtedly strong feeling in Hampshire on the question of Repeal, especially expressed by the six Unions, mainly on the Chalk, which refused to present statistics in 1854, there is little evidence to suggest that there was a swing away from arable farming, nor did the corn acreage decline.

Typical of the reaction of the corn-sheep farmer on the Chalk was John Twynam, of Houghton, whose farm accounts (Reading 1973) contain a draft letter from which the following is quoted. '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'. Twynam further advanced the thesis that farmers, whatever their political allegiance, should publicly declare that their vote would be given only to candidates sworn to promote the farmer's cause.

In viewing the annual totals for wheat imports from Repeal to 1855 (PP 1878–9) there were a series of upsurges. Thus from 4.6 million cwts in 1846 the figure jumped to 11.5 million cwts in 1847, while in 1852 the total of 13.2 million cwts went to 21.3. The harvest of 1846 was below average, while the crop sown in 1851–2 occupied a larger acreage than normal but yield was deficient and the price rose from 40s 9d to 53s 3d. The 1852–3 sowing produced the worst harvest for many years and the price went to 72s 5d. We thus have the classical situation of deficient harvest —price rise—stimulus to supply by import— increased home sowing—.

The acreage sown in 1853–4 was even greater and produced the best harvest since 1844 (Lawes 1868). With imports in decline due to the outbreak of the Crimean War, price in the English market rose to 74s 8d and the 1854–5 sowing continued larger than average. For Hampshire there is no reason to believe that there was any divergence from the national pattern of an increasing acreage as from the autumn of 1851. Corn sown in 1852–3 in Hampshire averaged 46.0% of the arable area and in 1853–4 rose to 47.0% in

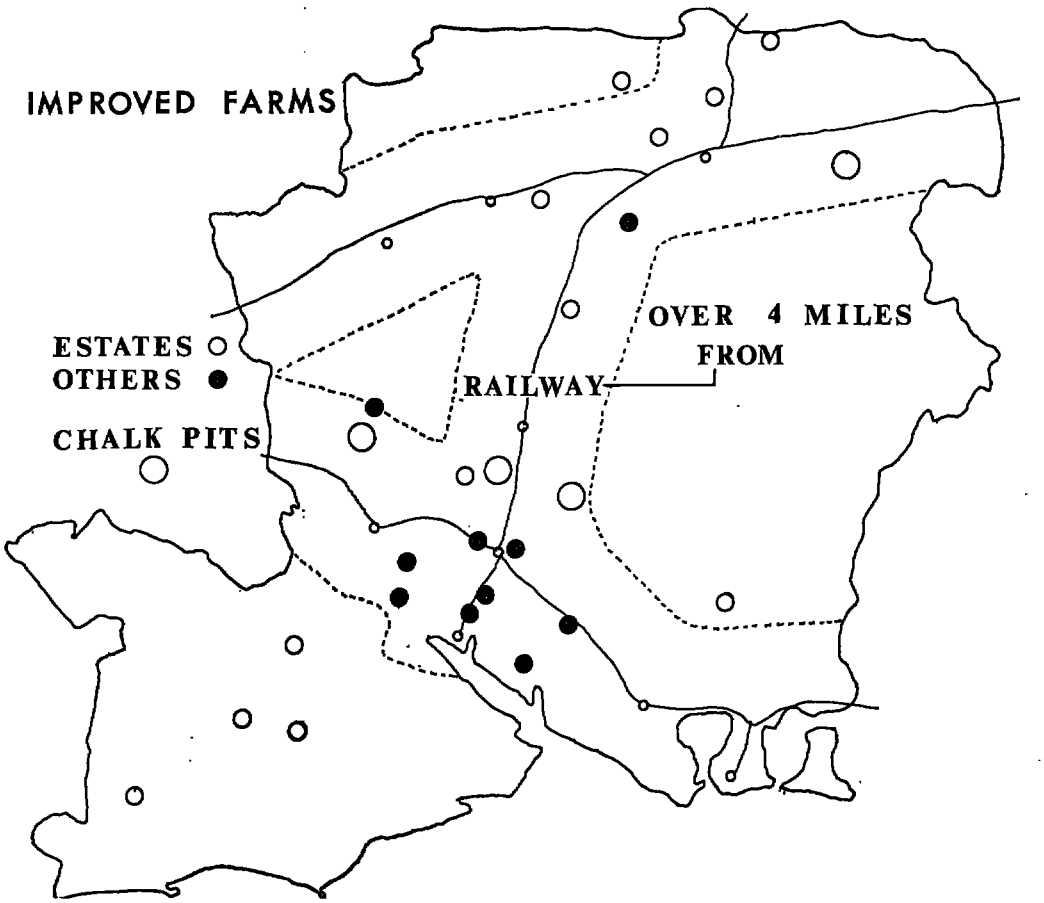

Fig. 4. Hampshire: Map showing improved farms and railways in 1854, regions as Fig. 1. (Scale as Fig. 1) *Erratum.* The map omits the Southampton and Dorchester line (1847) and the Fareham–Gosport line (1842). The Basingstoke–Andover line (1854) was not extended to Salisbury until 1860.

the county as a whole. Regionally there were larger increases as on the Central Chalk Region with 41.0% to 45.0% and on the Eastern Chalk of 42.0% to 44.0% in 1853–4.

As regards the Repeal year, John Twynam farming on the Central Chalk had 54.0% of his arable land under corn in 1845–6. Wheat occupied 37.3% and barley 30.3%. In the sowing for 1846–7, wheat fell to 32.3% but barley rose to 42.0%. His accounts terminate at Michelmas 1846 so that the oats acreage is not shown but assuming that he followed the general trend on the Central Chalk, as indicated in the Tithe Files, his oats acreage of 32.3% in 1845–6 would have gone up to 33.3% and the corn acreage to 55.0% of the arable.

Another farmer, Richard Hinton of Pittleworth, noted that Free Trade in corn had been declared but of more concern to him was the damaged hay harvests of 1853–5 and the potato blight of 1847–9. His ewe flock was maintained at an average of 290 while his corn acreage was advanced from 154 acres in 1844–5 to 179 acres in 1851–2. Of the sound and fury of the Repeal issue there was little real impact at farm level. Of more importance were the effects of the Crimean War

which pushed Hinton's wheat price up by some 70.0%, barley 33.0%, wool 30.0% and ewes realised up to 25.0% more (Pittleworth accounts).

Tenant farmers had but limited options as regards extension or contraction of the farm acreage in corn. Hampshire leases contained covenants preventing the ploughing-up of grassland and conversely stipulated a minimum acreage to be sown with corn. Wilkinson (1861) asked 'Might not rotations be considered less matters of inflexible legal determination, and more of climate, soil and even of seasons'. Sifting through the same source it is clear that for several regions, e.g. the London Basin, the Chalk, the Tertiary Basin and the Weald, 50.0% of the arable was in corn. Leases also stipulated that a certain number of sheep should be kept and prescribed how they should be managed.

Consequently contemporary exhortations to engage in High Farming, (or High Feeding, Pusey 1842) were wasted on the ears of Hampshire farmers.

Improvers there were, but most of these were 'gentlemen farmers' (Fig. 4) except for a nucleus of tenant occupiers formed of members of the Botley and South Hants Farmers Club (Wilkinson 1861, 272) in the Tertiary Basin. Imports of guano totalled 1400 tons in 1841 and in 1847, 220,000 tons (Coppock 1973). Manufacture of superphosphate was commenced in 1843 by a factory opened at Bow. As late as 1861 there was little evidence for the employment of either by Hampshire farmers. On the Duke of Wellington's estate at Stratfieldsaye guano was used for the mangold crop, also at Avon where the wheat had a dressing. Both estates used superphosphate for the mangold or root crops and at Hursley artificial fertiliser was said to be in use for roots. Ashes were probably used to a greater extent than described by Wilkinson (1861) who noted them at Avon on the mangold ground and at Hursley, and on Mr Boxall's farm (Wellington estate) for the root crop. John Twynam prepared his own and between 29 March and 10 May 1845 produced 3415 bushels and more or less the same quantity in the same period in 1846.

Boning had also been introduced and was widely used in many counties but the only mention in Hampshire is at Hursley, although Twynam again indicates that the intelligent farmer could help himself. His accounts show expenditure for the purchase of sulphuric acid utilised at the rate of 50 lbs to 2 bushels of bones and 10 bushels of ashes. As a prosperous sheep breeder, presumably even his dead sheep could be turned to account for boning.

Chalking, particularly valuable on the clays, could only be done on farms within easy range of the quarry as at Odiham, which supplied farms within a fifteen mile radius, and at Brook (Fig. 4). Even so, Wilkinson said that none was done south of the New Forest and moreover the practice was to chalk once in twenty years, and there was considerably less land chalked than formerly, despite his contention that the railway had brought down the cost. Harriett (PP 1848) thought more chalking would be carried out if farmers received compensation from the landlord and/or incoming tenant for their outlay.

As for High Feeding, the traces are scanty, Boxall, instanced as an improver, fed his dairy stock and a few steers on straw and roots with a little cake and chopped hay given in February and March. On the Vyne estate sheep were given corn and cake but the calves had to make do with straw and hay. Only at Botley (1861) and on Harriett's farm at North Waltham (1848) is there mention of feeding oil cake to stock. Stores, the focus of the Botley enterprise, were given cake and corn, and cake meal was supplied to the sheep. Harriett, changed his rotation from the four course to a six year course about 1840, and manured with guano, bones and salt. He was an owner occupier and as the result of upgrading the land and by feeding cake, had doubled his flock, increased his corn yield and could, in 1848, now sell hay.

However, like John Twynam who was experimenting in sheep improvement in the

1830's and whose rams went to all parts of England south of the Wash, farmers of the ilk of Harriett were more the exception than the rule in the Hampshire of the 1850's. The flock still 'paid the rent' but more as a dung machine than as a mutton producer. The coming of the railway, (Fig. 4), provided the means of bringing artificial foods and fertilisers to the farm, and of supplying the London market with milk, meat and vegetables, but these were opportunities which showed no sign of coming to fruition.

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HRO Hampshire Record Office
PP Parliamentary Papers
PRO Public Record Office

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