

The Statistical Assessment of British Agriculture

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INTRODUCTION

“ENGLAND is fertile in paradoxes, and not the least of them is the fact that the most difficult thing of all others to ascertain is that which is done in this land of liberty, of general curiosity, and extensive information in the face of nature and under the light of the sun . . . nobody knows, even in the most summary way, what is doing on the thousands of acres spread before his eyes in any landscape of ordinary extent, much less in the county or in the country at large.” So wrote *The Times* in a leader on the 18th of June 1867. The comment might more justifiably have been made two years earlier, for the occasion on which it was made was the collection of agricultural returns for the second year running, the numbers of livestock and the acreages of different crops having been collected from every county in Great Britain for the first time in 1866. These returns, which have been made in each succeeding year, form a body of source material for the study of agricultural change which lies virtually unexploited. Its importance is enhanced by the fact that the estate accounts, inventories, and surveys which are so valuable a source for earlier periods are at once less numerous and less detailed for the latter part of the nineteenth century. This is in part due to the fact that such material has not yet come to light; but it is primarily due both to the break-up of many estates and the loss and destruction of their records, and to the assumption by the State of the rôle of agricultural pioneer formerly played by landlords, whose powers to determine the agricultural character of their estates have dwindled ever since the Agricultural Holdings Act of 1875.

The original returns compiled by farmers are no longer extant, with the exception of some of recent date which are confidential, but parish summaries are available for nearly all years for every part of Great Britain.² While

¹ The study on which this paper is based was made possible by a grant from the Central Research Fund of the University of London.

² The parish summaries for England and Wales are held by the Collection of Statistics Branch, Ministry of Agriculture, Fisheries, and Food, Lytham St Anne's; those for Scotland prior to 1912 are in the Scottish Record Office, the later returns being held by the Department of Agriculture for Scotland. English and Welsh summaries are missing for all counties for 1868, 1871, 1872, 1892, 1893, and for some counties for other years; Scottish summaries are missing for 1868, 1871, 1872, 1873, and 1876.

less satisfactory than the records of individual farms would have been, these parish summaries provide a wealth of detail which is not available for any previous period for so extensive an area. Their utilization, and indeed that of the county and national figures also, demands some appreciation of their origins and of the way in which they were compiled. This paper reviews these origins and examines the development of the returns in the period from 1866 to 1914.

THE ORIGIN OF THE RETURNS

Three conditions had to be satisfied before agricultural returns could be successfully collected: the Government had first to be convinced of the usefulness of such information, a satisfactory means of collection had then to be found, and finally opposition on the part of landlords and farmers had to be overcome. In the development of the collection of returns the fulfilment of these three conditions did not take place by chronologically distinct stages; the need for the collection of statistics was only half-heartedly accepted by governments, the problem of finding adequate machinery bedevilled each of the various attempts made to collect returns, while opposition to their collection was manifest from the beginning. No doubt had there been a strong incentive to collect statistics means would have been found and opposition overcome; as it was, the success of the 1866 experiment, undertaken as it had been in a spirit of grudging acceptance, was ensured by the occurrence of a natural calamity, the cattle plague of 1865, which provided that incentive.

REAWAKENING INTEREST

The efforts to collect agricultural statistics, which had been made during the Napoleonic Wars through the agency of the parish clergy, were not immediately followed by any further attempt, and little interest seems to have been shown for over twenty years.¹ In the 1830's, however, discussion and experiment were resumed as part of the growing concern with the collection of statistics of all kinds. The change is well seen in the difference between the minutes of evidence of the Select Committees on Agricultural Distress in 1821, 1822, and even of that on Agriculture in 1833, and those of the Select Committee on Agricultural Distress in 1836;² in the former there is no mention of agricultural statistics, but in the latter numerous questions on the desirability of their collection drew frequent support from witnesses, one of

¹ H. O. Henderson, 'Agriculture in England and Wales in 1801', *Geographical Journal*, cxviii, 1952, pp. 338-45, and W. E. Minchinton, 'Agricultural Returns and the Government during the Napoleonic Wars', *Agricultural History Review*, 1, 1953, pp. 29-43.

² Parliamentary Papers, ix, 1821; v, 1822; vi, 1833.

whom testified that he could "not conceive a duty more imperative upon the Government than that of ascertaining the quantity of food that the people are likely to be supplied with."¹

The first indication that the question of collecting agricultural returns was arousing official concern is to be found in a letter from the Board of Trade to the Treasury, dated 31 March 1832, in which permission was sought to establish a statistical branch;² the letter noted the difficulty of obtaining accurate estimates of agricultural produce and thought information might be collected by the machinery used for the enumeration of population. The Statistical Department of the Board of Trade was founded in that year, and the question was reported to be under consideration by Lord Auckland, the President of the Board of Trade.³

Growing public interest in the collection of statistics was epitomized by the foundation of the Statistical Society in 1834, and it was among statisticians rather than among agriculturalists that the revival of interest in agricultural statistics was first manifest. This fact is emphasized by the contrast between the *Journal* of the Statistical Society, in which there are a number of articles describing attempts to collect agricultural statistics, and the *Journal* of the Royal Agricultural Society, started only one year later in 1839, in which no mention of agricultural statistics occurs before 1855.⁴ Emphasis in these articles in the *Statistical Journal* was laid on the statistical merits of, rather than the agricultural benefits to be derived from, such schemes as they describe.

A link between public and official interest was provided in the person of G. R. Porter, Head of the Statistical Department of the Board of Trade and Treasurer of the Statistical Society. In a paper read to the British Association in 1838 he made a cogent plea for the collection of agricultural statistics; he pointed to the backward position of Britain compared with other European countries where such information was regularly collected, and suggested that ignorance of the produce of our fields was an important reason for the fluctuation in agricultural prices. He thought that farmer and community

¹ *Report from the Select Committee appointed to inquire into the State of Agriculture*.—House of Commons, Sessional Papers, 1836, VIII (i and ii), (79, 189, 465), Questions 5002, 6318, 6971-6, 7217-8, 8167-75, 8746-50, 13527-9, 13560-4.

² P.R.O., B.T. 24/1, p. 2.

³ *Report from the Select Committee of the House of Lords appointed to inquire into the best mode of obtaining Accurate Agricultural Statistics from all Parts of the United Kingdom*.—House of Commons, Sessional Papers, 1854-5, VIII (501), hereafter referred to as the Lords' Committee, Question 900, evidence of E. A. Bowring.

⁴ C. Wren Hoskyns, 'On Agricultural Statistics', *Journal of the Royal Agricultural Society*, Series I, XVI, 1855, pp. 554-606.

alike would benefit from the collection of returns, which he estimated would cost between £20,000 and £30,000 per annum.¹

FURTHER EXPERIMENTS

Official interest was translated into action in 1836, when the President of the Board of Trade, possibly with the 1801 returns in mind, addressed a letter to the parish clergy in Bedfordshire, requesting them in the public interest to supply answers to a questionnaire about the agriculture of their parishes in May of the preceding year.² Fifty-two questions were asked, covering the acreage of the parish, the number of farms and the type of tenure, the nature of the soil and its drainage, the acreage of crops grown, their yields, the rotation followed, the number of livestock and the quantity of livestock products, the extent and composition of woods and plantations, and the level of agricultural wages. The very complexity of the questionnaire may have caused the failure of the experiment, for only twenty-seven of the 126 parishes made returns, and not all these were complete. The failure was unfortunate, since it had been the intention to extend the enquiry elsewhere if the experiment had been successful.³

In 1844 the question was raised for the first time in Parliament, when Milner Gibson moved a motion in favour of the collection of statistics.⁴ Gladstone, the President of the Board of Trade, affirmed the Government's interest, and said that they had tried several means but had been frustrated by their failure to find any adequate machinery. When the matter was raised the following year, Gladstone reiterated the difficulty of finding suitable machinery for collection, and said that they had considered "every class of officer who was *prima facie* capable of undertaking the task—the tax-collector, parochial officer, overseer, churchwarden, Excise officer, in fact every class of public functionary." Opinion was generally in favour of collection, only one member protesting against "these dictatorial attempts . . . to invade the sacredness of private property," and the Prime Minister, while suggesting that the matter was best left with the Government, undertook to lend any

¹ G. R. Porter, 'Suggestions in Favour of the Systematic Collection of the Statistics of Agriculture', *Journal of the Statistical Society of London*, II, 1839, pp. 291-6.

² Lord's Committee, evidence of E. A. Bowring, who suggested that Bedfordshire was chosen because it headed the alphabetical list of counties.

³ House of Commons, Sessional Papers, 1844, XLV (177), pp. 1-6. Also reproduced in 'Agricultural Returns of Bedfordshire', *Journal of the Statistical Society of London*, I, 1838, pp. 89-96.

⁴ *Parliamentary Debates*, LXXIV, 1844, p. 91; his reference to the report of 1816 is clearly a misprint for 1836.

weight it possessed or to apply any machinery it could command to secure the object.¹

Parliamentary interest and the numerous communications it had received led the Board of Trade in 1844 to approach the Poor Law Board, to see if the machinery of local administration which the latter provided could not be used to obtain returns.² It was proposed that further experiments be tried and that these should be limited to securing the acreage of wheat, barley, oats, rye, peas, and beans, "to ensure a reasonable chance of success." The Poor Law Commissioners, whose views were sought, suggested that the success of the experiments would depend on the view taken by the Guardians, the majority of whom were farmers and landowners; it was most important, therefore, that they be convinced that the object was not fiscal, and that the collection would not be a charge on the local rates. As the Commissioners had no power to require information, they doubted whether it would be possible to collect complete returns.

Nevertheless, it was decided to proceed with further experiments, and in England and Scotland these were made in the harvest year 1844-5.³ Much additional information was recorded, the acreages of many other crops, of grass, of woods, and of waste, and the numbers of different kinds of livestock also being collected. In Ireland the returns were collected in 1845, but here no livestock was enumerated, the list of crops was slightly different, and the acreage of bog was separately distinguished. Two Poor Law Unions, Basingstoke and Hartley Wintney in Hampshire, were chosen in England where the returns were collected through the Boards of Guardians. In Scotland and Ireland other agencies had to be used: in the county of Midlothian village schoolmasters collected the returns, and in the Bailieborough Union in County Cavan a private individual. The English experiment was only partially successful, no returns being received from the Basingstoke Union and only incomplete returns from Hartley Wintney; the Scottish and Irish returns, however, were completely satisfactory. This contrast, shown for the first time, between the ease with which Irish and Scottish statistics were collected and the difficulty of obtaining returns from English, and especially Southern

¹ *Parliamentary Debates*, LXXXIX, 1845, pp. 367-74.

² *Correspondence between the Board of Trade and other Public Departments relative to Agricultural Statistics*.—House of Commons, Sessional Papers, 1845, XLVI (265), pp. 1-4. The original correspondence is in P.R.O., HO 45, Regd. Papers, 824.

³ *Summary of the Results of the Experiment which was tried under the direction of the Lords of the Committee of the Privy Council for Trade in the years 1845 and 1846 to obtain Agricultural Statistics in the Unions of Basingstoke and Hartley Wintney, in England, the county of Midlothian, in Scotland, and the Bailieborough Union in Ireland*.—House of Commons, Sessional Papers, 1847, LIX (468), pp. 1-9.

English, farmers, was to characterize all subsequent attempts to collect agricultural statistics.

So far the various attempts had made use of existing administrative machinery; but in March 1847 the President of the Board of Trade introduced "a Bill to make provision for the collection of agricultural statistics in England and Wales." It was proposed that the Superintending Registrars of Births, Deaths, and Marriages should appoint agricultural enumerators in their districts, and that these should send on the 1st of June each year to every occupier of more than three acres a schedule on which the acreages of crops and numbers of livestock were to be returned within fourteen days. The crops chosen were almost identical with those of the 1845 experiment, but the classes of livestock were very different. Penalties were proposed for neglecting to make a return or for making false statements. But the Bill never received a second reading, largely as a result of the unwillingness of the Chancellor of the Exchequer to defray the estimated cost of £30,000—£40,000.¹

In the same year, however, administrative action did secure the collection of returns in Ireland. Here, in contrast to England, there was both a strong incentive and suitable machinery; there was also an absence of any class of large farmers who could effectively oppose the measure. The incentive was the risk of famine, and the Lord Lieutenant, Lord Clarendon, expressed to the Treasury his strong feelings about the need for accurate statistics. He called for Treasury sanction for the expenditure of up to £4,000 on their collection.² The returns were collected by the constabulary, an established and centrally controlled body; they were voluntary and covered both livestock and crops.³ The success of the enterprise was undoubtedly due in part to its supervision by Captain Larcom, of the Royal Engineers, who had already had considerable experience of the collection of statistics, and had been responsible for the inclusion of much agricultural information in the Irish Census of 1841. The returns continued to be collected annually by the constabulary, though responsibility was transferred to the Registrar General in 1853. At first they met with some hostility owing to the belief that they were connected with new taxation; but the existence of an obvious need and of

¹ House of Commons, Sessional Papers, 1847, Public Bills, 1, p. 1; *Parliamentary Debates*, xc, 1847, p. 1099; xcvi, 1848, p. 540.

² *Return of the Particulars of the manner in which 2,000 l. was expended in obtaining Statistical Information relative to the Agricultural Produce of Ireland; and a copy of the order under which the Inquiry is conducted.*—House of Commons, Sessional Papers, 1852, XLVII (491-1), pp. 1-2.

³ Details of the method of collection are given in *Returns of Agricultural Produce in Ireland in the year 1847*, pp. 1-6. House of Commons, Sessional Papers, 1847-8, LVII (923).

efficient machinery ensured collection without much difficulty, and opposition greatly decreased in the next few years.¹

CONTRASTS IN ENGLAND AND SCOTLAND

The hope of the *Economist* that "so useful an example as has been set by the Irish Government may soon be followed as regards England and Scotland" was, however, only partially fulfilled.² Nineteen years were to elapse before the regular collection of statistics was begun in either country; but in Scotland, through the enterprise of the Highland and Agricultural Society, statistics for the whole country were obtained for each of the years 1854-7. The Society had first approached the Government on this matter in 1847, and representatives had had an unofficial meeting with the Vice-President of the Board of Trade. In 1849 the East of Berwickshire Farmers' Club had again demonstrated the possibility of collecting statistics in Scotland, and when the Society once more approached the Board of Trade in 1852, it secured Treasury support for the collection of agricultural statistics in 1853 in the three counties of Haddington, Roxburgh, and Sutherland. The acreages of various crops and of grass were collected, as well as those of sheep walks, of houses and gardens, of woods and waste, while the numbers of different classes of livestock, including for the first time horses, were also ascertained. Collection was made in May through the agency of enumerators, who delivered, collected, and checked the returns, which were then consolidated by the Secretary of the Society by districts, comprising several parishes with similar agricultural conditions.³ Estimates of the yields of wheat, barley, oats, beans and peas, potatoes, turnips, turnip seed, mangolds, and carrots were also made in each district by committees consisting of the enumerator and prominent farmers.⁴ The experiment was highly successful, and only three persons failed to make returns.⁵

In England the Royal Agricultural Society played no comparable rôle, though a deputation from it was reported to have waited on the Prime Mini-

¹ Lords' Committee, evidence of W. Donnelly, Questions 465, 483, and 486.

² VI (9 September 1848), p. 1019.

³ Lords' Committee, evidence of E. A. Bowring, Question 909; evidence of Hall Maxwell, Questions 3 and 5.

⁴ *Copy of a letter from the Secretary to the Highland and Agricultural Society of Scotland to the Board of Trade, transmitting Estimate of Crops in the Counties of Roxburgh, Haddington, and Sutherland, in the Year 1853.*—House of Commons, Sessional Papers, 1854, LIX, p. 1.

⁵ *Copy of a letter addressed to the Board of Trade by the Secretary of the Highland and Agricultural Society of Scotland, transmitting Abstract of Returns of the Agricultural Statistics of the Counties of Roxburgh, Haddington, and Sutherland.*—House of Commons, Sessional Papers, 1852-3, CI (917), p. 1. Particulars of these three holdings were in fact, supplied by the enumerators.

ster, probably in the 1840's, to press the question of agricultural statistics, and it joined with the Highland Society in a deputation to the Government in 1853.¹ However, the Government decided to make a further experiment in the late autumn of 1853, using official machinery and confining the information to be collected to acreages and numbers of livestock. The schedules on which the returns were made were based on those used by the Highland and Agricultural Society, the slight differences reflecting differences in the agriculture of the two countries; thus turnip seed was omitted, hops and chicory were included, and there were differences in the definition of temporary and permanent grass.² Returns were collected from all holdings of two acres and above, the acreages of smaller holdings, of woods, and of commons being supplied from the Rate Books. Two counties, Norfolk and Hampshire, where it was thought that chances of success were greatest, were chosen. Boards of Guardians again supplied the machinery of collection; statistical committees were set up in each Union, and generally the Clerk acted as classifier and the relieving officers as enumerators. In Norfolk three Unions declined to co-operate, and there was considerable opposition in others, particularly from the Fen border parishes of the Thetford and Downham Unions. Nevertheless, the energy of the Poor Law Inspector responsible, Sir John Walsham, secured returns from all but $2\frac{3}{4}$ per cent of occupiers, though some of the returns were "incomplete" or "imperfect." In Hampshire, too, although "the zealous hostility of some opponents" created "great subsequent difficulties," returns were obtained from 92 per cent of occupiers, or $96\frac{1}{2}$ per cent if the Isle of Wight, where most of the opposition was concentrated, was excluded.³

The success of these two experiments encouraged the Board of Trade to try a more extended experiment in 1854, using the same machinery, and a sum of £13,000 was voted for this purpose.⁴ In England, Hampshire and Norfolk were again chosen, together with Berkshire, Leicestershire, Shropshire, Suffolk, Wiltshire, Worcestershire, and the West Riding of Yorkshire; two Welsh counties, Denbigh and Brecon, were also selected. In Norfolk and Hampshire estimates of crop yields were to be made by the Statistical Committees, but elsewhere returns were limited to acreages and to numbers of livestock. The items collected were little different from those of the previous

¹ Lords' Committee, evidence of E. A. Bowring, Questions 916 and 917; according to W. Miles, the reason for this inactivity was that the Society was precluded by its charter from discussing controversial political issues (*ibid.*, Questions 805-9).

² Lords' Committee, evidence of Sir John Walsham, Question 157.

³ *Reports of Sir John Walsham and Mr Hawley on the Agricultural Statistics of Norfolk and Hampshire*.—House of Commons, Sessional Papers, 1854, LXV (1761), pp. 1-23.

⁴ *Parliamentary Debates*, cxxv, 1854, p. 1036.

year, but some attempt was made to adopt the same nomenclature in Scotland and England. As in the previous year, the returns were collected in the autumn, though the proposed schedule bore the date 1 July.¹

In Scotland, the Highland and Agricultural Society undertook to secure returns from the whole of Scotland, and nearly 1,100 tenant farmers acted as enumerators and committee members. As some difficulty had been encountered the previous year because of the unwillingness of farmers in certain parts of the country to let neighbours see the details of their crops and stock, occupiers were given the opportunity of sending their returns direct to the Society. Lower limits to the size of holding were introduced, returns being collected only from farmers with a rental of £20 p.a. or more in Highland Districts, or £10 or more in Lowland Districts. The schedules were almost identical with those of the previous year, and estimates of yields were again obtained. Some delay was experienced because of difficulties in procuring accurate lists of occupiers, and collection took place between 1 September and 6 November; nevertheless, the experiment was again highly successful, schedules unreturned amounting to less than 1/5 per cent. As Hall Maxwell, the able Secretary of the Society, reported, "the Scotch farmers, as a body, at once recognized the importance and utility of the measure, and endeavoured to support and forward it by readily and faithfully affording the information required from them."²

The situation in England was very different; for 7 per cent of holdings in the selected counties no return was received, and only the West Riding was considered satisfactory, returns being made for 99·3 per cent of holdings in the western half of the county.³ In Hampshire and Wiltshire, on the other hand, the experiment "had not attained that completeness which renders it serviceable for practical purposes"; five Boards of Guardians refused to co-operate, and no return was made by either occupier or enumerator for 16·7 per cent of holdings. The produce estimates were "even more unsatisfactory" than the acreage returns, and in Norfolk only four Unions supplied estimates.⁴ The President of the Board of Trade reported that the results

¹ *Reports of Poor Law Inspectors on Agricultural Statistics (England) 1854*.—House of Commons, Sessional Papers, 1854-5, LIII (1928).

² *Report of the Highland and Agricultural Society of Scotland to the Board of Trade on the Agricultural Statistics of Scotland for the Year 1854*.—House of Commons, Sessional Papers, 1854-5, XLVII (1876), pp. 3-4. Also Lords' Committee, evidence of Hall Maxwell, Questions 6, 7, 8, 57.

³ J. Lewis, 'On Agricultural Statistics and the Cattle Census', *Journal of the Royal Agricultural Society*, 2nd Series, II, 1866, p. 398; Parliamentary Debates, cxxxviii, 1855, pp. 1782-3; *Reports of Poor Law Inspectors, loc. cit.*, Report of H. B. Farnall, p. 91.

⁴ *Ibid.*, Reports of W. H. T. Hawley, pp. 6, 13; Sir John Walsham, p. 39.

did not justify the Government in following up the plan which had been adopted of further extending the experiment.¹

This failure seems to have been due both to weaknesses in the machinery of collection and to opposition from farmers. It was felt that Boards of Guardians were unsuited for the purpose, which was held to conflict with the duties for which they were appointed. Difficulties were not confined to Guardians, for both Clerks and Relieving Officers felt themselves underpaid, and were sometimes unwilling to assist in the collection of returns; in the Wantage Union, for example, no enumerator could be found in fifteen of the thirty-four parishes. The opposition of farmers was founded both on fear and on principle; some were apprehensive that the information would be used either by landlords against their tenants or by the Government to justify new taxation, while others regarded the returns as inquisitorial and an unwarranted interference in their affairs. Political prejudice was also said to contribute to the hostility. Opposition was widespread; in the Drayton Union, most of the occupiers burnt or otherwise destroyed the schedules left with them, while in the Samford Union opposition was such that the Guardians felt themselves compelled, though reluctantly, to recommend that no further attempt be made to obtain the information required. The accuracy even of some of the returns which were made was suspect; thus, in the Knighton Union, occupiers were said to have understated their stock to avoid the taxation which they feared, while in Worcestershire attention was drawn to the inaccuracy of the Rate Books, on which part of the return was based. Opposition was dramatically epitomized by the Shropshire farmer who returned his blank schedule neatly torn in four pieces with the inscription "The idea of such questions! What next?" None the less, the extent of the opposition can be exaggerated; the more intelligent farmers were said to be in favour, while the proportion of returns received was very comparable with that obtained in 1866. The Poor Law Inspectors who reported on the scheme were generally of the opinion that compulsory powers were necessary, though there were differences of opinion about the suitability of the Poor Law machinery, especially the Boards of Guardians. But although the Poor Law officers were once more suggested as a suitable channel for the collection of returns, no further experiments were undertaken in England and Wales until the collection of the returns was begun in 1866.²

¹ *Parliamentary Debates*, CXXXVIII, 1855, p. 1783.

² *Reports of Poor Law Inspectors*. Reports of W. H. T. Hawley, pp. 6-7, 13; G. Pigott, pp. 56, 57; A. Doyle, pp. 77-8, 79; J. T. Graves, pp. 70, 73; Sir John Walsham, p. 34. See below, p. 18; the 1866 figure of 5½ per cent reflects the good response in the northern counties which were poorly represented in this experiment.

In Scotland, on the other hand, complete and accurate returns continued to be collected until the summer of 1857. In 1855 all schedules were completed, there being only about sixty cases of absolute refusal or opposition, while in 1856 returns were still "very freely made."¹ Duplication of returns had provided some check on their accuracy, but independent confirmation was obtained in 1857 when the crops in the county of Linlithgow were recorded and measured on maps by the Ordnance Survey, the difference between the returns and the computed acreage being only 316 acres out of a total of 25,999.² One fundamental change was made in the schedule in 1855: so much difficulty had been experienced in obtaining the acreages of permanent grass and sheep-walks that it was decided to confine the acreage return to the arable area only.³ Other minor changes were made in the schedule, particularly in the classification of livestock. Unfortunately the collection of returns was not continued beyond 1857. A disagreement arose between the Highland and Agricultural Society and the Treasury, who held that the Society should account for every penny of public money, supporting each item with vouchers, while the Society considered itself to be only the agent of the Board of Trade and not subject to the same standard of accounting as a government department. The Treasury, however, remained adamant, and the Society felt obliged to sever its connections.⁴ As a result continuous records in Scotland date only from 1866, as in England.

THE SEARCH FOR SUITABLE MACHINERY

Attempts to find satisfactory machinery continued. In 1854 a Select Committee of the House of Lords had been appointed to investigate the best way of collecting agricultural statistics, the importance of which "is now so generally admitted."⁵ It reported in favour of the collection both of acreages and numbers of livestock, and of estimates of produce, and thought that the Poor Law machinery should continue to be used, and that the returns should be compulsory. A Bill embodying these recommendations was introduced

¹ *Copy of the Report of the Highland and Agricultural Society to the Board of Trade, on the Agricultural Statistics of Scotland, for the Year 1855.*—House of Commons, Sessional Papers, 1856, LIX (2), p. 2; also *Report to the Board of Trade on the Agricultural Statistics of Scotland for the Year 1856.*—House of Commons, Sessional Papers, 1857, xv, p. 8.

² *Reports to the Board of Trade on the Agricultural Statistics of Scotland for the Year 1857.*—House of Commons, Sessional Papers, 1857-8, LVI, p. 4.

³ *Report on Agricultural Statistics for 1856, loc. cit.*, p. 2.

⁴ *Correspondence relating to the discontinuance by the Highland and Agricultural Society of Scotland of the collection of the Agricultural Statistics of Scotland.*—House of Commons, Sessional Papers, 1857-8, LVI, pp. 1-54.

⁵ Lords' Committee, p. 3.

into the Lords in 1856; it authorized the Poor Law Board to appoint collectors, who would obtain on the 1st of July each year a return of crop acreages and livestock numbers from all holdings of two acres and above, and prescribed penalties for non-compliance; the schedule to be used resembled that used in the extended experiment of 1854. Provision was also made for the appointment of crop estimators. The Bill was passed by the Lords without much opposition; but in the Commons no agreement could be reached, and even many who supported the collection of statistics were unwilling to accept the sanction of compulsion, or doubted the suitability of the Poor Law Board. The Bill was accordingly withdrawn, with the promise of a Select Committee in the following session to re-examine the question.¹

No Select Committee was in fact appointed. But in 1857 a further Bill was introduced by Caird and Garnett. Caird had earlier favoured the appointment of a small number of competent men who would collect acreage returns and make estimates of yields; he had also supported the principle of compulsion.² In his Bill, however, he proposed that the Registrar-General should employ the Superintending Registrars, or other suitable persons, to distribute schedules to all occupiers of two acres or more. The returns were to be collected on 1 June, and were confined to crop acreages, the list of crops being very similar to that prescribed in the previous Bill. The Registrar-General was also to appoint Inspectors of Agricultural Statistics, who would make periodical checks on the accuracy of the returns. Where no returns were made, powers of entry for the purpose of ascertaining the acreages of crops were to be authorized. Opposition was strong, particularly against this last provision; the Bill was said to be inquisitorial and useless, and though Caird offered to amend the offending clause in committee, the Bill failed to get a second reading.³

Official attempts to find suitable machinery for the collection of the returns continued. In May 1861 a circular letter was sent from the Home Office to the Chairmen of Quarter Sessions in England and Wales, suggesting that the constabulary might be used for this purpose, as in Ireland, and asking the opinion of magistrates on the extent of the information to be obtained and the frequency of its collection; a schedule identical with that proposed in Caird's Bill was enclosed with the letter. Only eighteen out of fifty-nine chairmen

¹ House of Commons, Sessional Papers, 1856, Public Bills, I, p. 1; also *Parliamentary Debates*, CXL, 1856, p. 1770; CXLI, 1856, pp. 629-33; CXLII (1856), p. 1771.

² Discussion on paper by L. Levi, 'On the importance of a correct system of Agricultural Statistics', *Journal of the Society of Arts*, II, 1854, p. 337; and Lords' Committee, evidence of James Caird, Question 269.

³ House of Commons, Sessional Papers, 1857, Public Bills, I, p. 27; *Parliamentary Debates*, CXLVII, 1857, pp. 200-1; CXLIX, 1858, pp. 1887-1919.

reported in favour of using the constabulary, though the opposition of the majority was not so much to the idea of statistics as to the suggested machinery of collection. Opposition to the returns themselves was, however, voiced; in Berkshire it was said that the farmers regarded the returns as an interference with their private affairs, while from Gloucestershire the fear was expressed that discrepancies might be revealed between rotations prescribed by leases and those actually followed. The idea of using the constabulary was not, therefore, pursued further.¹

Unofficial attempts to establish the collection of statistics continued. Caird was not deterred by the rejection of his Bill, and in June 1864 he proposed a motion in the Commons, "That in the opinion of this House the collection and early publication of the Agricultural Statistics of Great Britain would be in the Public Interest." Opponents questioned the accuracy and usefulness of such returns as could be collected; other members were sympathetic but doubted the value of an airy motion. Caird, however, was unwilling to withdraw, as he wished to stimulate the Government into action, and his motion was in fact carried against the wishes of the Government. Nine months later he asked whether the Government intended to give effect to the resolution, and was told by the President of the Board of Trade that, while no legislation was to be introduced, a plan had been suggested whereby voluntary returns of the acreage of crops might be obtained. On the 8th of June 1865 a vote of £10,000 to defray the cost was approved.²

THE 1866 RETURNS AND THEIR DEVELOPMENT

It had been intended at first to collect only the acreages of crops.³ But in 1865 there was a severe outbreak of cattle plague, and the Royal Commission which was appointed to investigate it was concerned at the absence of data concerning the numbers of livestock. On 24 October the Secretary of the Royal Commission wrote to the Board of Trade representing "the importance of obtaining correct information, respecting the number of horned cattle and sheep existing in the country."⁴ As a result of this pressure it was decided to obtain livestock figures as well, and these were in fact collected

¹ *Copy of the Circular sent by the Secretary of State to the Chairmen of Quarter Sessions in England and Wales, with reference to the Collection of Agricultural Statistics; with the Resolutions adopted thereon; and of any correspondence relating thereto.*—House of Commons. Sessional Papers, 1862, XL (205), pp. 1-31.

² *Parliamentary Debates*, CLXXV, 1864, pp. 1362, 1383; CLXXVIII, 1865, p. 560; CLXXIX, 1865, p. 1312.

³ *Parliamentary Debates*, CLXXXIX, 1867, p. 1104.

⁴ *First Report of the Commission appointed to inquire into the Origin and Nature etc. of the Cattle Plague.*—Appendix E, House of Commons, Sessional Papers, 1866, XXII (3591), p. 180.

and published before the acreage figures. On 5 March 1866 returns were collected from all owners of livestock, including proprietors of town dairies, of the numbers of milk cows and other cattle of two years and over and those under two, of sheep of one year and above, and of those under one year, and of pigs, the results being published on 7 May.¹

On 25 June the acreage figures were collected as originally planned. Schedules were sent to every occupier of more than five acres of land, requesting the acreages of wheat, barley, oats, rye, beans, peas, potatoes, turnips and swedes, mangolds, carrots, cabbage, kohlrabi and rape, hops, vetches, lucerne and any other green crop, rotation grasses, bare fallow, and permanent grass. Both livestock and acreage returns were collected for the Board of Trade through the agency of the Board of Inland Revenue, whose Excise officers were distributed throughout the country and were thus well placed to distribute and collect the forms. The procedure adopted was simple: the officers prepared lists of occupiers from the Parish Rate Books and from the Income Tax Assessments, and sent schedules to each occupier through the post. The returns, when received, were consolidated in parish summaries, and the original schedules destroyed after the lapse of one year. When occupiers declined to make a return the officer or the local Assessor of Taxes was to make an estimate; officers were instructed to compare their estimates with the total acreages given in the Rate Books, and, in the event of difficulty, to seek help locally from magistrates, clergy, agents, or others acquainted with the locality.²

Although satisfactory machinery, which incidentally had been thought unsuitable by the Government in 1846, had now been established, the problem of overcoming the opposition of farmers and landowners remained. Undoubtedly the occurrence of the cattle plague at that particular time facilitated the task of collecting the statistics; as one observer put it, "no one who has watched the current of public opinion in the past twelve months will doubt that to the calamity which has recently befallen our flocks and herds is due in great measure the present favourable disposition of farmers as a body to contribute for public use information which but a short while ago they had a strong objection to divulge."³ Not only did the cattle plague weaken the hostility shown by English farmers to the returns; it was responsible for the fact that any livestock figures were collected.

¹ *Returns relating to Livestock in the United Kingdom*.—House of Commons, Sessional Papers, 1866, LX, pp 1–6. The date is given in J. Lewis, *op. cit.*, p. 406.

² Circular to Collectors, Excise General Order, 31 May 1866; also Excise General Order, 30 May 1868.

³ J. Lewis, *op. cit.*, p. 415.

But while the cattle plague diminished opposition it did not eradicate it, and its effects were short-lived. That this was so is indicated by the contrast in completeness between the livestock and the acreage returns. In Great Britain estimates were necessary for only 1.5 per cent of the cattle, 2.5 per cent of the sheep and 2.0 per cent of the pigs, and even in a county such as Hertfordshire, where opposition was strong, the figures were only 6.0 per cent, 8.6 per cent, and 5.4 per cent respectively. No figure of the proportions of the acreage returned which had to be estimated was published for the whole country, but it can hardly have been much less than 10 per cent by area, and in Hertfordshire was as high as 45 per cent.¹

These contrasts in the proportion of estimates reflect the varying intensity of opposition, both as between the livestock and the acreage returns, and between the different parts of the country. As on previous occasions, there were marked differences between Scotland and England; the Inland Revenue Commissioners noted the facility with which the information was collected in Scotland compared with the reluctance and refusal often encountered in England.² In Scotland only $\frac{1}{2}$ per cent of the farmers declined to make returns, while in England the figure was $5\frac{1}{2}$ per cent. It was mainly in southern and eastern England that opposition was concentrated; in Cumberland only $\frac{1}{2}$ per cent of the farmers refused to make returns, and in Yorkshire, Lancashire, and Northumberland only 1 per cent, but "in Hertfordshire, Huntingdonshire, and some other counties, as many as 30 to 37 per cent declined."³ Even within these broad regional contrasts, there were marked differences between adjacent counties and even between adjacent parishes; 13 per cent of the acreage returned in Buckinghamshire was estimated, compared with 45 per cent in Hertfordshire and only 7 per cent in Oxfordshire, and with 0 per cent, 45 per cent, and 74 per cent respectively in the three neighbouring Hertfordshire parishes of Essendon, Little Berkhamstead, and Bayford.⁴

Much of this opposition was attributed to the hostility of landlords rather than of farmers. The President of the Board of Trade thought that certain substantial landowners had taken a prejudice against the returns and had

¹ *Return of the Total Number of Cattle, Sheep and Pigs, Returned by Occupiers of Land, and Estimated by Collecting Officers, upon 5th March, 1866, distinguishing the Number Estimated by the collecting officers, in default of Returns by Occupiers, with the Percentage Proportion of the Number So Estimated.*—House of Commons, Sessional Papers, 1866, LIX (528), pp. 1-4. The acreages are calculated from the Parish Summaries, Hertfordshire, 1866.

² *10th Report, Commissioners of Inland Revenue*, 1866, pp. 47-8.

³ *Parliamentary Debates*, CXCVII, 1869, p. 834. It is not clear to what these figures refer; it seems likely that they are average figures for the first three years.

⁴ Calculated from the 1866 parish summaries.

advised the farmers not to fill them up, while the Commissioners of Inland Revenue reported that "throughout large tracts of country the farmers, at the instigation of some great landowner, had set our officers at defiance." Generally it was the occupiers of large farms who objected to making returns, and the acreages of such farms were more difficult to estimate. Some of the returns were deliberately falsified; one farmer, occupying fifty acres, returned over 300, including ten acres of hops, and also 1,000 pigs, "a statement evidently as untrue as the other portion of the return." Officers experienced insult and annoyance; the date of collection was said to contribute to this, since the farmers were then engaged on their hay harvest, and "very irritable when called upon by a Government Officer to leave their occupation for the purpose of detailing to him all the particulars of their holdings."¹

As on previous occasions, the amount of opposition must not be over-emphasized; the majority of farmers made returns without trouble. Perhaps more typical of the majority was the Bedfordshire farmer who noted briefly in his diary on 24 February 1866: "On Monday next, I have to send the number of all my Neat Cattle, and Sheep, and Pigs, in a form sent by the Board of Trade, it is a very general thing yet quite new on account of the Plague."²

Despite the opposition, and despite the inevitable adjustments necessary in the machinery of collection, there was on this occasion no turning back. The returns continued to be collected, though in 1867, as in subsequent years, the acreage and livestock figures were obtained simultaneously on 25 June, a date altered in 1877 to 4 June. Because of the need to collect returns of all livestock the lower limit of five acres was abandoned, and returns were obtained in 1867 from all occupiers of land. In 1869 a lower limit was again imposed when a minimum size of a quarter of an acre was adopted; this figure was maintained until 1892, when the present minimum of over one acre was substituted.³ The returns remained voluntary until the Agricultural Returns Act of 1925 provided legal sanction for their collection, but they grew in size and complexity as new items were added and old subdivided.⁴

¹ *Parliamentary Debates*, cxvii, 1869, p. 834; 12th Report, Commissioners of Inland Revenue, 1869, pp. 11-12; 17th Report, 1874, p. 20; *Agricultural Returns of Great Britain, With Abstract Returns for the United Kingdom, British Possessions and Foreign Countries, 1881* (C3078), p. 3.

² Manor Farm, Upper Stondon, Bedfordshire Record Office, D.D.X., 159/3.

³ *Agricultural Returns for Great Britain*, 1867 (C3941), p. 3; 1877 (C1878), p. 3; 1869 (C4200), p. 4; 1892 (C6743), p. vi. In practice in 1867 "cottagers and holders of small pieces of garden ground" were exempted.—Excise General Order, 29 May 1867.

⁴ Returns were also compulsory from 1918 to 1921 under the provision of the Corn Production Act, 1917.

By 1919 the twenty-five items for which returns were required in 1866 had increased to fifty.

The difficulties encountered in the early experiments in the collection of statistics had concentrated efforts on the limited objective of securing the acreages of crops. Yet one of the chief arguments advanced in support of the collection of agricultural statistics was the light they would throw on the production of different crops, and Sir John Walsham had gone so far as to say that the acreage figures without yields were "interesting as statistical curiosities" but no more.¹ In 1884, when the collection of the acreage figures was firmly established, an attempt was made to obtain information about the yields of certain crops—wheat, barley, oats, beans, peas, turnips, mangolds, potatoes, and hay. Estimators were appointed, generally men experienced in making agricultural valuations. They were given groups of approximately fifty parishes, and required to make estimates of the yields of these crops in each parish, though parishes might be grouped where soils and the quality of the crop varied only slightly.² These estimates have also continued to be made, though the procedure has been somewhat modified. Their historical interest is, however, less both because they are estimates, and because the smallest area for which they are available in England and Wales is the county;³ for the study of regional change in agriculture, the livestock and acreage figures are of much greater importance.

INFLUENCE OF THE PREVIOUS EXPERIMENTS

The final form which the returns took and the way in which they were collected were clearly influenced by the experiments of the preceding thirty years. After 1836 a trend towards simpler returns is noticeable, and the difficulties of ascertaining yields, of collecting numbers of different classes of livestock, and of determining the extent of rough unenclosed land used for grazing, led to concentration on the collection of crop acreages; for the collection of livestock numbers in 1866 was purely fortuitous. Other lessons could certainly have been learnt, for many of the problems which the Board of Trade was to face in the collection of the returns had been met and noted, if not solved, on previous occasions; the problem of complete enumeration, the unreliability of the Rate Books, the use of local measures, ignorance of the true extent of land held, and difficulties of definition, particularly of per-

¹ Lord's Committee, evidence of Sir John Walsham, Question 174.

² Circular to Collectors, 28 July 1884. Details are also to be found in *Agricultural Produce Statistics, Great Britain, 1884* (C4216), pp. 5-7, and *Agricultural Produce Statistics of Great Britain, 1890* (C6298), p. vii.

³ Produce returns are available for Scotland by parishes from 1884 to 1911.

manent grass and fallow, had all caused trouble before.¹ At first sight it is difficult to see why the standards of accuracy which were acceptable in 1866 did not prove satisfactory in 1854. It may be that the success of the livestock census of March 1866, taken during an emergency for motives which were clearly in the farmers' interests, encouraged an attitude of optimism which minimized the shortcomings of the acreage returns. Some credit is also due to the new machinery for collection that was adopted in 1866, for though the Excise Officers were not agriculturalists, and though they were acting only as agents of the Board of Trade, they were paid officials of the central government and did not refuse to collect returns, as did the Boards of Guardians.² Furthermore precautions had been taken to secure estimates in default of returns, so that statistics of a kind were obtained from all known occupiers, and not only from those who could be persuaded to fill in a schedule or give the details of their holdings to the Collecting Officer.³ For these reasons, and because the returns were uniform for the whole country, the 1866 returns are probably more accurate and complete than their predecessors.

¹ *Agricultural Statistics of Scotland*, 1854, *loc. cit.*, pp. 3-5; 1855, p. 3; 1856, p. 5; also Lords' Committee, evidence of Hall Maxwell, Question 59; and *Reports of Poor Law Inspectors*, pp. 75, 76, 79.

² Some difficulties did arise later. See Minute of Board of Inland Revenue, 23 June 1892, as to proposed refusal to collect Agricultural Statistics. Excise officers continued to collect the returns until 1919.

³ In 1854 specific instructions were given that estimates should be made where no return could be obtained (*Reports of Poor Law Inspectors*, p. 18), though no procedure seems to have been laid down; in general, however, estimates were not made, and the returns prior to 1866 are therefore less complete.

(To be continued)

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