

The English Dairy Industry, 1860-1930: the Need for a Reassessment

By DAVID TAYLOR

"The cow is a walking beatitude . . . we could not run history well without her."—T. SWANN, *Agricultural Gazette*, xxii, 1885, p. 471

WRITING in 1938, Viscount Astor and Seeborn Rowntree considered milk to be "the most important product of British Agriculture . . . far more truly the cornerstone of our agriculture than wheat,"¹ while some thirty years earlier John Prince Sheldon, an authoritative and exhaustive writer on dairying matters, had proudly drawn attention to the "exalted position which dairy farming fills today as compared with forty years ago."² These claims can be substantiated with relative ease. In an appendix to a well-known article, T. W. Fletcher gave his revised version of Ojala's estimates of the structure of gross agricultural output in England in the latter years of the nineteenth century.³ These figures show that in the period 1867-71 to 1894-8 the contribution of wheat to gross output fell from 21.9 per cent to 6.8 per cent, whereas that of milk rose from 11.9 per cent

to 18.1 per cent. By the end of the nineteenth century milk had emerged as the most important single item sold off English farms. During the first three decades of the twentieth century this position was more than consolidated. According to official estimates dairy produce accounted for 20.0 per cent of gross agricultural product in 1908, 25.6 per cent in 1925, and 27.1 per cent in 1930-1.⁴ The relative importance of the dairy industry is further illustrated in table 1.

For the consumer, as well as the producer, milk became of increasing importance during the period. Roughly speaking, the total consumption of milk increased from some 170 million gallons in 1861 to just under 600 million gallons by the turn of the century, and reached over 830 million gallons by 1931. *Per capita* consumption also rose from 9 gallons a year to 15, and finally to 22 gallons in the same years.⁵

TABLE I

THE STRUCTURE OF GROSS AGRICULTURAL PRODUCT IN ENGLAND AND WALES, 1930-1

Commodity:	Liquid milk	Other dairy produce	Beef and veal	Mutton and lamb	Total crops
Value (£M)	47.5	7.7	29.9	15.6	33.2
% of total (including horticultural produce)	23.4	3.8	14.6	7.7	16.4

Source: B.P.P. 1933-4, xxvi, pp. 57-8.

¹ Viscount Astor and B. S. Rowntree, *British Agriculture*, 1938, p. 251.

² J. P. Sheldon, *British Dairying*, 1908, p. 68.

³ T. W. Fletcher, 'The Great Depression of English Agriculture, 1873-96', *Econ. Hist. Rev.*, 2nd. ser., xiii, 1961, p. 432.

⁴ B.P.P. 1927, xxv, pp. 76-7; B.P.P. 1933/4, xxvi, p. 39.

⁵ In the absence of reliable statistics the question of changing demand for milk is a complex one. The figures given here are "guesimates" based on several contemporary sources and on calculations of total yields of the national herd. I hope to discuss the question more fully in a further article.

From these few figures there can be little doubt about the importance of the dairy industry. Yet when one turns to the various works on English agriculture one is struck by the lack of balance that characterizes the treatment of the subject. Livestock farming generally is underwritten, while dairy farming scarcely receives more than passing reference.

I

Nowhere is this neglect of dairying more apparent than in the general economic histories of the period. In the one book attempting to deal statistically with long-term economic growth, P. Deane and W. A. Cole have only two references to dairy produce, both relating to the increase in imports of butter and cheese.¹ Beyond that there is no mention of dairying in relation to the changing structure of English agriculture in the later stages of industrialization. W. Ashworth runs to five references, three of which talk of the import of cheese and butter.² The other two refer to the increased demand for milk and meat, and their limited consumption by the poor. However, he does suggest that "in real terms people engaged in producing meat or milk for nearby urban markets probably suffered no worsening of their economic position."³ This point had been made earlier by G. P. Jones and A. G. Pool, who having outlined the movement in milk prices (but not of production costs), refer to the increasing demand for milk in general.⁴ However, less than ten lines in a twenty-page chapter is hardly an accurate reflection of the position of the dairy industry. Similarly, J. D. Chambers has very little to say about dairy farming after Repeal, except that it "was beginning to respond to the growth of knowledge of scientific feeding for milk production."⁵ R. S. Sayers, looking at the years 1880-1939, has a little more to say, but, beyond the mention of Scots in Essex, increased imports of dairy produce, and the growth of

the rail-borne milk trade, there is only the view (unsupported by any figures) that "only milk remained generally profitable."⁶ In the most recent general economic history of Britain, P. Mathias, relying upon certain well-known articles to buttress his own work on retailing, goes some way in acknowledging the importance of dairying, but such is the state of knowledge that only a brief coverage is given. Nor does the position improve significantly as one moves on to the 1920's.⁷ S. Pollard has only one reference to dairy farming.⁸ Concerned primarily with the establishment and work of the Milk Marketing Board, he gives an outline survey of trends in the 'twenties without ever getting to grips with the subject. By implication he suggests that conditions were satisfactory until the slump in world prices of cheese and butter—an argument that ignores two of the basic problems facing the dairy industry during that decade, namely stagnating demand and an oversupply situation intensified by new sources of supply on the chalklands. D. H. Aldcroft, in a book devoted to the inter-war years, can manage nothing more than one reference to a "significant" but unquantified increase in the consumption of dairy produce in the period 1909-14 to 1934-8, and another referring in general terms to protection offered to the economy in the 1930's—measures that included milk.⁹

It would, however, be grossly unfair to suggest that this neglect is in any way deliberate. To a large extent it is no more than a reflection of the limited coverage given in agricultural histories. It is a serious criticism of agricultural historians in Britain that, in their published works at least, very few have accorded dairy farming the recognition it deserves. Lord Ernle's *English Farming: Past and Present*, for long the standard text of students of English agricultural history, contains less than a dozen references to dairy farming in the period under review. In the well-known chapter xvii, *High*

¹ P. Deane and W. A. Cole, *British Economic Growth*, Cambridge, 1962, pp. 32, 74.

² W. Ashworth, *An Economic History of England*, 1960. ³ *Ibid.*, p. 67.

⁴ G. P. Jones and A. G. Pool, *A Hundred Years of Economic Development*, 1966, p. 208.

⁵ J. D. Chambers, *The Workshop of the World*, 1968, p. 58.

⁶ R. S. Sayers, *A History of Economic Change in England 1880-1939*, 1967, p. 110.

⁷ P. Mathias, *The First Industrial Nation*, 1969, pp. 345-7.

⁸ S. Pollard, *The Development of the British Economy, 1914-1967*, 1969, p. 140.

⁹ D. H. Aldcroft, *The Inter War Economy: Britain, 1919-1939*, 1970, pp. 349, 368.

Farming: 1837-1874, the only reference declares that "during the period . . . little attention was in England paid to improvements in dairying."¹ However, we are told that, for the years 1890 to 1910, "the chief development . . . was concerned with milk, the demand for which was continuously increasing with the growing population and industrial prosperity."² A brief consideration, however, of the relevant pages of *Agricultural Statistics* suggests in numerical terms growth in the English dairy industry was more striking before 1890 than after. Even taking into account the higher yields obtained by the end of the nineteenth century the years 1890 to 1910 are not characterized by any marked increase in production. The only obvious improvement was in relation to the quality of milk (though even here it was more a case of greater awareness rather than greater effective action), a point which Ernle makes at a later stage. He also mentions such technical advances as the barrel churn, coolers, and separators but there is little attempt to assess their impact. It can be argued that improved butter churns and sophisticated cream separators were largely irrelevant to the English dairy farmers of the late nineteenth century, simply because the majority had abandoned cheese- and butter-making for the easier and more profitable liquid-milk trade. Equally, though one cannot deny Ernle's statement that dairy breeds were improved, it remains true that the crucial breakthrough came much later in the twentieth century when increased knowledge of genetics made it possible for farmers to abandon essentially hit-and-miss methods and move to the greater certainty of purpose-bred animals. Certainly in the late nineteenth century much of the increased yield of the national dairy herd came from more cattle being milked for more days a year, rather than from increases in daily yields per cow.

Ernle's comments on the profitability of dairying are also unsatisfactory. He makes a general statement to the effect that "the English dairy farmer could get a better return by selling milk and abandoning the butter market to their foreign and colonial competitors."³

The statement, though open to some qualification, is basically sound, but there is no indication of the relative prosperity of the various branches of the dairy industry, nor of the reasons for the changes in prosperity, nor yet of the type of person involved in the changes.

The treatment of the 1920's is scarcely more satisfactory. Hosier's bail system was important, but we are not told how widespread this system was, nor how successful it proved to be. The advent of the milking machine, similarly, is not treated in a sufficiently rigorous manner. There were crucial technical and economic constraints on its widespread adoption. It should be remembered that well under 10 per cent of all herds, and of all cows, were machine-milked before 1939. The overall judgement on the period—instability resulting from increased supply and stagnating demand—appears correct as far as it goes. But compared with the detailed study bestowed on arable farming it does not go far enough.

The same criticisms can be applied to a lesser extent, to the other standard text by C. S. Orwin and E. H. Whetham.⁴ The coverage of dairy farming is more comprehensive, though the treatment is predominantly descriptive. The shift from cheese-making to milk-selling receives more attention than in most accounts (though it can be argued that in view of this change the amount of space devoted to cheese-making is disproportionate to its importance), but the supporting evidence is somewhat weak. Morton's estimate of the disposal of milk in the 1870's is quoted without qualification, even though Morton himself had doubts about the validity of his figures, based as they were on a very limited, and hardly representative, sample.⁵ This initial estimate is not easy to check in view of the limited amount of data available. However, two points deserve to be made. First, the overall estimate of the size of the dairy industry is probably too high. Morton's evidence came from above-average farms and it is significant that, writing some ten years later in collaboration with James Long, after more detailed work Morton lowered his estimate of net average yields

¹ Lord Ernle, *English Farming: Past and Present*, 6th edn., 1961, p. 375.

² *Ibid.*, p. 389.

³ *Ibid.*

⁴ C. S. Orwin and E. H. Whetham, *History of British Agriculture, 1846-1914*, 1964.

⁵ *Ibid.*, p. 148.

from 370 gallons per annum per cow and heifer in milk or in calf to 320 gallons without suggesting that there had been any deterioration in the interim. Second, the nature of the evidence tends to impart a bias against the small dairy farmer making and selling butter and cheese in the local market.

The one attempt to evaluate the contribution from dairying relies entirely upon twentieth-century figures. Without denying the immensity of the data problem it is possible, none the less, to piece together scattered evidence to give an approximate view of events. Thus, though the 1908 census of output is the first attempt at a national survey, one can put the information on dairy farming into some perspective by the careful use of such material as that collected by Henry Rew and published in the *Journal of the Royal Statistical Society* for 1892, as well as the many writings, dating from the 1880's, of Morton and Long.

When looking at the profitability of the various branches of the dairy industry, Orwin and Whetham give only a slight indication of the position. Gibbons's estimate of the returns to cheese, butter, and liquid milk in Derbyshire in the late 1870's is a useful piece of evidence, but it is necessary to know how relevant the information is for Derbyshire, as well as for England as a whole.¹ Further, one piece of evidence cannot indicate changes over time. Without underestimating the problems involved in calculating the cost structure of the industry one can suggest general outlines, though these have to be modified in the light of particular local variations. The most readily available price data relates to London. This is obviously not typical but, if it is remembered that the fall in milk prices is probably exaggerated, the data can be used with caution. Production costs cannot be measured with accuracy but changes in the price of feed and labour give a good approximation. Briefly my research suggests that milk-selling retained its profitability after the heady days of the 1860's and 1870's because production costs fell more than prices. This is not to

say that there were particular years in which oversupply proved disastrous, nor is it to say that profit margins were uniform throughout the period, but it does seem that even in the bleak years of the early 1890's milk-selling, as a long-term prospect, remained profitable.

TABLE II
COST OF PRODUCTION AND LIQUID-MILK
PRICES IN LONDON (1861-70=100)

	London milk price index	Feed/wage index
1871-80	123.7	107.9
1881-90	92.8	78.9
1891-1900	81.6	80.3

Source: Calculated from figures in D. Taylor, *The Development of English Dairy Farming c. 1860-1930*, unpublished Oxford D.Phil. thesis, 1971, pp. 208-9.

However, in other respects the sections on dairying provide a valuable service. In particular the emphasis upon regional variations, and upon the numerous combinations of produce found under the heading of dairying, provides a useful corrective against talk of the English dairy industry as if it were a uniform structure throughout the country. None the less, there remains a sense of disappointment, particularly as Miss Whetham wrote a useful article on some aspects of the London milk trade at the same time.² In a dozen pages packed with information she emphasizes the importance of the railways, particularly after 1865-6, and of cooling depots, in enabling farmers to respond to the favourable trend in milk prices. However, there are certain criticisms that can be made. First, the role of the railways before 1865 is probably understated. Second, insufficient attention is paid to fluctuations in the trade in the late nineteenth century. Third, the question of demand is not examined in detail. More generally, though this cannot be considered a criticism of the article, it is only the London milk trade that is under discussion.³ In

¹ Orwin and Whetham, *op. cit.*, p. 149.

² E. H. Whetham, 'The London Milk Trade, 1860-1900', *Econ. Hist. Rev.*, 2nd. ser., xvii, 1964, pp. 369-80.

³ D. Taylor, 'London's Milk Supply, 1850-1900: A Reinterpretation', *Ag. Hist.*, xlv, 1971, pp. 33-8.

a paper published in 1970, Miss Whetham takes the story up to 1930.¹ Even more strongly than in the first paper she stresses the role of legislation in improving the quality of the milk supply, and thereby stimulating demand (though it should be noted that for other reasons demand for milk was stagnating during the 1920's). Unfortunately, the coverage of the 1920's is confined to little more than one page, resulting in a limited, descriptive treatment. In many respects the period is better covered by Ruth Cohen, writing almost a quarter of a century earlier.² Although her *History of Milk Prices* cannot be considered as a comprehensive history of the dairy industry, it does provide a valuable starting-point with its detailed study of price levels in the various branches of the industry.

Dairying away from the London market has not been given much attention. J. T. Coppock's article on the Chilterns³ gives some indication of the changes that took place in the last quarter of the nineteenth century, but the only attempt at evaluating the profitability of livestock farming in general, and dairying in particular, is T. W. Fletcher's article on Lancashire.⁴ Complementing his more general article it spelt out in detail the advantages that the dairy farmer could exploit. Between the late 1860's and the end of the century the population of Lancashire increased by roughly 50 per cent. *Per capita* milk consumption increased by 25 per cent, while overall demand, he calculated, rose by almost 90 per cent. All in all, milk prices stayed remarkably stable except during the depression of 1883-6 and the hard years of the early 1890's. Moreover, the profitability of milk production became even more apparent during the 1890's when the price of local butter and cheese fell markedly for all but the highest-quality make. The shift to liquid-milk production was strengthened by two further factors. First, a marked fall in rail transport costs took place. Second, the cost

of feed—oats, maize, oilcake—fell by some 40 per cent, while savings were made on labour costs by reducing the numbers of paid workers and increasing the amount of family labour. Not surprisingly the amount of liquid milk produced and sold in Lancashire increased by over 50 per cent, while the quantity of milk imported into the country rose by well over 100 per cent. In these two articles Fletcher went a long way towards redressing the balance that had not existed in earlier writings.

Lastly, one must consider three books devoted specifically to the dairy industry. Of these the most disappointing is the popular history written by A. Jenkins to celebrate fifty years of the National Milk Publicity Council.⁵ Claiming to be "the first history of milk and the dairy industry to be made available to the general public," it tends to be a series of chatty reminiscences rather than an analytical history. Far more useful in terms of information is V. Cheke's account of cheese-making in Britain.⁶ While giving a detailed account of one aspect of the dairy industry it is open to the criticism of failing to set its subject in a more general setting of change affecting both dairying and the agricultural sector at large. Finally, one has G. E. Fussell's work on the dairy farmer in the years 1500 to 1900.⁷ For wealth of detail the book is unrivalled and it has proved of immense value to later attempts at analysing aspects of the industry. In view of the wide time-span covered, however, Fussell has been unable to realize the full potential of his work. By concentrating on a shorter period it is possible to provide a more rigorous analytical framework. In particular, one can distinguish between the types of dairy farming, and differentiate between the varying conditions over the country at large. The importance of local conditions should be stressed. There were, for example, several instances of strong local demand for particular cheeses. Lancashire cheese sold well in the industrial towns of the county (a point

¹ E. H. Whetham, *The London Milk Trade, 1900-1930*, University of Reading, 1970.

² R. Cohen, *History of Milk Prices*, 1936.

³ J. T. Coppock, 'Agricultural Change in the Chilterns, 1875-1900', *Ag. Hist. Rev.*, ix, 1961, pp. 1-16.

⁴ T. W. Fletcher, 'Lancashire Livestock Farming during the Great Depression', *Ag. Hist. Rev.*, ix, 1961, pp. 17-42.

⁵ A. Jenkins, *Drinka Pinta: The Story of Milk and the Industry that serves it*, 1970.

⁶ V. Cheke, *The Story of Cheesemaking in Britain*, 1959.

⁷ G. E. Fussell, *The English Dairy Farmer, 1500-1900*, 1966.

not stressed by Fletcher). Caerphilly was made in Somerset for the miners of South Wales, while Wensleydale found a steady market in the north-east of England. In each case the general downward trend in the quantity of cheese made on the farm was offset, to varying degrees, by local conditions. Similarly, important local variations in the price of milk were not uncommon before 1914. It would be an exaggeration to suggest that there was no such thing as a national market for milk by the late nineteenth century but interregional differences could be considerable. For example, in 1900 the average retail price of milk was 3d. a quart. However, prices could vary from 2½d. in such areas as Keighly, Colne, and Nelson, to 4d. a quart in Liverpool, Manchester, London, and the surrounding counties of Surrey and Middlesex. Overall Fussell's book, while providing much information, disappoints because of its sweeping approach. A review of the work reflects the overall state of knowledge on the subject. "It would be useful," it observed, "to command a convincing analysis of the economic and social constraints, and rigidities, which are likely to have determined progress" in dairying.¹

II

As a result of this neglect of the dairy industry there is a range of questions to be asked, often of an elementary nature. One would like to know more precisely the dimensions of the industry, and the size of its output. The task is not an easy one as before 1865 there are no official figures, and some of the estimates from contemporary sources are highly suspect. Even after 1865 problems persist, for there is no accurate definition of the national dairy herd. "Cows and heifers in milk or in calf" is only an approximation. Further, the popularity of the dual-purpose Shorthorn renders impossible any clear-cut distinction between dairy and beef cattle. Secondly, a more detailed study is needed of the structural changes that took place within dairy farming. The transfer of resources from cheese- and butter-making to liquid-milk production is well known, but the chronology of change has been left somewhat vague, while the precise size of the

various branches of the industry at any given time during the period is not known. The geography of change is easier to ascertain but even here regional differences have been blurred in the generalizations of historians.

Equally important questions need to be applied to the demand side of the industry. Very little is known of *per capita* consumption of dairy produce, particularly in the nineteenth century. In general terms there was a gradual change in the dietary pattern of the nation during the years after 1850; in particular, there was an increase in the consumption of liquid milk. However, having defined the change, there remains the larger problem of explaining the interaction of factors bringing about the change.

Looking more specifically at the dairy farmer, other questions present themselves for consideration. It is commonly asserted that dairying, or more precisely milk-selling, remained profitable throughout the period. However, the truth of this statement must be thrown into doubt when subjected to closer scrutiny. The 1870's and 1880's were years of large-scale expansion in the liquid-milk trade but the outcome in certain areas was a state of overproduction which, coupled with the disastrous seasons of the 1890's, left some dairy farmers, especially those supplying milk on contract to London, in dire straits; a point not fully appreciated by later observers. Overall, the reduction in the cost of feed, and lower rents, must have benefited the dairying community at large, particularly the new arrivals, but it is important to consider the problems of changing conditions of labour supply, wholesalers' monopolies, and general price fluctuations before arriving at any conclusions on the varying prosperity of dairy farmers.

Although profitability is of prime importance, one must also look at the question of productivity. It is often stated that dairying was the laggard sector of English agriculture. In comparison with other branches of rural life where machinery was ever-encroaching, the dairy appeared backward in its use of traditional implements and utensils. Yet advances were made. Better feeding, better care,

¹ E. J. T. Collins, *Ag. Hist. Rev.*, xvi, 1968, p. 68.

and better breeding raised the quantity and quality of milk produced.

Consideration of technical change leads to the last major set of questions to be posed. How responsive was the English dairy industry? and what type of person was involved in the process of adaptation? With the benefit of hindsight one might conclude that the striking feature of the years 1860 to 1930 was not the speed of development but the lack thereof. Favourable demand conditions at a time of heavy competition in certain branches of agriculture could have led to an earlier and more decisive adoption of dairying by the English farming community. In practice, events did

not develop in such a straightforward manner. The problem of identifying and responding to permanent change is always easier in retrospect: however, the barriers to change have to be defined before tackling the question of who was actually responsible for the changes that took place.

Some of these questions cannot easily be answered, but there is sufficient material in the pages of the agricultural press, between the covers of official reports, and within the mass of farm records to provide a more than adequate basis from which a more balanced account of agricultural developments in England may be given.

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