

MARKETING ANIMALS AND ANIMAL PRODUCTS IN LONDON'S HINTERLAND *circa* 1300

Margaret MURPHY and James A. GALLOWAY*

Summary

This paper presents some provisional results from the "Feeding The City" project at the Centre for Metropolitan History, London. It is based on an analysis of a database comprising information from 421 demesne accounts concerning 189 manors in 10 counties surrounding London in the period 1290-1315.

In order to assess the different factors governing the marketing of animals from seigneurial estates, the numbers of manors selling different animals and animal products have been plotted on six histograms, animals being sub-categorised by age and sex. This goes some way to establishing whether the animals are being sold for food or for other reasons.

The average price per head of a range of animals is also presented in tabular form allowing study of their relative economic importance. The pig emerges as a highly valued animal, the mean sale price being twice that for an adult sheep and 2.5 times that for a calf.

The spatial dimension of marketing in the metropolitan hinterland is discussed using the examples of calves, pigs and dairy produce. The evidence suggests that estate management policies, manorial working practices and transport considerations are among the most important influencing factors.

Résumé

Commerce des animaux et des produits animaux dans l'arrière pays de Londres autour de 1300 après J.-C.

Cet article présente des résultats provisoires du projet "Feeding the City" du Centre for Metropolitan History de Londres. Il dérive d'une base de données qui comprend des informations prises dans quelques 421 comptes domaniaux et concernant les affaires de 189 manoirs en 10 comtés de la région londonienne, pour la période 1290-1315.

Afin de préciser les divers éléments qui portaient sur le commerce d'animaux provenant des domaines seigneuriaux, on a présenté, en six histogrammes, le nombre de manoirs vendant divers animaux et produits animaux, les animaux étant sous-classées par âge et sexe. De cette manière on peut dans une certaine mesure estimer si les animaux étaient destinés à être vendus pour l'alimentation ou pour d'autres fonctions.

Les prix moyens par tête d'une gamme d'animaux, présentés en tableaux, nous permettent d'examiner leur importance économique relative. On constate la valeur attachées aux porcs, dont le prix de vente moyen atteint le double de celui des moutons adultes et 2.5 fois celui des veaux.

Les aspects spatiaux de la vente dans l'arrière-pays de la métropole sont examinés à partir d'informations concernant les veaux, les porcs et les produits laitiers. Les résultats suggèrent que les stratégies de gestion domaniales, les pratiques du travail aux manoirs et les considérations de transport étaient, dans ce contexte, parmi les éléments déterminants les plus importants.

Key Words

London, Medieval, Agriculture, Trade, Animals

Mots clés

Londres, Moyen Age, Agriculture, Commerce, Animaux

This paper presents some provisional results from the "Feeding The City" project currently in its third year in the Centre For Metropolitan History, London 1. The project's aim is to evaluate the impact of medieval London on its agrarian hinterland around the turn of the

fourteenth century, working on the basic hypothesis that major cities impose structures of specialized production on their hinterlands. That medieval London was a major city is clearer now than ever with recent estimates putting the pre-Black Death population at 80,000-

* Centre for Metropolitan History, University of London Institute for Historical Research, 34 Tavistock Square, London WC1H 9EZ.

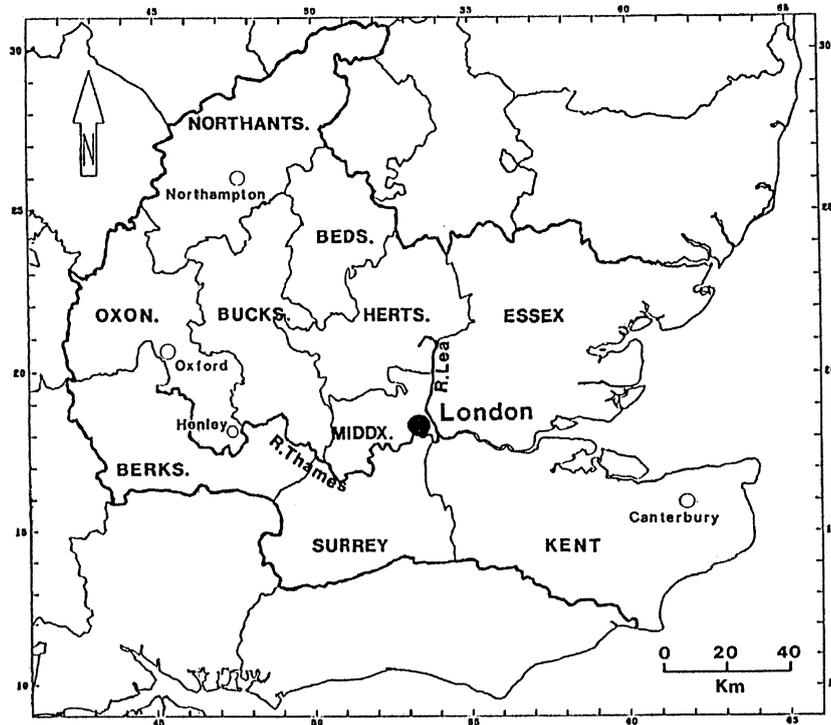


Fig. 1 : "Feeding the City" study area.

100,000 (KEENE, 1984, 1985). This substantial urban population had to be fed, sheltered and kept warm, thereby placing considerable demands on its agrarian hinterland.

The project therefore seeks to identify the ways in which responding to these demands shaped the rural economy of southern England. Our study area (defined in fig. 1) comprises 10 counties around London, an area large enough to contain contrasts in soils, topography, access to markets and transport networks but sufficiently compact to enable detailed work to be carried out. It is in no way intended to define the limits of the area from which medieval London drew its supplies ; this latter undoubtedly extended throughout the British Isles and beyond.

The study area is of course not an "isolated state" ; it contains other urban centres, demand from which must in turn have had an impact on surrounding areas. However, in our period few of these towns, possibly only Canterbury and Oxford, seem likely to have approached populations of 10,000.

The period c. 1300 which corresponds to the time of London's peak medieval population is also one which is

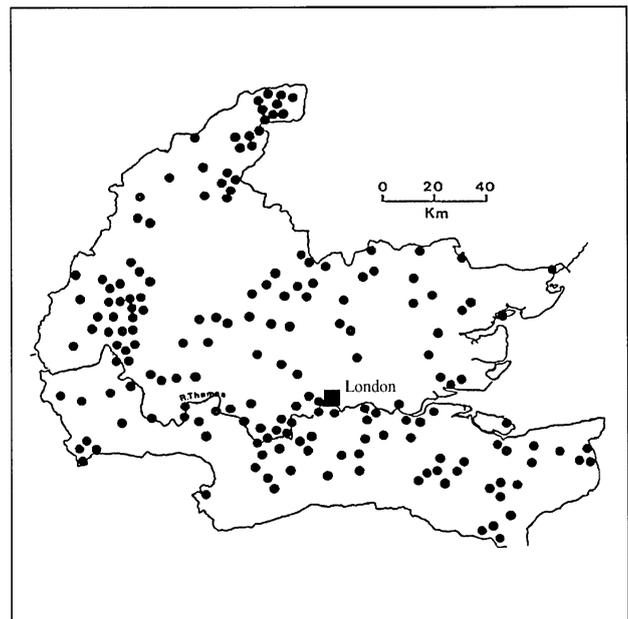


Fig. 2 : Location of database manors, 1290-1315. (This map indicates the general distribution of evidence : manors very close to each other are represented as a single point.)

very well served by surviving documentary material. There are numerous records which can be utilised for the study of patterns of urban consumption - market ordinances, borough court rolls, records of assize etc.- but by far the best type of record for the study of rural production is the demesne account roll. The demesne was that part of a manor which was held and worked directly by or on behalf of the lord. In the thirteenth and fourteenth centuries it was usual for a manorial official to render a yearly account detailing the incomings and outgoings of the manor during the year - harvests and births, disposal of crops and mortality of animals, sales and purchases. These *compoti* are thus extremely detailed documents which deal with all aspects of seigneurial agriculture (HARVEY, 1984).

One of the project's databases contains information from demesne account rolls for manors in the study area in the 25 year period 1290 - 1315. This database currently contains data from 421 accounts representing 189 different manors whose location is mapped in figure 2.

The policy for selecting documents from the large numbers which survive has been to try to get three accounts for each manor from the beginning, middle and end of the 25 year period. This has proved possible for about 50% of the manors. Data collection is continuing and the complete database should contain around 500 accounts representing just over 200 manors. The coverage, for a medieval source, is remarkably good. There is a tendency for clusters of manors to occur in certain areas and there are also some gaps. The latter are in part explicable by geographical features but, often, as is the case in Bedfordshire and much of north Buckinghamshire, are due to lacunae in the survival of evidence. From these 421 accounts just under 5,000 pieces of information relating to sales of animals and animal products have been collected and it is this body of data which will be analysed in this paper.

In most cases the accounts give the numbers of animals and quantity of their products sold with the prices obtained. Frequently some indication is given as to the condition of animals, and in about 20% of cases information is given relating to the time of year of the sale. The place of sale is unfortunately rarely given for livestock, being encountered marginally more frequently with reference to grain sales. Sales range from the commonplace meat animals to the more exotic swans and conger eels and products such as peacock's tails. Clearly we are dealing with a highly developed and cash-based economy where every conceivable type of animal or animal product found its way onto the market

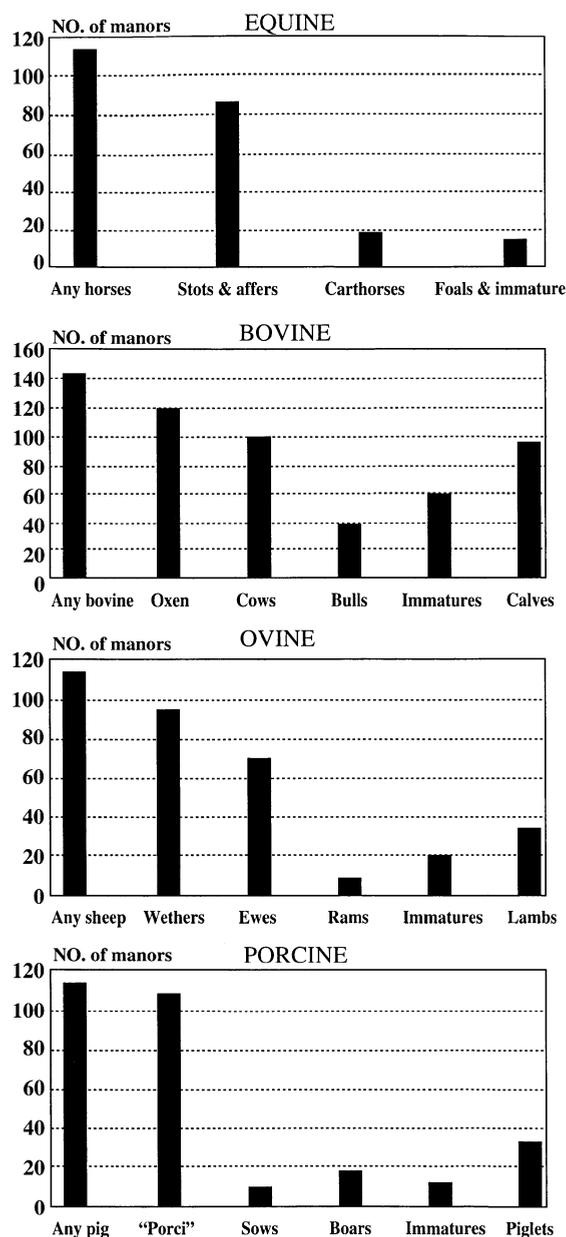


Fig. 3 : Number of manors selling animals from the equine, bovine, ovine and porcine categories (sample size : 189).

at some time or another. The extent to which different animal types or products entered commercial exchange was however variable and was profoundly influenced by the working practices of medieval manors.

A relatively straightforward way to represent the varying "marketability" of animal types is to compare the number of manors out of the sample of 189 selling

each (see fig. 3). The animals have been classified into 4 categories with the first column in each histogram representing manors selling any animal, adult or juvenile, male or female, from the species or type and the remaining columns representing various age and sex subcategories.

It can be seen that, overall, bovines are the most commonly sold category and that within categories it is the bovine that has the greatest spread of sales, with significant numbers of manors selling immature animals and calves as well as adults. This reflects firstly the fact that oxen at this period remained the most important and widespread source of traction, despite the growing use of horses in plough-teams, and secondly the fact that breeding of bovines was less specialized than was the case with horses or sheep. In other words most manors replenished their bovine herds internally ; fewer did this with sheep and much fewer with horses. In our study area there are a small number of horse breeding manors where it is clear that a strategic decision had been made to engage in this specialized and time-consuming but potentially lucrative activity.

Certain non-market factors influenced numbers of each type sold. One was the re-classification of animals by manorial officials. Therefore, although 128 or 68% of the manors had carthorses on the demesne only 19 sold carthorses. This can largely be explained by the fact that carthorses were frequently re-classified as "stots" or "affers" when they were no longer used to draw the manorial carts and were put to ploughing or harrowing 2. Also, individual manors would have fewer carthorses than plough horses so one would expect them to appear less frequently in market transactions. These two considerations likewise apply to bulls, rams and boars with the majority of manors having two at most of these types and frequently reclassifying them when they had reached the end of their breeding potential.

To what extent can we assess whether animals were being sold for food or for other purposes ? In the case of horses we can be fairly sure that they were not being sold for human consumption. The taboo on eating horseflesh was quite rigorously adhered to in medieval England. There is no mention in the 421 demesne accounts of horses being slaughtered and this is further substantiated by the work of other historians and archaeozoologists (LANGDON, 1986 : 263-4 ; GRANT, 1984 : 181). About half the stots or affers sold were described as being old, worn-out or sick, so the assumption is that they were no longer any use to the manor which replaced them with younger, fitter

animals. They were perhaps sold to smaller landholders who might try to get another year or two's work from them or they might have been sold to the medieval equivalent of "knackers".

In contrast the majority of sales from the porcine category can be fairly confidently said to be for the table. The overwhelming dominance of *porci*, non-breeding "porkers", in the sales reflects the single-use nature of the porcine category.

However, in the bovine and ovine categories where animals yield a variety of products in addition to meat, one can rarely be sure where sale animals end up. Again, a large number of sales of adult bovines and ovinnes are said to be of worn-out or old animals. It is clear that oxen were sold both as working animals surplus to the manor's requirements and as fattened ex-work animals for slaughter. A study of cattle bones from a Winchester excavation noted a high incidence of injuries to the hip joints of adults, consonant with their having been used for tractive purposes over long periods of time (BROTHWELL, 1981 : 239). It is likely that manors were following the advice of medieval writers such as Walter of Henley and fattening up older animals on good pasture land prior to sale for the table (OSCHINSKY, 1971 : 274, 284, 330-1, 336-7). Certainly this was a policy followed on the manors of Christ Church Canterbury in the early fourteenth century (SMITH, 1943 : 214).

The high number of manors selling calves and immature bovines is noteworthy. Manors specialising in dairy production might be expected to have a surplus of calves for sale, either to other manors or for consumption. Veal was certainly consumed in the Middle Ages, but probably featured more regularly on

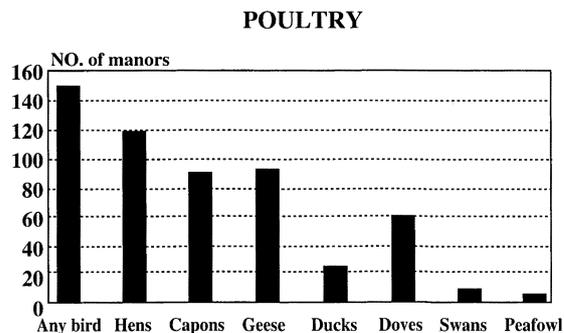


Fig. 4 : Number of manors selling poultry (sample size : 189).

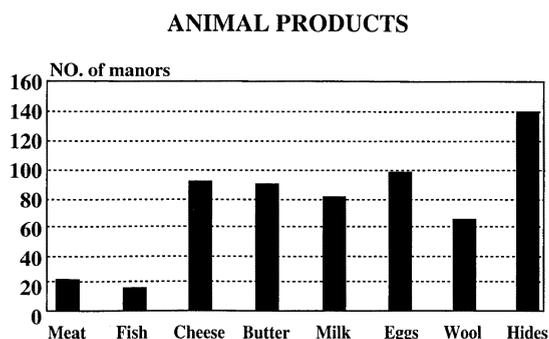


Fig. 5 : Number of manors selling animal products (sample size : 189).

the tables of aristocrats and the religious than those of townsmen ; on some manors of Battle Abbey about a quarter of the calves were slaughtered each year for food (SEARLE, 1974 : 300).

Again, it can be seen that about a quarter of the manors sell lambs or immature sheep, which might either remain within the agrarian economy or go for consumption. The prevalence of juvenile sheep bones in thirteenth and fourteenth century urban sites in England implies a manorial policy of selling less healthy juvenile animals for meat, leaving the better animals for wool and milk production (GRANT, 1988 : 153). More detailed analysis of the documentary evidence relating to juvenile categories in all four major animal types is needed to clarify these issues.

In terms of the numbers of manors engaging in their sale, poultry form one of the most commercialised sectors of the manorial economy. Figure 4 shows that nearly 150 of the 189 manors sell some type of bird, with hens being the most common followed by geese, capons and ducks. Geese may have been relatively more important in urban than rural diets, and were capable of being driven to market (GRANT, 1988 : 163). Dovecots occur on the majority of demesnes, providing birds for the lord's table and, in nearly a third of manors, a surplus for sale. Swans and peafowl, in contrast, were symbols of status and rarely entered into market exchange, occurring more commonly as aristocratic gifts.

In figure 5 the numbers of manors selling a variety of animal products is shown. Relatively few manors sold meat, implying the importance of middle-men in urban food supply. Fish sales are also rather uncommon, and

are dominated by eels from manorial mill-ponds. In contrast dairy products were sold by a much larger number of manors, as were eggs. Estate policies favouring centralised sales of wool are reflected in the fact that only 62 manors appear selling wool fleeces. A further 60 manors sent their fleeces to central collection points (eg. Wolvesey in the case of the Bishop of Winchester's estate) and sold only the by-products of the shearing process themselves. Hides from animals which had been slaughtered or had died of natural causes form one of the most commonly encountered sales, and can sometimes be linked to urban tanning in such places as Cambridge and smaller towns like Coggeshall in Essex.

From the approximately 5,000 recorded sales of animals and animal products mean prices can be derived. This is more straightforward in the case of animals than their products due to the lack of standardisation in the units of weight, size and volume used for the latter. Figure 6 illustrates the mean sale price per head of some of the more common animals in the period 1290-1315. All animals sold are used in these calculations, regardless of condition. Those described as "sterile" or "worn out" are included, and the prices therefore represent the real mean yield of money per head. They are not prices for ideal or "prize" specimens, which would in any case be atypical both of a manor's total stock and of the animals consumed in towns.

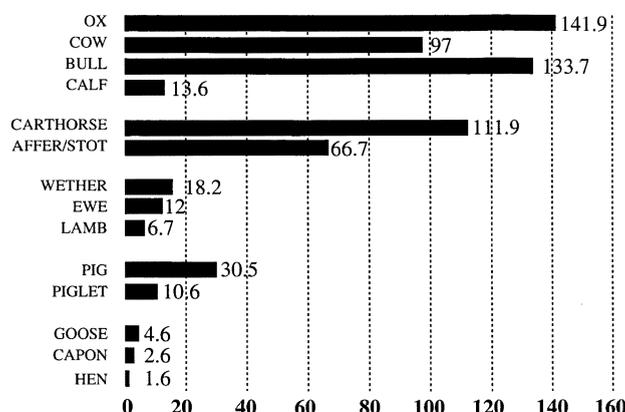


Fig. 6 : Mean sale price of animals (old pence).

Naturally, these mean prices conceal significant variations. Thus, the actual prices of calves sold range from 4d to 30d per head while carthorses range from 48d to 276d.

Nevertheless, certain points emerge clearly from the mean prices presented (fig. 6). Oxen are the most valuable animals, followed by bulls, and are worth significantly more than cows ; in part this must reflect their greater meat potential. Carthorses are worth much more than plough horses on average ; this is consistent with the year-by-year price data assembled by D.L. FARMER for the same period (FARMER, 1969). As we have seen, carthorses could be re-classified as stots or affers and set to ploughing ; this is not to say, however, that overall there may not have been real differences of size and strength between the two categories of horse. Archaeological evidence might shed light on this. Pigs emerge as strikingly valuable animals, the mean sale price of *porci* being twice that for an adult sheep and 2.5 times that for a calf. Similarly, the relative importance of the goose is indicated by its mean sale price which, at 4.6d per head, is over one-third that for a calf and over two-thirds that for a lamb.

In order to develop a fuller picture of the marketing of animals and animal products in the metropolitan hinterland it is necessary to consider the spatial dimension. The data contained in demesne accounts is well-suited to mapping, relating as it does to largely discrete and identifiable places. To exemplify the contrasting spatial characteristics which different animals and products may have, three maps are presented, showing places which derived significant income from sales of firstly calves, secondly pigs, and thirdly dairy products.

Figure 7 shows those manors which earned above average income from the sale of calves. Of the 189 manors in the sample 95 sold calves, and on these the mean income earned from calf sales was 100d. It can be seen that there is a concentration of manors earning over twice the mean figure in the south-east of our study area, in the county of Kent. The Kentish marshlands had strong links with the London livestock market in the seventeenth century, and this trade may well have had medieval antecedents (SHORT, 1984 : 281-5). Many, but not all, of the Kentish manors for which we have data belonged to the monastery of Christ Church in Canterbury, a progressive and market-oriented landlord (SMITH, 1943). The estate policies pursued by Christ Church contrasted strongly with those of Peterborough Abbey, whose priority was self-sufficiency rather than

Fig. 7 : Manors with above average income from the sale of calves (average = 100d).

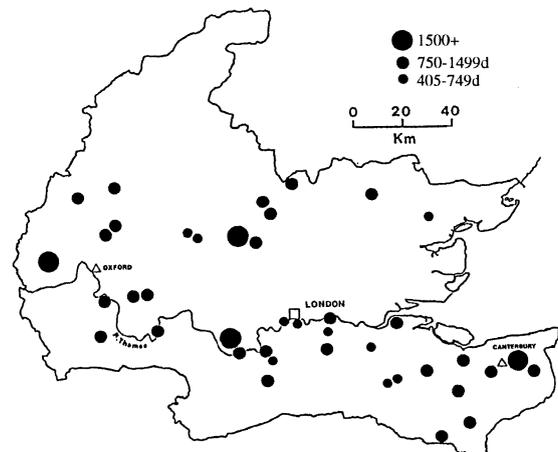
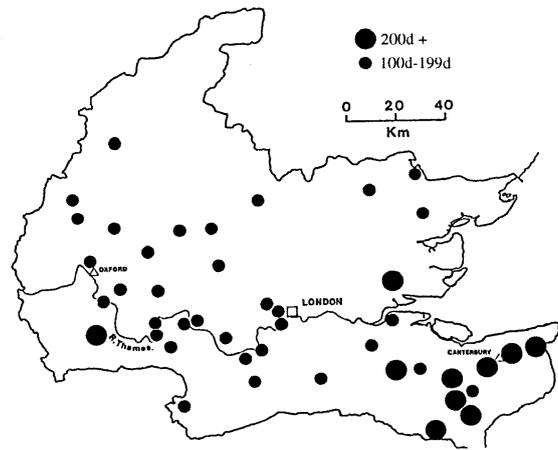


Fig. 8 : Manors with above average income from the sale of pigs (average = 405d).

maximisation of cash income (BIDDICK, 1989). This contrast is reflected in the absence of Peterborough manors from figure 7, despite the fact that 18 of them are incorporated in the database, most lying in the extreme north of the study area. Also notable is the broad band of manors with above average income from calf sales to the west of London, extending from close to the western suburbs of the metropolis, down the Thames valley and north into Oxfordshire and Buckinghamshire.

In figure 8, showing manors with above average income from sale of pigs, we see a rather different

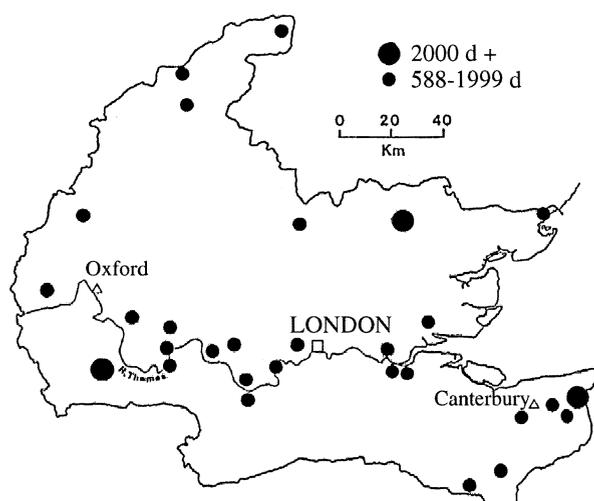


Fig. 9 : Manors with above average income from the sale of dairy produce (average = 588d).

pattern. In order accurately to reflect the range of values encountered three classes have been used. It should first of all be remarked that the second and third classes represent substantial amounts of income. The largest sales approach 3000d per annum at a period when a workman's daily wage was 1.5d. Pigs were clearly "big business" for the seigneurial class. The map appears to show a London grouping, perhaps directly supplying the metropolitan market, a Kentish or Canterbury grouping, a looser western grouping around Oxford, and a north-central or Hertfordshire grouping. It seems plausible to link these groupings of above average sales to concentrations of urban demand for pork, and perhaps to networks of supply based upon local markets and market towns.

In our third map (fig. 9) we are dealing with a commodity which, unlike the previous two, could not walk, or rather be driven, to market. This factor, that the bringing of dairy produce to market depends upon some

external mode of transport, shows up clearly in the distribution of manors with above average income from sale of cheese, butter and milk. While milk is perishable, and thus must be produced close to the place of consumption, cheese and butter, which together make up the vast bulk of dairy sales in cash terms, can be transported for considerable distances. The cheapest and most efficient means of carrying bulky goods in the medieval period was, of course, by water, and the impact of water transport is quite strikingly clear in figure 9. Manors with above average income from dairy produce are with few exceptions strung out along the river Thames above London, grouped around the Thames estuary, or otherwise close to the coast, all locations with ready water transport links to the metropolitan market.

Conclusion

While the interpretation of the results and maps so far available from the Feeding the City project must be tentative, and subject to future refinement or revision, certain significant factors can be seen to be emerging. It seems clear that in thinking about the marketing of animals and animal products in the medieval period, and of the links between urban consumption and rural production, various interposing factors must be kept firmly in mind. Amongst the most important of these are :

- i) the working practices of the medieval manor, which partly determined the point in their life-cycle at which certain categories of animals were most likely to be sold ;
- ii) the policies pursued by the estates, great and small, which dominated the rural scene, influencing the type and numbers of animals which came to market and the locations at which they did so ; and iii) the differing transportability of different animals and products, a key factor in the size and shape of urban market areas. It was the interaction of these factors with those of urban demand and local resource endowment which largely determined the emergence of zones or areas of specialized production and marketing.

(1) The results presented here are those that were available in November 1990. The "Feeding the City" project is supervised by Dr. D. Keene, Director of the C.M.H., and Dr. B.M.S. Campbell of the Queen's University, Belfast. It is funded by a grant from the Leverhulme Trust. We would like to thank John Power for his assistance in setting up the computerized database and Olwen Myhill for research and computer support.

(2) In the study area, both "affer" and "stot" are used to denote adult plough beasts. "Affer" is the more common term, denoting horses of either sex. The term "stot" which is used by 62 manors appears rarely, if ever, with reference to mares. In the thirteenth and fourteenth centuries, "stot" refers solely to horses, but it later came to be applied to young oxen (LANGDON, 1986 : 294-6).

Bibliography

- BIDDICK K. (1989) : *The Other Economy : Pastoral Husbandry on a Medieval Estate*, University of California Press, Berkeley
- BROTHWELL D. (1981) : Disease as an Environmental Parameter, in : M. JONES & G. DIMBLEBY ed., *The Environment of Man : the Iron Age to the Anglo-Saxon Period*, BAR British Series, 87 : 231-47.
- FARMER D.L. (1969) : Some Livestock Price Movements in Thirteenth-Century England, in *Economic History Review*, 2nd Series, vol. XXII, no. 1 : 1-16.
- GRANT A. (1984) : Medieval Animal Husbandry : the Archaeozoological Evidence, in : C. GRIGSON & J. CLUTTON-BROCK eds, *Animals and Archaeology : 4. Husbandry in Europe*, BAR International Series, 227 : 179-186.
- GRANT A. (1988) : Animal Resources, in : G. ASTILL & A. GRANT eds, *The Countryside of Medieval England*, Basil Blackwell, Oxford : 149-87.
- HARVEY P.D.A. (1984) : *Manorial Records*, British Records Association, Archives and the User, 5.
- KEENE D. (1984) : A New Study of London Before the Great Fire, in *Urban History Yearbook 1984*, Leicester University Press, Leicester : 11-21.
- KEENE D. (1985) : *Cheapside Before the Great Fire*, Economic and Social Research Council, London.
- LANGDON J. (1986) : *Horses, Oxen and Technological Innovation*, Cambridge University Press, Cambridge
- OSCHINSKY D. (1971) : *Walter of Henley and other Treatises on Estate Management and Accounting*, Oxford University Press, Oxford.
- SEARLE E. (1974) : *Lordship and Community : Battle Abbey and its Banlieu 1066-1538*, Pontifical Institute of Mediaeval Studies, Toronto.
- SHORT B.M. (1984) : The South-East : Kent, Surrey and Essex, in : J. THIRSK ed., *Agrarian History of England and Wales*, vol. 5, part 1, Cambridge University Press, Cambridge : 270-313.
- SMITH R.A.L. (1943) : *Canterbury Cathedral Priory : a Study in Monastic Administration*, Cambridge University Press, Cambridge.
-