The Economics of Horses and Oxen in Medieval England

By JOHN LANGDON

I

Despite some argument to the contrary, it has generally been assumed that the ox was the dominant draught animal in medieval English farming. This opinion is based mainly on demesne accounts, which show oxen as almost always outnumbering horses. This is particularly the case in the key matter of ploughing, where the horse seldom made much impression beyond its inclusion in the mixed plough-teams of horses and oxen popular on demesnes in the south-eastern part of the country. As expected, the horse was commonly used for hauling and harrowing, but, despite its theoretical advantages of speed, stamina, and longer life, total conversion to the animal for all facets of demesne farming was comparatively rare.

This state of affairs was reflected in the agricultural treatises of the time, which were firm in their preference for the ox, particularly as a plough-beast. The case was put most clearly in Walter of Henley's Husbandry, written towards the end of the thirteenth century. Walter admitted a possible advantage for the horse in ploughing stony ground where oxen would tend to slip, but countered the advantage of speed by saying that the 'malice' of the ploughmen would not allow the horse plough to go any faster than if it were pulled by oxen. He also pointed out that when ploughing hard or heavy ground the horse was almost useless, repeatedly coming to a standstill while the slower ox managed to pull through.

But the keystone to Walter's argument was economic: horses were simply more expensive to keep than oxen. They consumed more of the expensive fodder, oats, and cost more to maintain, particularly in shoeing. To prove his point, Walter drew up a crude comparison of costs, itemized in Table 1.

<table>
<thead>
<tr>
<th>TABLE 1</th>
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<tbody>
<tr>
<td>Walter of Henley's Horse/Ox Cost Comparison (per animal)</td>
</tr>
<tr>
<td><strong>Horses</strong></td>
</tr>
<tr>
<td>Oats (in winter)</td>
</tr>
<tr>
<td>Pasture (in summer)</td>
</tr>
<tr>
<td>Shoeing</td>
</tr>
<tr>
<td>Total (per year)</td>
</tr>
</tbody>
</table>

Much is missing from this list of costs. Although he mentions hay, straw and chaff

7 Oschinsky, op cit., particularly p 319, cc 36-41.
as part of the feeding regime, Walter obviously considers them as being of a minor nature and does not assign a value to them. Nor does he try to assess depreciation, although he was clearly aware of it since he does mention that when a horse gets old he loses all but the worth of his hide, while the ox, with 10d of summer grass for fattening, can be sold for as much as he originally cost.

Nevertheless, Walter's figures, incomplete as they are, carry considerable weight. If the 4 to 1 ratio in costs represented anything close to reality, they must have given a sizeable boost to the continued use of oxen on the demesne. How much faith should we put in Walter's figures, though? At least one commentator has suggested that they were probably inaccurate and may in fact have been made up to suit his argument.8 Also, there is the curious fact that, although oxen were dominant on the demesne, in some areas at least they seem to have been almost completely eliminated from peasant agriculture. This is particularly noticeable in the Suffolk and Bedfordshire lay subsidy studies of E Powell and A T Gaydon, where the demesnes clearly held the majority of oxen and the peasants the majority of horses.9 In short, we have not only to investigate the precision of Walter's remarks, but also to explain this relative lack of enthusiasm for the use of the ox by that very sector which seemingly had most to gain from the economic advantages that Walter so clearly attributed to the beast.

The investigation will be accomplished in two stages. First, I shall attempt a detailed cost analysis to determine to what extent Walter's figures were correct. With one exception, this will be done using demesne accounts centred around the late thirteenth century, in order to bring the analysis into chronological line with Walter's remarks. Second, through the use of a suitable manorial example, I shall attempt to explore how much influence this economic consideration had in shaping peasant and demesne policy as regards the medieval use of the two animals.

II

Proceeding with the first stage, the cost of keeping horses and oxen falls into three main categories: (a) feeding; (b) general maintenance, that is, shoeing, harnessing, stabling, and so on; and (c) depreciation.

(a) Feeding

Essentially, this involved only four items: oats, hay, straw and pasture. Chaff, although mentioned by Walter, is rarely entered in the accounts as a feed and so is ignored here, and the same applies to more extravagant fodders, such as bran and various types of horse-bread, which were generally fed only to riding horses or privileged household cart-animals.10 Notably excluded, too, are legumes, that is, peas, beans and vetches, which, although used on occasion, do not figure largely as a feed for draught animals in the accounts until after 1350.

Of the commonly employed feeds, however, the major item was oats, and the reeves, bailiffs, or other manorial officials were very careful to enter the amounts consumed on the dorse of each account. Table 2 contains a region by region summary of these entries for 77 manors, covering the period 1250–1320.11 For the purposes of this analysis,

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8 Ibid, p 163.
9 E Powell, A Suffolk Hundred in the Year 1283, Cambridge, 1910; A T Gaydon, 'The Taxation of 1297', Beds Hist Rec Soc, XXXIX, 1959, especially p xxviii. Animal heriots in the south and east of England often indicate the same trend, as, for instance, in the case of Cuxham discussed below.
10 As in the c1270 Beaulieu Abbey stable accounts; S F Hockey (ed), 'The Account-Book of Beaulieu Abbey', Camden Soc, 4th ser, XVI, 1975, pp 260–3. I would also like to express my gratitude to Mr Kyle Rae for drawing my attention to this use of high-grade feeds for horses.
11 The manors sampled, in order of region as they appear in the table, were Thornham and Hanworth, Norfolk; Peasenhall, Craitfield, Framlingham, Stonham, and Clifton, Suffolk; Newport, Birdbrook, Kelvenden, and Borely, Essex; Meldreth, Cambs; Houghton and Sundon, Beds; Standon, Berkhamsdted, Wheathampstead, Wymondley, Amwell, and Ashwell, Herts; Iver, Cippenh, and Turweston, Bucks; Isleworth, Ashford, and
the horses have been subdivided into cart-horses (equi carectarii or occasionally just equi in the accounts) and plough-horses (affri, stotti and jumenta). Although inevitably there was some overlapping in function — affers, stotts and jumenta, for instance, often did harrowing and carting as well as ploughing — this distinction between horses for carting and horses for ploughing is a common convention in the accounts, especially in the south and east.¹²

As expected, horses consumed considerably more oats per year than oxen. There is, as well, a very sharp distinction between cart- and plough-horses, the former consuming over three times as much of the grain as the latter, partly because carting was a year-round occupation compared to the somewhat seasonal nature of ploughing. Finally, a strong regional trend is evident with the oats consumption for both horses and oxen tailing off towards the west and north. Presumably this was because of increasing availability of pasture, but there is also the factor of reduced labour, particularly in the case of horses as they became increasingly excluded from ploughing towards the north and west, and even from hauling and harrowing on occasion.

Also to be noted from Table 2 is that the oats rations for plough-horses and oxen suggested by Walter were seldom followed in practice; as can be seen, none of the regional

Hayes, M’sex; Battersea, Morden, and Croyden with Cheam, Surrey; Hampstead Ferrers, Berks; Westerham, Gillingham, Lyninge, Saltwood, and Charing, Kent; Chalvington and Tangmere, Sussex; Streton, Rutland; Pury, Wellingborough, Radstone, and Naseby, Northants; Bingham and Wheatley, Notts; Holywell, Lincs; Guxham, Watlington, Launton, and Whitchurch, Oxon; Bourton-on-the-Hill, Hardwicke, and Todenham, Glos; Sutton-under-Brailes and Knowle, War; Pershore, Wores; North Waltham, Bishop’s Sutton, and Crawley, Hants; Mere and Cowesfield, Wils; Exminster, Tiverton, Hemyock, Topsham, Plympton, and Honiton, Devon; Skipton, Holme, Rocelelfs, Howden, Burstwick, Clayton, Easington, Keyingham, and Little Hamfer, Yorks; West Derby, Lancs; Finchale, Durham. Space prevents a detailed list of sources; several of them, however, are referred to later in the article.

TABLE 3
Detailed Draught Stock Feeding Costs for Certain Archbishopric of York Manors, 5 November 1373 — 6 May 1374

<table>
<thead>
<tr>
<th>Manor</th>
<th>Affers and Jumenta</th>
<th>Oxen</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost/animal (d)</td>
<td>Cost/animal (d)</td>
</tr>
<tr>
<td></td>
<td>Oats    Peas Hay Straw Total</td>
<td>Oats    Hay Straw Total</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Sherburn, Yorks</td>
<td>3</td>
<td>51/2</td>
</tr>
<tr>
<td>‘Coughous’, Yorks</td>
<td>No horses</td>
<td>8</td>
</tr>
<tr>
<td>Cawood, Yorks</td>
<td>No horses</td>
<td>30</td>
</tr>
<tr>
<td>Beverley, Yorks</td>
<td>4</td>
<td>171/2</td>
</tr>
<tr>
<td>Skidby, Yorks</td>
<td>4</td>
<td>171/2</td>
</tr>
<tr>
<td>South Burton, Yorks</td>
<td>6</td>
<td>261/2</td>
</tr>
<tr>
<td>Wetwang, Yorks</td>
<td>8</td>
<td>151/2</td>
</tr>
<tr>
<td>Southwell, Notts</td>
<td>4</td>
<td>71/2</td>
</tr>
<tr>
<td>Laneharn, Notts</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Scrooby, Notts</td>
<td>3</td>
<td>301/2</td>
</tr>
<tr>
<td>Average</td>
<td>81/2</td>
<td>101/2</td>
</tr>
<tr>
<td></td>
<td>321/2</td>
<td>131/2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage</th>
<th>26.0</th>
<th>32.8</th>
<th>38.9</th>
<th>0.2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.3</td>
<td>29.7</td>
<td>67.0</td>
<td>53</td>
</tr>
</tbody>
</table>

*Peas and beans

During this period all the hay, straw, oats and peas used as draught stock feed on 10 manors in Yorkshire and Nottinghamshire were recorded, perhaps as a charge to the incoming archbishop. As a result we have a uniquely detailed breakdown of all feeding costs except pasture, which, when separated from the accounts and with some adjustments made, were calculated in terms of cost per animal as shown in Table 3.

The figures are startling. Here in the north hay and straw make up the lion’s share of feeding costs, nearly 90 per cent for horses and over 95 per cent for oxen. The very high cost of straw for oxen is especially noticeable, but accords well with Fitzherbert’s statement that ‘oxen wyll eate but straw, and a lyttel hey’.19

Other accounts for hay only show similar results, and on the basis of these and the archbishopric of York accounts above educated guesses as to the average hay and straw

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16 Cf the cart-horse purchase and selling prices used in the depreciation calculations below.

17 The use of straw as a feed, sometimes mixed with hay, is well supported by Walter and his colleagues (Oschinsky, op cit, pp 327, 335, 339, 397, 439), wheat and oats straw both being mentioned.

18 PRO SC6 1144/10.

portion of the total feeding costs (excluding
pasture) for each animal across the country
were made as follows: cart-horses, 20 per
cent; plough-horses, 30 per cent; oxen, 85 per
cent. These are pitched somewhat lower than
the archbishopric accounts would indicate,
but take into consideration other areas of
England, particularly the south and east,
where oats played a greater part in the total
feed in place of hay and straw. Using these
proportions, then, and extrapolating from
the national average oats costs in Table 2, we
obtain average cost figures for hay and straw
across the country of £3 1s 9½d, £2 3s 6d and £4 7s 8d
for cart-horses, plough-horses and oxen
respectively. In view of the scarcity of direct
evidence, these costs of course are highly
conjectural, but at least should provide a
guideline by which we may be able to judge
medieval performance in these matters.

The cost of pasture is much easier to
ascertain. Walter estimates its cost at £1 per
animal per summer term, and this seems more
or less right, although normally such charges
do not figure in the accounts unless it is
pasture outside the manor that is used. Where
such charges are given, however, the agree-
ment is usually good.

(b) General Maintenance
The primary cost here was for shoeing horses,
for which Walter assigned a charge per animal
of £1 per week, or £4 3s 4d per year. Even a casual
glance at the accounts shows this to be wildly
inflated, and a more detailed look confirms it.
The average shoeing cost per animal for 47
manors across the country was as follows:

<table>
<thead>
<tr>
<th>Average Shoeing</th>
<th>14d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cart-horses</td>
<td></td>
</tr>
<tr>
<td>Plough-horses</td>
<td>9d</td>
</tr>
</tbody>
</table>

Unlike oats consumption there was no clear
regional trend, although there was often a
great variation from manor to manor,
depending on the work required of the
animals. Oxen were also shoed on occasion but
at such a low cost (generally 1d or 2d per
animal per year) and on so few manors that
for all practical purposes the average outlay
was nil.

Other maintenance costs, such as har-
nessing equipment, repairs to stables, and
bedding, were of a minor nature, and a survey
of the accounts indicates a charge of 6d per
animal per year would adequately cover them
all. Care of the animals was normally part of
the ploughman’s or carter’s duties, and conse-
quently only an occasional charge for extra
labour was involved here.

(c) Depreciation
The annual depreciation of the demesne
draught animals can be calculated using the
formula:

\[
\text{Purchase price at start of demesne career} - \text{selling price at end}
\]

\[
\text{No of years active service in between}
\]

The most difficult variable to determine is
the number of years active service, or average
demesne life, but this can be worked out from
a series of consecutive or nearly consecutive
accounts by simply dividing the average
number of animals on the demesne by the
average number replaced per year. The results

20 Thus (20/80) × 15 = £3 11s 9d (cart-horses); (30/70) × 4 = £2 3s 6d (plough-horses); (85/15) × 9d = £4 7s 8d (oxen).
21 E.g. Oschinsky, op cit, p 162n.
22 The manors being Thornham, Norfolk; Monks Eleigh and
Clapton, Suffolk; Bocking, Hadleigh, Birdbrook, Feering,
Kelvenden, and Borley, Essex; Sundon, Beds; Cippenham
for a sample of manors across the south of the country are shown in Table 4.23

Using these figures, we can now calculate the various depreciations. The purchase and selling prices employed are those of Farmer, averaged for the period 1276–1300.24 Thus we have:

Average Depreciation of Cart-horses = \[
\frac{16s \ 10\frac{1}{2}d - 7s \ 10\frac{1}{2}d}{7.0} = 1s \ 3\frac{1}{2}d
\]

Average Depreciation of Plough-horses = \[
\frac{10s \ 10\frac{1}{2}d - 4s \ 11\frac{1}{2}d}{5.5} = 1s \ 3\frac{1}{2}d
\]

Average Depreciation of Oxen = \[
\frac{11s \ 6\frac{1}{2}d - 9s \ 10\frac{1}{2}d}{5.1} = 3\frac{1}{4}d
\]

Two points stand out from these calculations. First, oxen, as expected, fare much better in terms of depreciation than horses. Second, depreciation costs in general are patently of minor consideration compared to those of feeding.

III

Totalling up all the above costs, we can now construct a more or less complete economic comparison between the animals under consideration. This is shown in Table 5.

As expected from Walter’s figures, horses, and particularly cart-horses, did cost more to keep than oxen. They consumed more in the way of oats and also cost more in general maintenance and depreciation. The difference, however, particularly between plough-horses and oxen, was nowhere near as marked as Walter would have it. The cost of keeping an ox in real terms was fully 70 per cent that of a plough-horse, perhaps more given the uncertainty of the hay and straw figures. Only when hay and straw are excluded does the relative difference between the cost for

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23 Sources as follows: N S B and E C Gras, The Economic and Social History of an English Village, Cambridge, 1930, pp 373, 377, 383 (Crawley, 1276–1300); P D A Harvey (ed), ‘Manorial Records of Cuxham, Oxfordshire’, Oxfordshire Rec Soc, L, 1976, pp 181–314 (Cuxham, 1289–98); F G Davenport, The Economic Development of a Norfolk Manor 1086–1565, 1906, pp 33–5 (Fornceett, 1272–1300); Westminster Abbey accounts WAM 8229–8256, 8230 (Bourton, 1287–1308); WAM 16380–16402 (Knightsbridge, 1289–1313); WAM 25398–25424 (Birdbrook, 1295–1319); WAM 26389–26402 (Westerham, 1296–1306). Where possible, the inclusion of heriots, waifs, and confiscations was avoided. These animals were almost always sold very quickly after being received and consequently would reduce the figures significantly.

TABLE 5
‘Operating’ Costs of Horses and Oxen in Medieval England

<table>
<thead>
<tr>
<th></th>
<th>Cart-horses (cost/animal/yr)</th>
<th>Plough-horses (cost/animal/yr)</th>
<th>Oxen (cost/animal/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( a ) Feeding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>15s 9½d</td>
<td>4s 9¼d</td>
<td>9¼d</td>
</tr>
<tr>
<td>Hay and Straw</td>
<td>3s 11¾d</td>
<td>2s 1¾d</td>
<td>4s 7½d</td>
</tr>
<tr>
<td>Pasture</td>
<td>1s</td>
<td>1s</td>
<td>1s</td>
</tr>
<tr>
<td>Total</td>
<td>20s 9d</td>
<td>7s 10¼d</td>
<td>6s 5d</td>
</tr>
<tr>
<td>( b ) Maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoeing</td>
<td>1s 2d</td>
<td>9d</td>
<td>—</td>
</tr>
<tr>
<td>Other Costs</td>
<td>6d</td>
<td>6d</td>
<td>6d</td>
</tr>
<tr>
<td>Total</td>
<td>1s 8d</td>
<td>1s 3d</td>
<td>6d</td>
</tr>
<tr>
<td>( c ) Depreciation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1s 3½d</td>
<td>1s 3½d</td>
<td>3½d</td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td>23s 8½d</td>
<td>10s 2d</td>
<td>7s 2½d</td>
</tr>
<tr>
<td>Walter of Henley’s figures</td>
<td></td>
<td>13s 6d</td>
<td>3s 4d</td>
</tr>
<tr>
<td>Grand Total excluding hay and straw</td>
<td></td>
<td>19s 9d</td>
<td>8s 13½d</td>
</tr>
</tbody>
</table>

plough-horses and oxen approach that 4 to 1 ratio that gave such force to Walter’s argument.

Does this lack of agreement between the foregoing analysis and Walter’s argument totally invalidate his figures? Did he deliberately ignore hay and straw in order to improve his case? It seems unlikely, since Walter’s figures appear to be sincere. Except for the wildly inflated shoeing costs (which, as Dorothea Oschinsky suggests, may have been intended by Walter to include depreciation as well), his figures do often agree more or less with those found in the accounts. It is curious, though, that hay and straw consumption is so widely ignored, both in Walter and the accounts. One possibility is that, due to transportation costs, there may have been an inclination among manorial officials to think of hay and straw as being essentially without market value and hence more suitably treated as a virtually free source of food for the demesne animals. This was not strictly correct, of course. Even ignoring the potential worth of labour services, there were, for example, associated costs of hay-making — mainly extra labour — that were a direct drain on manorial cash reserves. Also, there were possibilities of selling hay and straw locally, to both tenants and outside customers, which gave them some value at least. Nevertheless, in terms of decision making, the concept of hay and straw as being essentially without accountable worth is one that Walter and his manorial colleagues seem to have considered valid, and as such it gave a decided bias to the demesne use of oxen rather than horses.

IV

On the other hand, this does not explain the presence of a horse-oriented peasantry that could be found as far west as Oxfordshire. At demesne cost levels the horse would have been ruinous to the average villein’s budget. To show how the peasant got round this difficulty and managed to fit the animal into his

\(^{25}\) Oschinsky, op cit, p 163.
pocket-book, so to speak, I have chosen as an example the Merton College manor of Cuxham in south-east Oxfordshire, for which the records have largely been made accessible through the excellent work of P D A Harvey.26

Cuxham after 1293 had a demesne arable of about 270 standard acres, for which there was a working stock of around 3 cart-horses, 4 affers (or plough-horses), and 12 to 16 oxen.27 Two ploughs, each probably with a team of 2 horses and 6 oxen, were the norm, although very occasionally a third plough, drawn mainly by horses, was employed as well.28

On the peasant side, 1 freeman and 13 families of customary tenants holding a half-virgate of 12 acres apiece had land sufficient to require their own draught animals and ploughing equipment.29 With the exception of the freeman, who, it appears from trespass presentments, had both horses and oxen, the rest had only horses, generally 2 to a holding according to the trespasses.30

From the evidence, slight as it is, there was little co-operation. In 1288–89, for instance, when there were only 8 half-virgate holders on the manor (5 were added from 1290 to 1293), bread was supplied for a plough-boon involving 16 men with 8 ploughs.31 Since only half-virgaters ever owed full ploughing services at Cuxham, it seems likely that these 8 ploughs coincided with the 8 half-virgate holdings then in existence, and that each holding was thus self-sufficient in ploughing stock and equipment, even though, as seen above, these plough-teams must have been very small indeed.

Nevertheless even 2 plough-horses, if maintained at the demesne level, would seem an almost insupportable drain on a holding as small as the Cuxham 12-acre half-virgate. Clearly some accommodation had to be made, particularly in the matter of feed. Fortunately the Cuxham material provides some clues as to how this was done. First, in regard to the ploughing stock at least, it is virtually certain that the peasants’ draught animals were used much less intensively than the demesne animals. As mentioned above, the Cuxham demesne totalled some 270 acres, which were cultivated under a three-field system. Allowing for a double ploughing of fallow (the normal practice), this meant that 360 acres needed ploughing every year. The tenant contribution to this ploughing was negligible, a quarter of an acre for each of the 13 half-virgate holdings or 3½ acres in all. Consequently, if 2 demesne ploughs are assumed, each plough-team was responsible for nearly 180 acres per year. Even with an optimistic ploughing rate of an acre a day, this still meant 180 days ploughing.32

On the other hand, peasant animals were put to the plough for a much shorter period of time. Assuming again a double ploughing of the fallow, a Cuxham half-virgate would require 16 acres of ploughing, or 16½ including the rood owed to the lord. Even if co-operation between neighbours did occur, doubling the size of the plough-team from, say, 2 to 4 animals, a peasant’s horses would still only be required at the plough for 32½ acres, or, at the above acre a day, 32½ days’ work. Harrowing and carting would have to be added to this, of course, whereas on the demesne this would largely be handled by the cart-horses, but even so it is doubtful that this would make up the yearly work load to anything like that for the demesne animals.

In consequence, peasant animals had a much easier life than those on the demesne.

29 Demonstrated most clearly on the holding of Robert Oldman, the reeve, who definitely had his own plough and ploughing animals. Ibid, pp 69–70; ‘Manorial Records of Cuxham’, p 639.
30 Harvey, Med Ox Vil, pp 131, 174–5.
32 Probably more, since even the normally sanguine Walter indicates that seven-eighths of an acre a day was a more likely figure for most of the year’s ploughing (Oschinsky, op cit, pp 315, 317).
and this enabled the tenant to cut down considerably on his costs for keeping them, especially those for feeding. For one thing, it appears that the Cuxham peasants scarcely bothered at all with oats. Instead they grew vetches which, for them at least, were a much more flexible crop suitable for all animals, although perhaps less specifically good for horses. A detailed tax assessment for 1304 shows the Cuxham peasants growing up to 3 acres of vetches each, although how much of this was fed to their horses as opposed to the other animals they owned is debatable. Instead it would seem they relied more on the cheaper fodders of hay, straw, and, in particular, pasture.

Of the first two, certainly the most available was straw, something that almost every tenant had as a residue from the harvest. Although more likely to be fed to his other animals, particularly any cattle he had, it did have some value as bedding for his horses and perhaps as an emergency feed for them if needed. Straw could also be bought from the demesne.

Hay, though, was another matter. Never was it sold to the Cuxham tenantry. In fact, there seems to have been a chronic shortage of the fodder on the manor, since the demesne purchase of hay from outside the manor occurs regularly in the accounts. Presumably the Cuxham peasant largely did without, although he may have had a little of the 'allotable' meadow referred to in the 1356-57 account. And, of course, he might have had the same opportunities for outside purchase as did the demesne.

Pasture was distinctly more promising. Again it could be bought from the demesne, but it is likely that the Cuxham peasant looked to cheaper sources. First among these must have been the commons, but unfortunately the Cuxham records throw almost no light on them. Certainly they were not inexhaustible, since even demesne animals were often forced to go outside the manor for pasture.

More intriguing is the question of trespasses, which seemed to go well beyond the bounds of occasional infringements. Altogether 413 cases were recorded against the lord’s corn, pasture, and meadow from 1279 to 1358, an average of 7 trespasses per court. Some of the trespasses were quite determined, the most prolific examples occurring over two courts in 1343 and one in 1346, when 82 instances were brought involving 53 horses, at least 40 sheep (probably a great many more), and undisclosed, but quite likely large, numbers of cattle, pigs, ducks and geese. The transgressors represented almost all levels of the Cuxham tenantry: half-virgaters, freemen, famuli, and even a few people from outside the manor. Yet there is no sense of outrage at this mass infringement; all were fined at the usual levels of 1d or 2d per horse, less for smaller animals. In fact, the number of trespasses in the court rolls often approaches that appropriate for licences rather than fines, like the assize of ale, and perhaps they were considered as such, condoned as long as they did not get out of hand. If so, as a source of pasture, trespasses on the demesne must have ranked alongside the commons.

The diet of the Cuxham peasant’s horses, then, appears to have been heavily loaded towards the cheaper staples of pasture and perhaps straw. This is consistent with the low amount of work expected of the animals. When periods of high exertion did occur, vetches, rather than oats, were used; hay probably much less, simply because it was scarce at Cuxham. Finally, it is almost certain that this diet would have remained essentially the same whether the peasant had horses or oxen, and thus the economic bias in favour of

33 Harvey, *Med Ox Vil*, pp 130-1.
35 Eg ‘Manorial Records of Cuxham’, p 214.
37 As in the 1378 case of John Lacheford, who was killed while fetching hay (presumably for his own use) from nearby Wheatfield. Harvey, *Med Ox Vil*, pp 101-2.
the ox which Walter saw and of which feeding costs formed the major portion would largely evaporate in the case of the Cuxham peasant.

In any case, any economic disadvantage still accruing to the horse would have been swallowed up by the other benefits the peasant saw in the animal. For example, horses were much more versatile than oxen. They could pull a cart; they could be ridden; they could be used as pack-animals — all functions that an ox performed awkwardly or not at all. Also, with its use in smaller teams, the horse was better suited for things like ploughing little bits of land in closes or in awkward corners of the open fields. And then there was the increase in ploughing speed promised by the horse, which no doubt could be very useful at times, particularly on level ground and light soils.40

With respect to their purchase horses were much more flexible as well. For instance, while it was virtually impossible to buy a cheap ox because of its ever present value as meat, it was very possible to buy a cheap horse. It seems inevitable, for instance, that the demesne cast-offs would be bought by peasants and, as we can see from the figures used in the depreciation calculations, the average selling price for plough-horses in particular was less than half that for oxen. The range of prices for these horses was much greater as well. Demesne affer was, for instance, could be bought for as little as two shillings or as much as ten, or even more.41 Consequently the peasant could chop and change; if he wanted to increase his cultivation beyond his single plough or to free himself from the need to co-operate with a neighbour, he could do so by buying a horse or two, adjusting the quality of his purchase to suit his budget. The comparatively stable price of an ox during its adult life tended not to allow this sort of flexibility.

40 Fitzherbert (ed Skeat), op cit, p 16.
41 As at Knightsbridge, M'sex, where an affer was sold for 2s in 1309–10 (WAM 16399) and another for 10s 4d in 1312–13 (WAM 16402).