

# Grain Issues from Some Properties of Oseney Abbey, 1274-1348

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ONE of the indicators of the efficiency of medieval agriculture is the yield of grain. Much research has been concentrated on this aspect of the medieval economy, with particular attention to the estates of religious houses, for which there is usually more complete data than for the estates of lay lords.<sup>1</sup> Statistics of grain yields from the estates of houses of Austin Canons, however, are still rather scarce.<sup>2</sup> Oseney Abbey was a house of such Canons, with estates mainly concentrated in Oxfordshire and Buckinghamshire. Although these estates included several large manors, the extant ministers' accounts relate mainly to the smaller properties of the Abbey. Some of these smaller properties—such as Forest Hill, Waterperry, Chastleton, and Watlington—were really glebe-demesnes, or demesnes created from or around an appropriated glebe.<sup>3</sup> Unfortunately, there are no complete extant accounts for the largest manors of the Abbey, such as Water Eaton or Hooknorton. The grain statistics are therefore a little fragmentary and weighted.<sup>4</sup> There is, however, a substantial portion of a centrally enrolled account of c. 1280, which provides statistics for almost all the manors.<sup>5</sup> The evidence from the 14 manors represented in this account roll confirms the trends revealed in the original ministers' accounts of the smaller properties. The total receipt from the sale of grain from the 14 properties in c. 1280 (including the largest manors of Hooknorton, Cleydon, Water Eaton, and Weston on the Green) did not exceed £60. This figure is quite derisory when compared, for example, with the total of £276 received for sales of grain from the 15 English manors of the Abbey of Bec.<sup>6</sup> Of course, Bec was an absentee lord and naturally preferred to sell most of the grain from its English estates. In contrast, Oseney Abbey produced most of its grain for direct consumption, either for self-sufficiency on the manor or for transfer or livery to the conventual granary.

The Abbey employed the conventional methods to try to increase productivity,

<sup>1</sup> See, for example, the comprehensive analysis of the yields on the estates of the Bishopric of Winchester: J. Z. Titow, *Winchester Yields*, (1972), and D. L. Farmer, 'Grain Yields on the Winchester Manors in the Later Middle Ages', *Economic History Review*, 2nd series, xxx (1977), 555-66.

<sup>2</sup> The fullest series in print is in I. Kershaw, *Bolton Priory*, (1973), 38. Fragmentary series can be found in R. H. Hilton, *The Economic Development of Some Leicestershire Estates*, (1947). The series from Bolton derives from a region unsuitable for arable production and concentrating uniformly on oats.

<sup>3</sup> There were outlying properties in Gloucestershire and Staffordshire, and also in Ireland. For the configuration of the estates, see my unpublished thesis, Leicester University, 1975. For the exploitation of the glebe-demesne, see my forthcoming article in *Midland History* (1978 for Spring 1977); R. H. Hilton, *op. cit.*, 36 ff.; T. A. M. Bishop, 'Monastic Granges in Yorkshire', *English Historical Review*, li (1936), 193-214.

<sup>4</sup> The rolls are listed by N. Denholm-Young, *The Medieval Archives of Christ Church*, (Oxford Historical Society, xcii, 1929), 13 ff.

<sup>5</sup> H. E. Salter, ed., *The Cartulary of Oseney Abbey*, vi (Oxford Historical Society, ci, 1936), 184 ff.

<sup>6</sup> M. Morgan, *English Lands of the Abbey of Bec*, (repr. 1968), 46.

but was not necessarily inspired by a commercial motive.<sup>7</sup> Marling and manuring were carried out.<sup>8</sup> The Abbey also put into practice the precept that seedcorn ought to be changed regularly, either through inter-manorial liveries and exchanges, or by purchase. The reeve of Little Tew received  $2\frac{1}{2}$  qtrs. of rye *ad seminandum* from the reeve of Great Barton.<sup>9</sup> Rye seed was sent from Hampton Gay to Forest Hill *ad seminandum*.<sup>10</sup> The bailiff of Waterperry sent a quarter of wheat *ad seminandum apud middele* (sc. Medley),<sup>11</sup> and other seedcorn to other manors.<sup>12</sup> The same bailiff, however, also constantly purchased seedcorn for sowing at Waterperry and Thumley.<sup>13</sup> The reeve of Little Barton sowed seed sent from Fulwell, and seed from Watlington was sown at Holcombe.<sup>14</sup> The bailiff of Forest Hill bought three quarters of wheat, two bushels of peas, and two quarters and two bushels of wheat *ad seminandum*; the bailiff of Stone bought five quarters of drage seed.<sup>15</sup> This change of seed accorded with the maxim of Walter of Henley.<sup>16</sup> It was certainly not an influx of seed to remedy a deficiency of seedcorn, although the amounts involved were small.

The rate of sowing varied according to the type of grain. Wheat was sown at the rate of two to two and a half bushels per acre, which Walter regarded as the minimum.<sup>17</sup> Oats were sown at a slightly higher rate, usually three bushels, but occasionally four bushels, per acre. Oats were probably sown more intensively as the seed-yield ratio of oats was usually low. Intensive sowing was one method of counteracting the lowness of yields. In the case of oats, however, it proved to be only partially successful; the ultimate result was that oats were replaced on some properties by other grains.<sup>18</sup> Drage, barley and pulses were all sown at an intensive rate, three or four bushels per acre. These grains were also the highest yielding.<sup>19</sup> Drage and barley comprised the principal grains sold, but the main reason for the intensive sowing was probably the demands of the manor.

Sales of grain, as they appear in the *Bladum Venditum* paragraph of the accounts, can be deceptive. The constantly poor yield of oats, for example, made the Abbey a purchaser as well as a small vendor of grain.<sup>20</sup> The bare statistics of the sales must be qualified also. Some sales of grain were necessary in order to raise cash to acquit obligations. The urgency of these sales is reflected in the amount of grain sold in the sheaf before threshing, rather than being precisely measured. In some cases, the sale may have been fictitious; this is particularly so for grain supposedly sold in sheaves in the fields to acquit the wages of the *famuli*. In these cases, the grain was

<sup>7</sup> See E. M. Halcrow, 'The Decline of Demesne Farming on the Estates of Durham Cathedral Priory', *Economic History Review*, 2nd series, vii (1955), 345 ff.

<sup>8</sup> Marl was carted from Upton to Stone for 18 weeks after Lady Day: Bodleian Library MS. D.D. Ch. Ch. Oseney Roll (hereafter Ch. Ch. O. R.) 36. Forks were bought at Waterperry for spreading manure: *in iii furcis pro fimo dispergendo*, Ch. Ch. O. R. 59. Manuring was quite common; a donor reserved the right of ingress and egress for manuring in 1241: *ad terram suam fundam a Pascha usque ad festum Omnium Sanctorum*, H. E. Salter, ed., op. cit. vi, 11.

<sup>9</sup> Bodleian Library MS. Roll Oxon. Oseney (hereafter O.R.) 97.

<sup>10</sup> Ch. Ch. O. R. 22.

<sup>11</sup> Ch. Ch. O. R. 47.

<sup>12</sup> Ch. Ch. O. R. 54.

<sup>13</sup> Ch. Ch. O. R. 58 (2 qtrs. of beans, 5 qtrs. 6b. oats), 51 (2 qtrs. of oats), 59 (4 qtrs. of oats).

<sup>14</sup> O.R. 19; Ch. Ch. O. R. 62.

<sup>15</sup> Ch. Ch. O. R. 23-25 and 35.

<sup>16</sup> D. Oschinsky, ed., *Walter of Henley*, (1971), 325.

<sup>17</sup> *Ibid.*, 325.

<sup>18</sup> See below.

<sup>19</sup> D. Oschinsky, ed., op. cit., 418.

<sup>20</sup> E.g. O.R. 19: 20 qtrs. of oats bought. See also Table 2.

probably given to the *famuli* in lieu of their wage. Five quarters and one bushel of wheat were sold as new grain (cut early) for 2s. per quarter *in campo per estimationem in garbis datis pro stipendiis famulorum ad terminum sancti michaelis*.<sup>21</sup> Such 'sales' were a frequent occurrence at Waterperry.<sup>22</sup> Other sales actually occurred to raise cash to pay other obligations. For example, five quarters of drage were sold to defray the archdeacon's procuration;<sup>23</sup> four quarters and a bushel of wheat were sold to raise cash to buy two oxen;<sup>24</sup> and 12 quarters of oats were sold to raise cash *ad soluendum pro minutis necessariis*.<sup>25</sup> Additionally, some grain was sold because it was inferior: one and a half quarter of pulses *quia humidum* and 16 quarters of drage *quia debilis*.<sup>26</sup>

Figures of grain issues in the *Exitus Grangie* paragraph are given in TABLE 1. Such figures contain some slight inaccuracies. It is not necessary in most instances to add a ninth to the figures to allow for tithes taken in the fields,<sup>27</sup> as the Abbey was the rector in most cases. It is necessary to do so, however, in the cases of Sibford and Maids Moreton. Reapers were often paid in sheaves in the fields at Forest Hill and Waterperry. At Forest Hill in the late thirteenth- and early fourteenth-centuries, the reapers took the seventeenth sheaf. In the fourteenth-century at Waterperry, the reapers took the twentieth sheaf.<sup>28</sup> The grange account completely ignored this prior deduction, and consequently the figures for yields in the grange accounts of these two properties are underestimates. The same measures were used in grange and granary, so that there was no discrepancy. It was customary to use the strike, or levelled bushel, in the granary. This measure was also employed in the grange for newly threshed grain. Accounts of grain threshed constantly refer to the *rasa mensura*, although it is also occasionally indicated by measuring *sine cumulo*. By using the strike in both grange and garner, the Abbey obviated any fraudulence by its officials' using heaped measures in the grange and struck measures in the garner.<sup>29</sup>

On the other hand, grain was constantly consumed in the sheaf for diverse purposes.<sup>30</sup> In most cases, some estimate was made of the amount of grain disposed. There was a rough calculation that 16 sheaves contained a bushel.<sup>31</sup> This estimate was duly recorded in the grange account, but it was merely an estimate. When the batches of sheaves amounted to only small quantities, as with livestock feed, the estimate may have been fairly reliable. Nevertheless, the accounting official still might neglect to make an estimate and the auditors accept it; thus the reeve of Stone claimed *quod resyduum prebend' fuit de howes et puls' in garbis set nessit (sic) quantum in garbis*.<sup>32</sup> When the number of sheaves was large, moreover, the reliability of the

<sup>21</sup> Ch. Ch. O. R. 53; a further 12 qtrs. 0½b. of oats were 'sold' in the same account for the same purpose. I owe the point of the fictitious sale to Dr. P. D. A. Harvey.

<sup>22</sup> Ch. Ch. O. R. 52, 58, 59.

<sup>23</sup> Ch. Ch. O. R. 50.

<sup>24</sup> Ch. Ch. O. R. 51.

<sup>25</sup> Ch. Ch. O. R. 52. Also Ch. Ch. O. R. 25: barley sold *ad emendum animalia ad sem'*.

<sup>26</sup> O. R. 95; Ch. Ch. O. R. 35.

<sup>27</sup> R. V. Lennard, 'Statistics of Corn Yields in Medieval England: some critical questions', *Economic History*, iii (1934-7), 173 ff.

<sup>28</sup> E.g. Ch. Ch. O. R. 20, 22, 47.

<sup>29</sup> See D. Oschinsky, ed., op. cit., 325, 323, 168 ff. The exception is that the granger at the tithe barn of Waterperry may have used the heaped bushel: *de incremento cumulorum de decima*, Ch. Ch. O. R. 58.

<sup>30</sup> E.g. as livestock feed: Ch. Ch. O. R. 37: *Et de iiiii gr. vi bs. receptis de ccccexvi garbis per estimationem datis in prebend' bouum*.

<sup>31</sup> E.g. Ch. Ch. O. R. 51: *in viciiii<sup>xxx</sup> garbis ad prebend' Bouum et estimabatur in xvi garbis i bs.; in cxvi garbis datis iii Bobus et estimabatur in xvi garbis i bs.*

<sup>32</sup> Ch. Ch. O. R. 34.

estimate may be less certain. Uncertainty may attach to the case of 50 quarters of beans sold at Stone *per estimationem . . . in uno tasso*.<sup>33</sup> The *famuli* were frequently paid in kind (in sheaves) in the fields, especially on the smaller properties where the reeve or bailiff had little cash in hand.<sup>34</sup> When this sort of payment occurred, the grange account took it into consideration, but only as an estimate of quantity.

Estimates of the content of sheaves were a persistent feature of the grange accounts. The auditors did introduce more precision when the *responsio* was applied.<sup>35</sup> The *responsio* first appears in full form as the auditors' marginal addition to the accounts in 1335. It had, however, appeared slightly earlier in an embryonic form: *defic' de estimatione ix qr'*.<sup>36</sup> The target was probably set each year when the grain was in the stalk, perhaps by the itinerant steward. When it is recorded, however, the target was usually the threefold yield from seed required by Walter of Henley to break even in any year.<sup>37</sup> The defect of this method was that it did not eliminate the dishonesty of the accounting official if the yield exceeded the target.

Relatively few figures can be extracted for the acreages and these are mainly for Stone and Waterperry (TABLE 4). Although wheat was often sown over a larger acreage than any other single grain, the main issue comprised barley and drage. The cause was no doubt the greater seed-yield ratio of the latter two grains. Winter grain (wheat and rye) was sown over less than half the total acreage sown, so that spring grains (barley, drage, oats and pulses) combined were sown over a wider area. Moreover, the spring grains were sown more intensively. The high-yielding drage consisted of more barley than oats, which accounts for the high yield. On some properties, particularly Little Tew and Stone, oats were in decline. Oats were being replaced as livestock feed by barley, drage or even pulses. The reason was no doubt that oats were low-yielding, and in some years their yield was so disastrous as to merit the purchase of considerable quantities of oats.

Most grain was consumed in manorial obligations or sent to the Abbey. Varying amounts of wheat were sold, ranging from a bushel to 23½ quarters in some years. The wheat sold was usually only a fraction of the issue. The variance of the quantities sold from year to year confirms that grain was sold because it was unexpectedly surplus to requirement, rather than that it had been grown specifically for the market. This obtains also for barley and drage, which comprised the largest quantities of grain sold. The overall impression is that grain was produced primarily for consumption. In this, Oseney, a house with medium-sized estates for a religious house, contrasted quite strongly with those large Benedictine houses which ran 'federated grain factories'.<sup>38</sup>

<sup>33</sup> Ibid.

<sup>34</sup> E.g. Ch. Ch. O. R. 23: *omnes alii famuli ceperunt bladum in campo pro stipendio estuali*; Ch. Ch. O. R. 24: *omnes isti famuli et ii daye ceperunt bladum in campo prout estimatum est ad valenciam stipendiorum suorum per Iuratos ville*; Ch. Ch. O. R. 34: *quia ceteri famuli iste habuerunt stipendia in campo excepto quod iiii famuli habuerunt de grangia v bs. drag'* . . . *quia insufficientes fuerunt isti quatuor stipendia in campo*.

<sup>35</sup> See J. S. Drew, 'Manorial Accounts of St. Swithun's Cathedral Priory', *English Historical Review*, lxii (1947), 20 ff. The *responsio* was introduced earlier on some lay estates, e.g. at East Carlton, co. Norfolk, and Beaumanor, co. Leics., both in 1277-8: John Rylands University Library Philips MS. 17 and Leics. Record Office DG9/1954.

<sup>36</sup> Ch. Ch. O. R. 25, 49-50.

<sup>37</sup> E.g. Ch. Ch. O. R. 50: *onerat' super compotum quia non respondet ad tercium granum*; Ch. Ch. O. R. 52: *item onerat' de ii qr. ii bs. ut respondeat ad tercium granum*; Ch. Ch. O. R. 53: bailiff charged for a bushel of barley because the yield fell one bushel below threefold.

<sup>38</sup> P. F. Brandon, 'Demesne Arable Farming in Coastal Sussex during the Later Middle Ages', *Agricultural History Review*, xix (1971), 113.

TABLE I  
Demesne issues from the *Exitus grangie* (to the nearest quarter)

Manor	Date	Wheat	Rye	Barley and drage	Oats	Pulses	Others
Little Tew	1273-4	22	9	67	3	9	
	1281-2	22	3	37		3	
	1284-5	23		22	7	5	
	1288-9	23	2	34	7	7	
Watlington	1305-6	34			10		
	1327-8	64		62	35	12	
	1341-2	50		43	30	6	i
	1344-5	82	54	118	35	11	
Forest Hill	1276-7	41	42	58	12	27	11i
	1278-9	50	47*	59*	28*	49*	12i
	1302-3	30	24†	52	22	28*	8i
	1303-4	75	52†	67	23	44*	4i
Stone	1320-1	85	7	155		101	35i
	1324-5	54		57	2	13	9ii
	1325-6	83		111		52	
	1326-7	50	21	181		31	
Sibford	1331-2	128		206		13	52i
	1342-3	84	19	99		51	8i
	1277-8	1	42	23	6	18	2ii
	1331-2		17†	33	9	4	
Maids Moreton	1328-9	22		10	20		
	1340-1	?	9	6	28	4	
Waterperry	1279-80	90	126†		137		63iii
	1327-8	105		109	30	34	
	1328-9	48		38	25	12	14i, 47ii
	1329-30	49		44	20	45	5i
Chastleton	1332-3	68		39	24	35	16i, 2ii
	1334-5	31		33	15	30	12i
	1336-7	35		24	20	37	
	1337-8	34		36	25	19	29i
	1340-1	55		31	14	21	6i
	1344-5	55			16	33	12i
	1277-8	24	23	10	47	16	
	1278-9	23	33	17	31	12	
	1331-2	?	26	17	39		
	1334-5	22	40	23	44	21	
	1336-7	26	35†	18	46	25	
	1338-9	22	22	20	46	27	
	1339-40	17	21†	21	34	24	1i

i. New grain.

ii. Old grain.

iii. *Tremesium*.

\* includes tithes as a composite figure given.

† mixtil of wheat and rye.

The Stone rolls include also outlying property at Upton and Hertwell, and the Waterperry rolls include outlying property at Thumley and Ledhale.

TABLE 2  
Sales and purchases of grain

<i>Manor</i>	<i>Date</i>	<i>Sales</i>			<i>Purchases</i>		
		£	s.	d.	£	s.	d.
Forest Hill	1276-7	3	11	8		6	0
	1278-9	4	13	7		11	2
	1302-3	2	5	0	1	16	6
	1303-4	4	15	4		9	7
Stone	1320-1	24	11	1 $\frac{3}{4}$		17	0
	1324-5	15	18	9 $\frac{1}{2}$	13	13	9 $\frac{1}{2}$
	1325-6	2	7	5			
	1326-7	5	15	9			
	1331-2	4	6	0			
	1340-1	6	8	2 $\frac{1}{2}$	1	0	0
Waterperry	1279-80	1	3	8			
	1327-8		15	0			
	1328-9	2	14	6			
	1332-3	1	2	0			
	1334-5		13	4			
	1335-6	1	16	1		4	0
	1336-7	2	10	0			
	1337-8	5	13	6 $\frac{3}{4}$	1	13	2 $\frac{3}{4}$
	1340-1	8	16	6	2	1	8
	1344-5	4	7	8		8	0
Watlington	1305-6	6	18	1 $\frac{3}{4}$			
	1327-8	3	18	4			
	1341-2	3	18	11 $\frac{1}{2}$ i			
	1344-5	17	2	6ii			

i. Includes 22 $\frac{1}{2}$  qtrs. of malt.

ii. Includes 41 qtrs. 6 bs. of malt.

TABLE 3  
The composition of grain sales (to the nearest half quarter)

Manor	Date	Wheat	Rye	Barley and drage	Oats	Pulses
Forest Hill	1276-7	7		10		3
	1278-9	11	4	9		7
	1302-3	5		10½		4
	1303-4	10		18		7
Stone	1320-1	14	1	75		70
	1324-5	14½		75½		6
	1325-6			13		
	1326-7	21		21½		1½ and ½ hardcorn
	1331-2	2		13		
	1342-3	10		24½		7 and 5 tramesium
Waterberry	1279-80	6				
	1327-8			3	3	
	1328-9	9			1	
	1329-30			4	2½	2½
	1336-7			10	12	
	1337-8	9½		34½	12	
Little Tew	1340-1	6		21½	5½	
	1344-5	6		20	5½	
	1281-2					½
	1284-5	6	7½			
	1288-9					3
	1305-6	15½	6i	9½		
Watlington	1327-8	23		54		
	1341-2	½		9½		
	1344-5	23½	8	40		
	1277-8					
	1278-9					
	1331-2					
Chastleton	1334-5		6			
	1336-7		3i			
	1338-9	8	4½	11	4	9
	1339-40	½		12	3	3
	1277-8					
	1331-2					
Sibford	1277-8		5½			
Maids Moreton	1331-2					
	1328-9			2	2	
	1340-1	3½		3	2½	

i. Mixture of rye and wheat.

TABLE 4  
Acreages sown

Manor	Date	Wheat	Pulses	Rye	Barley and drage	Oats	Total
Forest Hill	1302-3	76	16	16*	38	21	167
	1303-4	74½	?	53*	?	?	?
Stone	1320-1	80½	29½		86		196
	1324-5	61½	22½		60		144
	1325-6	95½	43	7	61		206½
	1326-7	95	28	6	55½		184½
	1331-2	?	38		84		?
	1327-8	30½	11		13½	30½	85½
Waterperry	1329-30	36½	19½		18½	37½	112
	1332-3	44½	13		21	30	108½
	1334-5	59	9		21½	22½	112
Watlington	1338-9	20½		18	20	15½	74

TABLE 5  
Auditors' estimates of yields of grain

<i>Manor</i>	<i>Date</i>	<i>Wheat</i>	<i>Rye</i>	<i>Barley and drage</i>		<i>Pulses</i>	<i>Oats</i>
Stone	1342-3	4	3	---	3	---	4½
Waterperry	1335					4	3
Waterperry	1336-7	3		5	2	8	3
Waterperry	1337-8	4		---	3	---	3
Waterperry	1339-40	1		3	1	4	1
Waterperry	1340-1	5				3	1
Waterperry	1344-5	4			5	5	5
Maids Moreton	1340-1		7		4	2½	2