

Demesne and tithe: peasant agriculture in the late middle ages^{*}

by Ben Dodds

Abstract

The peasant sector of the agricultural economy is much less well documented than the seigneurial sector in the late middle ages. This paper is an attempt to use tithe data to shed light on cropping patterns outside manorial demesnes in six parishes in south-east England. Tithe receipts are compared with output from demesnes and the similarity of cropping in the two sectors is revealed. Peasant cultivators were clearly able to adopt intensive cropping regimes in response to various incentives like their seigneurial counterparts. Tithe data are found to be a problematic source since they reflect aggregate output levels. The impact of this difficulty on the conclusions is discussed and differences between large and small peasant holdings are suggested.

Somewhere in the plains of Castile La Mancha, Don Quixote and Sancho Panza were resting with a group of goatherds after a long day's knight errantry. They passed around a wineskin, waiting for the return of a companion who had been sent to fetch provisions from a nearby village. When the boy arrived back, he came with a tale of love and loss, which he had heard from the villagers. The tragedy involved a young man named Chrysostom who had died for the love of a local beauty named Marcela. The villagers were particularly distressed by the death because Chrysostom had acquired a very useful skill. The bright son of a wealthy peasant family, he had been to university in Salamanca where he studied astrology. When he returned to the village, he was able to use his knowledge of the stars to predict grain yields, with good results for his family:

his father and his friends got very rich, because they believed him and did what he advised. He used to say: This year sow barley and not wheat, or: Now you can sow chick-peas and not barley, or: Next year there will be a full crop of olive-oil, and the three years following there won't be a drop.¹

^{*} I am grateful to Dr Neil Rushton for his work on the Westminster and Winchester tithe data used in this paper. Professors Richard Smith and Richard Britnell, as directors of the ESRC project out of which this paper arises, provided valuable encouragement, support and advice. Preliminary versions of this paper were read at the Ninth Anglo-American Seminar on the Medieval Economy and Society held at Lincoln in July 2007 and the Cambridge University Medieval Economic and Social History Seminar in October 2007. The participants made many useful comments.

¹ M. de Cervantes Saavedra, *The adventures of Don Quixote* (1950), p. 91.

This presents an example, albeit a fictitious one, of a seventeenth-century peasant family concerned to maximize the yields of one crop or another, from one year to the next.

The extent to which preindustrial cultivators were able to control yields is an important question for historians. The Malthusian model implies that the area under cultivation was the main determinant of output. However, observation of present-day 'traditional' agriculture reveals a range of techniques by which producers can raise yields per acre when required. One such example comes from northern Ethiopia where farmers plant a bean called the 'gebeto' six months before wheat and maize are sown. The bean tastes unpleasant and, although a few are used for medicinal purposes, the crop is left unharvested to dry and is then ploughed into the fields. The 'gebeto' crop has fertilizing effects on the soil and is reported by agronomists to increase yields considerably.²

Medieval agricultural historians have also observed the use of yield-raising techniques. In his recent book about decision-making on medieval manorial demesnes, for example, Stone pointed out that crop rotations were determined not 'by customary routine or by consultation with local astrologers' but rather by 'deliberate' and sensible decisions.³ In other words, like the Ethiopian farmers described above, medieval manorial demesne managers understood how different agricultural practices could be applied selectively to meet changing requirements.

One of the difficulties with studying medieval agricultural practices is that most of the evidence comes from the seigneurial sector which, even at the height of direct demesne management, probably produced only between one-fifth and one-third of total agricultural output.⁴ This raises the question of comparability between the seigneurial and peasant sectors. Stone and others have observed that those managing and working the manorial demesnes often cultivated their own holdings too, implying a common body of agricultural knowledge in the two sectors.⁵ However, awareness of techniques did not automatically mean that those techniques were put into practice. The requirements of many peasant cultivators were different from those of the managers of manorial demesnes, as were the resources at their disposal. It cannot be assumed that the practices of the demesne sector were also those of the peasant sector. To understand the response of medieval cultivators to incentives, therefore, an investigation is needed into the extent to which seigneurial and peasant farming differed.

The term 'peasant' is problematic in the context of late-medieval England because of cultivators' involvement in the market and the extent of their interests beyond the family and village.⁶ Most people to whom the term 'peasant' is applied were not subsistence farmers with fixed ancestral holdings, concerned only to supply their families. However, most did produce a substantial proportion of their own food and used significant quantities of family labour on their holdings. Following Ellis's definition, therefore, it is assumed here that the term 'peasant'

² The World Bank, Database of Indigenous Knowledge and Practices, <http://www4.worldbank.org/afr/ikdb/detail.cfm?id=115> (viewed 2 July, 2008).

³ D. Stone, *Decision-making in medieval agriculture* (2005), p. 56.

⁴ B. M. S. Campbell, *English seigniorial agriculture,*

1250-1450 (2000), p. 60.

⁵ Ibid., p. 1; D. Stone, 'Medieval farm management and technological mentalities: Hinderclay before the Black Death', *ECHR* 54 (2001), p. 634.

⁶ A. Macfarlane, *The origins of English individualism* (1978), pp. 165ff.

refers to people with only a partial dependence on markets for produce and labour.⁷ If used in this way, the term covers a wide range of types of cultivator, from the smallholder struggling to feed his family to the manager of a much larger holding producing a substantial surplus for the market. Care is taken in this study to distinguish between different types of peasant producer.

By comparison with the luxury of dozens of series of manorial accounts, evidence from the peasant sector is 'more fragmentary and indirect'.⁸ Tithe receipts are one of the few possible ways of assessing the farming of the peasantry. Tithe was a tax of approximately one-tenth, paid on all types of production and by all types of producer. The quantity of produce received as tithe provides an insight into the scale and character of peasant production.

Six sample parishes in south-eastern England were selected for study, on the basis of the quantities of surviving data from each and the distinct agricultural geographies represented (see Figure 1). They were appropriated to three different ecclesiastical organizations, a process which meant the monastic communities or bishop became the titular rectors of the parishes, collecting a substantial proportion of the tithe revenue, and employing vicars to look after the cure of souls. The tithes of Eastry, Monkton and Birchington in Kent belonged to the cathedral priory of Canterbury, those of Hambledon and East Meon in Hampshire to the bishops of Winchester and those of Feering in Essex to the abbey of Westminster. Advanced medieval bureaucracies, and institutional continuity since the middle ages, have meant that records of tithe income from these six parishes during the late middle ages survive with exceptional richness.⁹ Although tithe data survive from some of the series from as early as 1223 and as late as 1533, we selected a core period – from 1288 to 1412 – during which the survival of data from all six parishes is fairly consistent. The best documented parish is Hambledon, from which ninety sets of tithe data survive in the core period; the worst is Birchington with forty-six.

The extent to which tithe data from the sample parishes derive only from non-seigniorial cultivators is difficult to determine. All six parishes contained manorial demesnes that belonged to the tithe owners, i.e. Canterbury Cathedral Priory, the bishops of Winchester, and

⁷ F. Ellis, *Peasant economics: farm households and agrarian development* (1993), pp. 9–13. See also P. R. Schofield, *Peasant and community in medieval England, 1200–1500* (2003), pp. 6, 53, 79–81; B. Dodds, *Peasants and production in the medieval North-East: the evidence from tithes, 1270–1536* (2007), pp. 38–9.

⁸ Campbell, *Seigniorial agriculture*, p. 2.

⁹ The rectory accounts from Eastry, Monkton and Birchington are found in the Canterbury Cathedral Archives, Canterbury Dean and Chapter archives [hereafter CCA DCc] and in the Lambeth Palace Library. I am grateful to Dr Michael Stansfield for letting me use his lists of the Canterbury manorial and rectory accounts. The rectory accounts from Hambledon and East Meon are found in the Winchester Pipe Rolls: Hampshire Record Office (hereafter HRO), 11M59/B1. Published samples are available in M. Page (ed.), *The Pipe Roll of the Bishopric of Winchester, 1301–2* (Hampshire Rec. Ser.,

14, 1996), pp. 291–6, 303–4; id., *The Pipe Roll of the Bishopric of Winchester, 1409–10* (Hampshire Rec. Ser., 16, 1999), pp. 273–81, 291–2. The Hambledon and East Meon demesne and tithe data were collected and tabulated by J. Z. Titow who made his research notes available: HRO, 97M97. A sample of these data has been checked by Dr Neil Rushton and myself and Titow's tabulations used for this paper. It should be noted that the catchment area from which East Meon tithes were collected changed over the course of the period, with tithes from certain parts of the parish being sold in some years. This means the East Meon data cannot be used to examine changes in the volume of production but can be expected to be representative of changes in the composition of output in the parish. The rectory accounts from Feering are found in the Westminster Abbey Muniments [hereafter WAM].

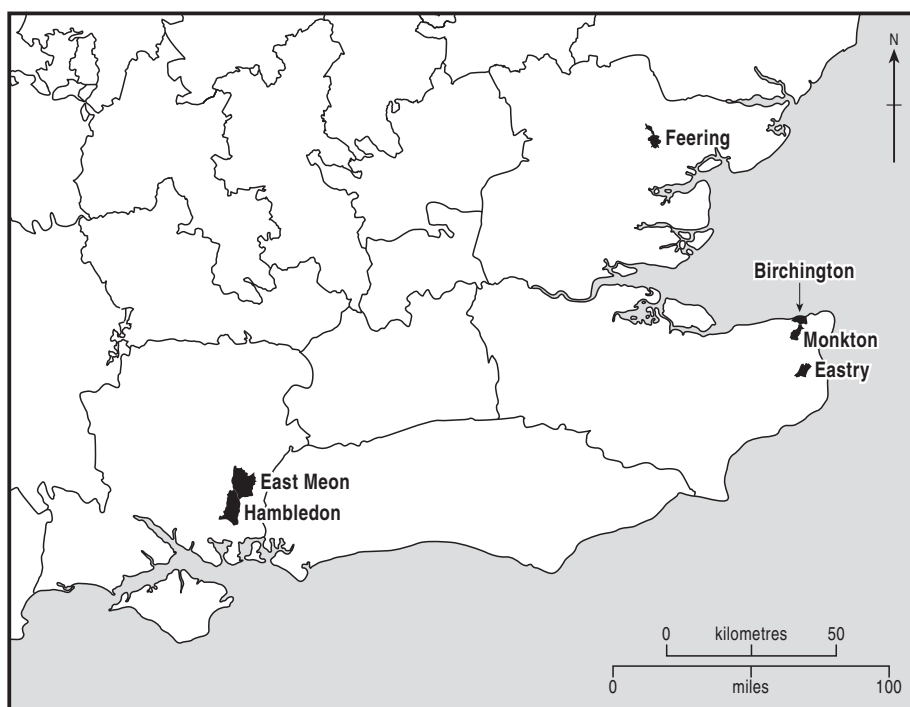


FIGURE 1. Six parishes in south-east England.

Source: The map was drawn by Mr Chris Orton, using data prepared by Professor Brian Roberts.

Westminster Abbey. No evidence has been discovered from the Canterbury Cathedral Priory and Westminster Abbey rectories to suggest tithe was levied on the monks' own demesnes. Tithe and manorial grain receipts tended to be recorded in separate accounts and there is no indication in the manorial accounts that tithe was deducted.¹⁰ In the case of Hambledon in Hampshire, it appears that tithe was paid on the bishop's manorial demesne. For this reason, one ninth of demesne produce has been deducted from tithe receipts, to give a more accurate indicator of non-seigneurial output. For reasons that are not clear, it appears that tithe was not collected from the bishop of Winchester's manorial demesne at East Meon.¹¹

Of course, parishes appropriated to ecclesiastical institutions often contained more than one manorial demesne. For example, in addition to their manorial demesnes from which separate accounts were rendered, the monks of Canterbury Cathedral Priory also received grain from glebe land in Eastry and Monkton. The glebe was a parcel of land attached to the rectory and originally intended to provide the sustenance of the incumbent priest. The usual practice was for the serjeants of the rectory to distinguish between grain from tithe, in the 'common grange',

¹⁰ For example, WAM 25603 records grain receipts from Feering manor for the year 1300-1 and WAM 25604 records tithe grain receipts from Feering rectory for the same period. Occasionally tithe receipts and demesne output were recorded as a single quantity (e.g. for

1366-7 in WAM 25687).

¹¹ J. Z. Titow, 'Field crops and their cultivation in Hampshire, 1200-1350', (unpublished paper deposited in HRO), pp. 18-20.

and glebe, in 'our own grange'.¹² It was also common for parishes to contain manorial demesnes not held by the titular rectors. Feering, for instance, contained at least three additional manors which can be traced back to the middle ages.¹³

It must be emphasized that the tithe data used here do not reflect total arable output in the parishes concerned. High value industrial crops, such as flax and hemp, are not likely to be represented in tithe returns from an appropriated parish since they were usually distinguished from the tithes of the major field crops, known as garb tithes, and collected as part of the small tithes by the vicar.¹⁴ Legumes were collected with the other garb tithes and sometimes constituted a significant proportion of total output. However, data for these crops are difficult to use because of the frequency with which they were fed unthreshed to livestock and no quantity for the amount collected entered in the account.¹⁵ Given the importance of legumes both as a foodstuff and in crop rotations, these receipts have been included in the tabulated data: all calculations were repeated only for cereals, to ensure that inaccurate data for legume production do not have a distorting effect on the interpretation of the results.

The six sample parishes contain land with three distinct agricultural geographies. Monkton, Birchington, and Eastry are situated on very rich agricultural land in north-east Kent. According to current agricultural land classifications, based on the physical characteristics of land and its agricultural potential, Birchington is situated on grade two and three land and Monkton and Eastry on grade one and two land. Such high classifications mean the land is suitable for a wide range of crops or for obtaining consistently high yields from certain high value crops. Although not as rich as the land in Monkton and Eastry, that in Feering is also fairly well suited to arable cultivation with classification at grades two and three. By contrast, Hambledon and East Meon are situated on poorer quality land, currently classified as grades three and four.¹⁶

Needless to say, it is not only the physical characteristics of the land that determine the types of crops grown and the intensiveness of production. Commercial factors are also important. The north-east Kent parishes were particularly well situated from this point of view. All three were around ten miles from a major centre of urban demand at Canterbury, less than 35 miles from Maidstone, and around 60 miles from London and adjacent boroughs. Ports were also accessible, including Sandwich, which was adjacent to Eastry, and Faversham, less than 20 miles away. The concentration of urban demand within reach of the Kentish parishes was exceptionally high: Mate has recently estimated that Canterbury, Maidstone, Sandwich and

¹² For example, in the Eastry rectory serjeant's account of 1286–7 (CCA DCc/Eastry 14) wheat entries were received 'from the wheat issue of the common grange by tally against William Sparke' and 'from our own grange by tally'.

¹³ P. Morant, *The history and antiquities of the county of Essex* (1768), pp. 170–3.

¹⁴ F. L. Cross and E. A. Livingstone (eds), *The Oxford Dictionary of the Christian Church* (1997), p. 1626. For example, when the vicarages of Eastry and Monkton in Kent were ordained in 1367, the vicars were granted various small tithes including flax, hemp, honey, apples and pears: W. F. Shaw, *Liber Estriae; or memorials of the royal*

ville and parish of Eastry, in the county of Kent (1870), p. 219.

¹⁵ E.g. in 1367–8 the Monkton accountant entered a nil receipt for vetch tithes because what was collected was of very poor quality and scarcely sufficient for fodder purposes: CCA DCc/Monkton 87. This entry implies that quantities of vetch were automatically used as fodder each year and not entered in the account of tithe receipts.

¹⁶ Agricultural Land Classifications may be found at <http://www.magic.gov.uk> and <http://www.defra.gov.uk/rds/publications/technical/alc.pdf> (viewed 2 July, 2008).

Faversham together had nearly 14,000 inhabitants in the 1520s.¹⁷ Faversham was an important coastal port through which London was supplied with grain.¹⁸ Hambledon and East Meon were also fairly well situated in terms of commercial potential. Winchester, a city of between 10,000 and 12,000 inhabitants at the beginning of the fourteenth century, was around 15 miles to the west and there were other market centres within the same radius including Southampton, Portsmouth, Bishop's Waltham, Meonstoke, New Alresford and Petersfield.¹⁹ Cultivators in Feering did not enjoy the proximity of so many marketing centres but there was considerable urban demand. Colchester, a town of between 3,000 and 4,000 inhabitants in 1300 and perhaps double that in 1400, lay fewer than nine miles to the north-east of Feering.²⁰ London and surrounding boroughs were approximately 45 miles to the south-west and it is known that grain from the parish was exported to outside the region.²¹

This paper contains a comparison between tithe receipts and output on manorial demesnes as a means of examining similarities and differences between peasant and seigneurial production. In all cases, the manorial demesnes from which data were used belonged to the titular rectors of the parishes. Data from the glebe were collected in addition to those from the manor at East Meon. In the case of Monkton in Kent, data were used from the glebe rather than from the larger manorial demesne because more data survive from the former. In the first section, broad similarities in tithe receipts and demesne output are considered and attributed largely to physical and commercial geography. In the second section, the extent to which the different restraints operating on peasant and seigneurial producers affected output from their holdings is examined. In the third section, the different consumption priorities in the two sectors are discussed. Finally the data are broken down into pre- and post-Black Death series for an examination of the effect of depopulation on output.

I

Table 1 shows that the composition of the tithe returns is broadly similar to the seigneurial output from the same areas. There is an apparently direct relationship between the proportion of oats in the harvest and the quality of the arable land in the parish. In Eastry and Monkton, where the arable land is classified grade one and two, oats represented on average 8 per cent of tithe output and 10 per cent of demesne output. In Birchington, where there is more grade three arable land, oats were a little more important, representing on average 15 per cent of tithe output. By contrast, in the Hampshire and Essex parishes, oats represented nearly one-third of total tithe output and over 40 per cent of demesne output. The relationship between the importance of oats in tithe returns and the quality of the arable land is indicated by similar fifteenth-century data from some of the less fertile areas of County Durham, where oats accounted for nearly half of

¹⁷ M. E. Mate, *Trade and economic developments, 1450–1550: the experience of Kent, Surrey, and Sussex* (2006), p. 239.

¹⁸ B. M. S. Campbell, J. A. Galloway, D. Keene and M. Murphy, *A medieval capital and its grain supply: agrarian production and distribution in the London*

region, c.1300 (1993), p. 76.

¹⁹ D. Keene, *Survey of medieval Winchester* (2 vols, 1985), I, pp. 366–68.

²⁰ R. H. Britnell, *Growth and decline in Colchester, 1300–1525* (1986), pp. 49, 159.

²¹ *Ibid.*, p. 47.

TABLE 1. Composition of tithes collected and demesne harvests in Kent, Hampshire and Essex, 1288–1412 (per cent)

	Wheat		Barley		Oats		Rye and mixtures		Legumes	
	tithe	demesne	tithe	demesne	tithe	demesne	tithe	demesne	tithe	demesne
Eastry (Kent) ^a (tithe n=47, demesne n=33)	25	34	62	50	3	11	1	0	9	5
Monkton (Kent) ^{a, b} (tithe n=46, glebe n=36)	20	14	60	76	12	9	3	1	5	0
Birchington (Kent) (n=46)	10	-	64	-	15	-	3	-	8	-
Hambleton (Hampshire) (tithe n=90, demesne n=106)	33	21	33	41	30	35	1	0	3	3
East Meon (Hampshire) (tithe n=73, demesne n=107)	41	36	25	14	29	48	0	0	5	2
East Meon Church manor (Hampshire) (n=98)	-	37	-	16	-	46	-	0	-	1
Feering (Essex) (tithe n=60, demesne n=59)	54	52	4	3	30	37	3	1	9	7

Notes:

^a Manorial data from Kent do not always survive for the same years as the tithe data. All surviving data have been used but then the results tested using only years from which tithe and demesne data survive to ensure that the sample does not affect the interpretation of the results.

^b As explained in the text, the Monkton seigneurial data are taken from the glebe and not from the manorial demesne belonging to the monks with a serjeant rendering a separate account.

Sources: Eastry manor and rectory accounts, Monkton rectory accounts: CCA DCc; Lambeth Palace Library. I am grateful to Professor Bruce Campbell for letting me use data he collected from Eastry and Monkton manors. Hambleton manor and rectory accounts, East Meon manor and rectory accounts, East Meon Church manor accounts: Winchester Pipe Rolls, HRO, 11M59/B1. The Hambleton and East Meon manorial and tithe data were collected and tabulated by J. Z. Titow who made his research notes available: HRO, 97M97. Feering manor and rectory accounts: Westminster Abbey Muniments.

total production.²² Constraints on growing conditions are likely to explain the emphasis on oats production in the Hampshire parishes in particular since, as Campbell pointed out, oats were 'more tolerant of difficult growing conditions than any other crop'. Equally, it is possible that the proximity of urban centres may have meant oats were a profitable cash crop.²³

Soil type was partly responsible for the varied emphasis on wheat and barley. In the north-east Kent parishes, the lighter, sometimes chalky, soil is well suited to the cultivation of barley, which requires soil which is 'light, free, [and] open in texture'.²⁴ The contrast with Feering in Essex is most apparent. This area is characterized by heavier soils, clays and loams: these are better suited to wheat cultivation and do not produce good crops of barley.²⁵ Proportions of wheat and barley received as tithe in the Hampshire parishes are somewhere between the extremes represented by Kent and Essex. In some ways, it is surprising more barley was not harvested there, given the light chalky soils in this downland region.

Any patterns in legume output must be treated with caution given the problems with the data we have already mentioned. Nevertheless, it appears that legumes constituted a smaller proportion of the harvest in Hampshire. This may reflect the lower intensity of cultivation on less fertile soils but is, perhaps, more likely to be the result of the greater availability of pasture in a downland region, and therefore lower requirements for fodder crops.²⁶

The cultivation of rye was of little importance in the manors and parishes considered here but may have been encouraged by different environmental conditions elsewhere. The manor of Lydden, situated five miles east of Monkton and also belonging to the monks of Canterbury Cathedral Priory, provides a case in point. Although the soil is as fertile at Lydden as it is on the Kentish manors included in Table 1, rye and rye mixtures sometimes represented over one-third of total output there.²⁷ It appears that rye may have been preferred on this marshland manor because of its hardiness in cold and exposed conditions. Certainly, the ready accessibility of sizable urban markets must have meant that rye from Lydden was easy to sell.²⁸

Overall, patterns of output appear to have been similar on seigneurial and non-seigneurial land in the six parishes under consideration. Both tithe and manorial demesne output relate to Campbell's national classification of demesne cropping types although obviously the data used here relate to output rather than sown acreage, there being no surviving evidence of the sown acreages from which tithes were taken. Both before and after the Black Death, very intensive cropping regimes were put in place on a number of manorial demesnes in north-east Kent, including Eastry and perhaps also Monkton glebe: fallows were reduced and the nitrogenous properties of legumes were sometimes used to maximize wheat and especially barley production.²⁹ Likewise, what Campbell describes as 'three-course cropping of wheat and oats', with other crops playing only a minor role, prevailed on the clay soils of Essex both

²² Dodds, *Peasants and production*, p. 34.

²³ Campbell, *Seigniorial agriculture*, pp. 224–5.

²⁴ J. A. S. Watson and J. A. More, *Agriculture: the science and practice of British farming* (1945), p. 230.

²⁵ *Ibid.*, pp. 194, 230.

²⁶ Campbell, *Seigniorial agriculture*, p. 229.

²⁷ Lydden manor account 1291–2, CCA, DCc/Lydden

11.

²⁸ Campbell, *Seigniorial agriculture*, p. 220; M. E. Mate, 'The occupation of the land: Kent and Sussex', in E. Miller (ed.), *The Agrarian History of England and Wales*, III, 1348–1500 (1991), p. 120.

²⁹ Campbell, *Seigniorial agriculture*, pp. 253, 278, 269–72, 286–8, 290.

before and after the Black Death.³⁰ The evidence suggests that the techniques were used equally on demesne and peasant land.

II

Despite the broad similarities observed in the composition of tithe receipts and demesne harvests in the three regions under consideration, there are also some important differences. The relatively greater importance of oats cultivation on most manorial demesnes than on tenant land requires closer examination. With the single exception of Monkton, oats represented a larger proportion of the demesne harvest than the tithe receipt in all cases shown in Table 1. Peasant cultivators appear to have grown more legumes than their seigneurial counterparts, suggesting some substitution of legumes for oats. Even taking this into account, fodder crops represented a smaller proportion of tithe receipts than demesne harvests.

This means that peasant farmers produced slightly higher proportions of more valuable cereals at the expense of oats than their seigneurial counterparts. Bailey observed the same greater emphasis on cash crops outside manorial demesnes in Suffolk parishes on the basis of surviving tithe receipt data.³¹ In the sample parishes considered here, the choice of wheat or barley depended partly on the region. In Kent, tenants and peasants appear to have grown less wheat and more barley than their seigneurial counterparts. In Hampshire, they grew approximately equally increased proportions of both wheat and barley. In Essex they grew more wheat and barley but with a considerably greater emphasis on wheat production. Environmental conditions obviously played a major part in this. As mentioned above, in Essex, maximization of barley production would have made little sense because the soil was ill-adapted to the crop.

Within these regional groupings, however, proportions varied from parish to parish, warning against simple explanations. In Hampshire, patterns of barley output varied between the two parishes and the three demesnes. Barley output on the two East Meon demesnes was much lower than on the Hambledon demesne, a difference which also applied, though to a lesser extent, to the tithe receipts. The difference between the two manorial demesnes could be explained by household supply factors but the fact that it is mirrored in the tithe receipts suggests something more may have been at stake. It may be that the character of the soil differed between the two parishes.

The only example in the sample where wheat and barley represented a more significant proportion of demesne than tithe output is Monkton. It may be that the small size of Monkton's glebe (see Table 7) explains this difference: Campbell observed that small demesnes tended to be cultivated more intensively than large ones since the land to labour ratio was lower.³² However, it is likely that consumption decisions were more important: there was no livestock operation on the glebe at Monkton, reducing the need for fodder crops.

In the light of some assumptions often made about peasant agriculture, the observation that high-value bread and brewing grains constituted a slightly higher proportion of tithe receipts

³⁰ Ibid., pp. 257, 262–3, 282, 285.

³¹ M. Bailey, *Medieval Suffolk: an economic and social*

history, 1200–1500 (2007), p. 77.

³² Campbell, *Seigniorial agriculture*, p. 71.

than demesne harvests is surprising. Titow assumed that peasant land would be inferior to that on the manorial demesne and yields would be lower.³³ On this basis, peasant cultivators would be likely to favour oats, which are better able to grow on poor soil than wheat and barley.³⁴ This comparison between tithe returns and manorial demesne output indicates, by contrast, that land outside the manorial demesne was of adequate quality to sustain more demanding cropping regimes than those adopted on the seigneurial land.

Titow also argued that peasants were less likely than lords to have been able to maintain their soil in good heart because they had less access to manure and other types of fertiliser.³⁵ Unfortunately there is little evidence concerning the means by which non-seigneurial producers in these parishes maintained the productivity of the soil sufficiently to sustain crops of wheat and barley. Livestock ratios are likely to have varied considerably from one region to the next. The Hampshire parishes of Hambledon and East Meon were situated in downland areas where there was land ill-suited to arable cultivation. This meant that tenants had access to grazing and sheep constituted an important part of the local economy.³⁶ It is likely that the densely populated parts of east Kent had considerably less available land for peasant livestock, an impression reinforced by Mate's evidence for the continued importance of arable farming in the region even after the Black Death and in the later fifteenth century.³⁷ The areas around Feering may have been more comparable with Kent than with southern Hampshire in terms of pasturing rights. Britnell commented on the irregularity of these rights in Essex and the existence of many villages where tenants had no rights over cultivated land.³⁸ As Stone has recently pointed out, shortage of manure from peasant livestock did not necessarily mean peasant land was inadequately manured. Even a small amount may have sufficed on peasant holdings, if used thoroughly and supplemented with other forms of manure, such as that supplied by poultry and household waste.³⁹ Another means by which productivity may have been maintained on peasant holdings is through the cultivation of nitrogenous legumes. The differences are small, and the data problematic, but it does appear that legumes constituted a more important part of tithe receipts than demesne output in all of the examples considered, with the exception of Hambledon.

Even accepting different levels of access to resources on manorial demesnes and non-seigneurial holdings, the intensiveness with which peasant producers could apply labour is likely to have been decisive in permitting the cultivation of higher-value, more demanding crops. It is probable that there was a lower ratio of land to labour on peasant holdings by comparison with manorial demesnes because of smaller holding sizes and the availability of family labour.

³³ J. Z. Titow, *English rural society, 1200–1350* (1969), pp. 80–1, 95.

³⁴ Campbell, *Seigniorial agriculture*, pp. 225, 260.

³⁵ Titow, *Rural society*, pp. 80–1, 95.

³⁶ J. N. Hare, 'Agriculture and rural settlement in the chalklands of Wiltshire and Hampshire from c.1200–c.1500', in M. Aston and C. Lewis (eds), *The medieval landscape of Wessex* (1994), p. 160; J. N. Hare, 'The Bishop and the Prior: demesne agriculture in medieval

Hampshire', *AgHR*, 54 (2006), pp. 194–6, 198–9; E. Miller, 'Occupation of the land: the southern counties', in Miller (ed.), *Agrarian History*, III, p. 144.

³⁷ Mate, 'Occupation of the land', p. 132.

³⁸ R. H. Britnell, 'Farming practice and techniques: eastern England', in Miller (ed.), *Agrarian History*, III, pp. 199–200.

³⁹ Stone, *Decision-making*, pp. 264–5.

III

So far the differences in the composition of demesne output and tithe receipts have been considered in relation to the resources available to different types of producer. Consumption priorities were also an important factor.

It is usually assumed that peasant producers consumed a large proportion of their output and therefore total output from their holdings should reflect their consumption patterns. In general terms, this appears to have been the case. In particular, barley, which features prominently in both demesne output and tithe receipts, was important in peasant diets. Although an inferior bread grain to wheat in terms of medieval dietary preference, barley offered the advantage of considerably higher yields per acre (Table 2).⁴⁰ However, peasant diet does not seem to be an obvious cause of differences between tithe receipts and demesne output. Indeed, oats were important in the diets of poorer peasants but feature less prominently in tithe receipts than demesne output, as shown in Table 1.

Clearly not all peasants produced solely for their own consumption: a proportion of output was sold. Commercialized output appears to be reflected in the tithe receipts. Aggregate tithe receipts from a parish were composed principally of output from the larger holdings. Even in an extreme situation where a village contained ten virgaters holding 40 acres each and 100 cottagers holding three acres each, nearly 60 per cent of sown acreage would be controlled by the ten virgaters. The likelihood is that the situation was rather less extreme in the parishes under consideration, meaning the larger tenants were responsible for an even larger proportion of total output. Lack of surviving rentals means it is difficult to obtain a clear picture of landholding patterns in these parishes but, in Hambledon and East Meon at least, a significant proportion of land transfers involved full virgates of forty acres.⁴¹ It is usually assumed that the larger the peasant holding, the smaller the proportion devoted to producing food for the peasant family and the larger the proportion devoted to cash crops.⁴² In other words, the composition of tithe receipts probably reflects the output of commercialized larger holdings: it is quite possible that the poorer quality grains featured more prominently in the diets of the poorest villagers than the tithe receipts suggest. For example, rye constituted a greater proportion of tithe returns than demesne output in all cases, except at East Meon where none was produced. Even though rye and mixtures constitute only between zero and 3 per cent of tithe output, these low proportions could hide the greater importance of rye production on the smaller peasant holdings.

However, it should not be taken for granted that arable production was most commercialized on the largest holdings. This may be illustrated by a consideration of the north-east Kent parishes, where barley represented nearly two-thirds of tithe receipts. Barley must have been a profitable cash crop for both seigneurial and non-seigneurial cultivators in

⁴⁰ D. J. Stone, 'The consumption of field crops in late medieval England', in C. M. Woolgar, D. Serjeantson and T. Waldron (eds.), *Food in medieval England: diet and nutrition* (2006), pp. 17, 19.

⁴¹ I am grateful to Dr John Mullan for sharing the findings of his research with me and discussing its

implications for peasant landholding in East Meon and Hambledon.

⁴² J. Masschaele, *Peasants, merchants, and markets: inland trade in medieval England, 1150–1350* (1997), pp. 36–41.

this region. The land was exceptionally fertile and within reach of large urban and overseas markets, creating the ideal circumstances for commercial grain production. Such an intensive cropping regime could also be pursued in a region of flexible agrarian institutions; in a stricter three-field system, maximization of output of a single spring-sown crop would be more difficult.⁴³

Such heavy concentration on the production of barley outside the manorial demesnes is, nevertheless, surprising given the likely predominance of smaller holdings in the region. This was a densely populated and wealthy part of the country and the types of tenure in operation in Kent meant there had been more fragmentation of holdings in this region than in most others.⁴⁴ Dyer's work on peasant budgets has made it clear that it was very difficult for a family to subsist on holdings below a certain size: by the time deductions had been made for seed corn, tithe, and the payments of rents and taxes, very little was left.⁴⁵ Families with such tight budgets are likely to have consumed the cheapest grains, and yet rye, mixtures and oats represented total only 4–18 per cent of cereal output.

It is possible that barley appealed especially to those peasants with the smallest holdings in the Kentish parishes. Smallholders may have sold a very large proportion of their output and bought cheaper foodstuffs, such as rye and oats, for their own consumption. Apart from the natural suitability of the soil, barley, rather than wheat, was a sensible choice in agronomic terms too. Although barley prices were lower, quarter for quarter, than wheat prices, yields per acre were higher. The speculative analysis in Table 2 deploys Campbell's maximum yield figures, gathered from counties in southern and eastern England, to estimate the cash value of a year's output from five sown acres. It must be emphasized that the yields used for these calculations are the highest recorded in Campbell's sample, and have been chosen on the basis that peasant smallholders had strong incentives to maximize output. The difference in income from wheat and barley is lower if mean yield figures are used.⁴⁶ It is possible that lack of access to manure did indeed mean that peasant yields were lower than those on the manorial demesne. A relatively low requirement for manure, however, may be another reason why peasant farmers in Kent chose barley as a major cash crop: too much nitrogen can make a barley crop unsuitable for brewing.⁴⁷

Even if the difference between the cash value of five acres of wheat and five acres of barley was not as great as suggested in Table 2, the use of barley for brewing meant producers could further increase its sale value. Campbell has found examples of instances where a bushel of malted barley sold for 95 per cent of the price of a bushel of wheat. Supposing the barley and wheat prices used in Table 2 were adjusted along these lines, the difference in value between the two crops would be even greater. Needless to say, malting the barley would require additional labour and expense. However, in a high-pressure economy in which producers were struggling to make ends meet, such effort would be justified. There is plenty of Kentish evidence for the

⁴³ Campbell, *Seigniorial agriculture*, p. 274.

⁴⁴ B. M. S. Campbell and K. Bartley, *England on the eve of the Black Death: an atlas of lay lordship, land and wealth, 1300–49* (2005), pp. 314–49; M. E. Mate, 'Tenant farming and tenant farmers: Kent and Sussex', in Miller

(ed.), *Agrarian History*, III, p. 681.

⁴⁵ C. Dyer, *Standards of living in the later Middle Ages: social change in England, c.1200–1520* (1998), pp. 117–8.

⁴⁶ Campbell, *Seigniorial agriculture*, pp. 322–3.

⁴⁷ *Ibid.*, p. 222.

TABLE 2. Estimating the value of land sown with wheat and barley

	<i>Five acres sown with wheat</i>	<i>Five acres sown with barley</i>
Maximum yield per acre	2qr. 2.6bz.	4qr. 4bz.
Output	11qr. 5bz.	22qr. 4bz.
Price per quarter	6s. 4d.	4s. 7½d.
Value of output	£3 13s. 7d.	£5 4s. ½d.

Note: The table shows that the value of the barley output is 1.41 times the value of the wheat output.

Sources: B. M. S. Campbell, *English seigniorial agriculture* (2000), pp. 332–3; G. Clark, 'The price history of English agriculture, 1209–1914', *Research in Economic History*, 22 (2004), pp. 41–125.

presence of maltsters in the villages, operating on both a large and small scale, showing that some producers probably did follow this approach.⁴⁸

Overall, it is apparent that the relationship between production and consumption is not a simple one. The greater significance of barley, rye and mixtures in tithe returns may reflect peasant diets. However, it is possible that the tithe receipts conceal the greater significance of cheaper grains on the smallest peasant holdings. Equally, it is also possible that those peasants with the smallest holdings were some of the most commercialized, cultivating barley as a cash crop, malting it to obtain a higher sale value, and then obtaining cheaper foodstuffs for consumption.

The picture is further complicated by the fact that arable crops were not, of course, consumed only by humans. Legumes and oats, in particular, were widely used as fodder crops. Legumes constituted a larger proportion of tithe returns than demesne output in all five examples in Table 1, a factor which may be related to the role of leguminous crops in maintaining soil fertility, as mentioned above. It is also possible that peasant producers required more fodder crops to feed livestock because of limited access to pasture. Equally, the managers of manorial demesnes needed oats both for horses employed in ploughing and carting on the demesne and for horses used in the lord's household. The latter may have been particularly significant in the demesnes considered here since all except Feering were within fairly easy reach of the lords' households.

However, it is likely that there were more horses on peasant holdings than on the manorial demesnes, especially on the holdings of less substantial tenants. This is due to their greater versatility and the availability of older animals at cheap prices because they had no value for food at slaughter. In the light of this evidence, the fact that oats represented a smaller proportion of tithe receipts than manorial demesne output requires consideration. This is particularly striking in Kent, an area in which the evidence from inventories suggests horses were heavily used on peasant holdings, yet where tithe receipts from oats were low. It is possible that this apparent anomaly is explained by the differing workloads of horses on peasant and seigniorial holdings. Langdon pointed out the impact of this on feed requirements. The smaller size of peasant holdings meant peasant horses did less ploughing than their demesne counterparts. For much of the year, when the peasant horses were not required to undertake very heavy work,

⁴⁸ Mate, 'Occupation of the land', pp. 132, 134.

they could be fed on cheaper products than oats such as hay, grass and vetches.⁴⁹ In this way, even in areas where horses were heavily used by peasants with small holdings, the production of oats as a fodder crop did not have to be prioritized.

IV

The Black Death raged in Hampshire, Kent, and Essex from late 1348 to mid-1349, meaning the 1349 harvest was the first affected.⁵⁰ In Tables 3 and 4 the data have been divided into two separate series, before and after 1349, in order to examine any shift in production in response to the demographic downturn. The data reflect the increased importance of wheat and barley in tithe receipts and demesne output after the Black Death. This is commensurate with Campbell's evidence for the increased importance of wheat and barley relative to other bread and brewing grains on manorial demesnes throughout the country after the Black Death.⁵¹ Likewise, in his study of demesne and tithe output in Suffolk, Bailey observed the increased importance of these higher value grains on both seigneurial and tenant land after 1349.⁵² These shifts reflect the changing structure of demand as pressure on resources was relaxed and real wages rose, putting wheaten bread and ale made with barley within reach of a wider section of the population.

Tables 3 and 4 suggest that wheat and barley production expanded more, on average, as a proportion of demesne harvests than tithe receipts: from 63 to 69 per cent by comparison with 70 to 74 per cent. On first glance, therefore, it appears that, in general, the managers of manorial demesnes were responding to shifts in demand with greater alacrity than their counterparts in the peasant sector. It would, however, be unwise to place too much emphasis on the difference observed since it is likely to reflect the different ways in which the two types of cultivator were able to respond to changed economic circumstances. On manorial demesnes, oats output often contracted in the aftermath of the Black Death because the poorest land was withdrawn from cultivation.⁵³ The contraction of arable acreages on the Hampshire demesnes is clear from a comparison of the amounts of land sown in 1301–2 and 1409–10, shown in Table 5. On both East Meon and Hambledon demesnes, there were sharp falls in the percentage of sown acreage devoted to oats although on East Meon Church demesne this remained approximately the same. Table 6 shows a sharp fall in overall sown acreage at Feering and a fall in oats as a percentage of sown acreage across approximately the same period. Likewise, the proportion of acreage devoted to oats at Eastry fell, though it remained the same on the small glebe at Monkton (Table 7).

A retreat from poorer quality land may also have occurred outside the manorial demesnes as the demand for land fell. However, the contraction in sown acreage is unlikely to have been as marked, not least because land no longer cultivated as part of the manorial demesne was often

⁴⁹ J. Langdon, *Horses, oxen and technological innovation: the use of draught animals in English farming from 1066 to 1500* (1986), pp. 175, 178, 204, 228–9, 251–3; J. Langdon, 'The economics of horses and oxen in medieval England', *AgHR*, 30 (1982), pp. 37–9.

⁵⁰ P. Ziegler, *The Black Death* (1970), pp. 148, 167–8,

173; O. J. Benedictow, *The Black Death, 1346–1353: the complete history* (2004), pp. 132, 134.

⁵¹ Campbell, *Seigniorial agriculture*, pp. 243, 244.

⁵² Bailey, *Medieval Suffolk*, pp. 212–3.

⁵³ Campbell, *Seigniorial agriculture*, p. 301.

TABLE 3. Composition of tithes collected and demesne harvests in Kent, Hampshire and Essex, 1288–1348 (per cent)

	Wheat		Barley		Oats		Rye and mixtures		Legumes	
	tithe	demesne	tithe	demesne	tithe	demesne	tithe	demesne	tithe	demesne
Eastry (Kent) ^a (tithe n=29, demesne n=24)	25	33	62	49	2	12	1	0	10	6
Monkton (Kent) ^{a, b} (tithe n=31, glebe n=18)	18	5	61	87	11	8	4	0	6	0
Birchington (Kent) (n=31)	9	–	65	–	15	–	3	–	8	–
Hambleton (Hampshire) (tithe n=39, demesne n=50)	33	23	30	28	31	46	1	0	5	3
East Meon (Hampshire) (tithe n=27, demesne n=51)	38	33	22	13	35	54	0	0	5	0
East Meon Church manor (Hampshire) (n=43)	–	36	–	14	–	49	–	0	–	1
Feering (Essex) (tithe n=39, demesne n=36)	55	54	2	0	32	40	3	1	8	5

Notes and sources: as for Table 1.

TABLE 4. Composition of tithes collected and demesne harvests in Kent, Hampshire and Essex, 1349-1412 (per cent)

	Wheat		Barley		Oats		Rye and mixtures		Legumes	
	tithe	demesne	tithe	demesne	tithe	demesne	tithe	demesne	tithe	demesne
Eastry (Kent) ^a (tithe n=18, demesne n=9)	26	35	62	52	3	10	1	0	8	3
Monkton (Kent) ^{a, b} (tithe n=15, glebe n=18)	23	23	60	64	12	10	2	3	3	0
Birchington (Kent) (n=15)	12	-	61	-	15	-	3	-	9	-
Hambleton (Hampshire) (tithe n=51, demesne n=56)	34	19	35	53	30	25	0	0	1	3
East Meon (Hampshire) (tithe n=46, demesne n=56)	42	40	27	16	26	41	0	0	5	3
East Meon Church manor (Hampshire) (n=55)	-	38	-	17	-	45	-	0	-	0
Feering (Essex) (tithe n=21, demesne n=23)	52	49	9	7	27	32	1	1	11	11

Notes and sources: as for Table 1.

TABLE 5. Sown acreages on Hampshire demesnes belonging to the bishops of Winchester, 1301-2 and 1409-10

	Wheat		Barley		Oats		Rye and mixtures		Legumes		Total acreage	Percentage rise or fall in total acreage
	acreage	%	acreage	%	acreage	%	acreage	%	acreage	%		
East Meon 1301-2	608	44	95	7	685	49	-	-	-	-	1388	
East Meon 1409-10	160	49	40	12	105	33	-	-	19	6	324	77% fall
East Meon Church 1301-2	129	44	58	20	105	36	-	-	-	-	292	
East Meon Church 1409-10	25	46	9	17	20	37	-	-	-	-	54	82% fall
Hambledon 1301-2	75	31	33	14	131	55	-	-	1 ^a)	>1	240	
Hambledon 1409-10	45	30	54	36	36	24	-	-	14	10	149	38% fall

Note: ^a 2bz. of peas were sown but no acreage is given. In the same year, peas were sown at a rate of 3bz. an acre in Cams (Hampshire).

Source: M. Page (ed.) *The Pipe Roll of the Bishopric of Winchester, 1301-2* (Hampshire Rec. Ser., 14, 1996), pp. 288-9, 294-5, 300-1; M. Page (ed.) *The Pipe Roll of the Bishopric of Winchester, 1409-10* (Hampshire Rec. Ser., 16, 1999), pp. 269-70, 277-8, 288.

TABLE 6. Sown acreages on the demesne at Feering belonging to the monks of Westminster Abbey, 1301-2 and 1403-4

	Wheat		Barley		Oats		Rye and mixtures		Legumes		Total acreage	Percentage rise or fall in total acreage
	acreage	%	acreage	%	acreage	%	acreage	%	acreage	%		
1301-2	276	53	-	-	236	46	-	-	6	1	518	
1403-4	138	42	27	8	107	32	2	1	58	17	332	36% fall

Source: WAM25605, 25606, 25758

TABLE 7. Sown acreages on the demesne and glebe in Kent belonging to the monks of Canterbury Cathedral Priory, 1306-74

	Wheat		Barley		Oats		Rye and mixtures		Legumes		Total acreage	Percentage fall or rise in acreage
	acreage	%	acreage	%	acreage	%	acreage	%	acreage	%		
Eastry 1306-48 (n=23)	82	28	108	37	30	10	0	0	72	25	292	
Eastry 1349-74 (n=10)	81	35	90	39	15	6	0	0	46	20	232	21 % fall
Monkton glebe 1306-48 (n=20)	1	5	10	50	2	10	0	0	7	35	20	
Monkton glebe 1349-74 (n=18)	6	19	13	42	3	10	1	3	8	26	31	55 % rise

Source: CCA, DCc and Lambeth Palace Library, Eastry manor accounts, Monkton rectory accounts. I am grateful to Professor Bruce Campbell for letting me use data which he collected.

leased to local tenants. In other words, manorial demesne output data represent production on land that one landowner chose to cultivate. Tithe, by contrast, was owed by the cultivators of all the land in the parish. Even if a wealthy peasant chose to sublet part of his holding, this sublet land would still be included in the tithe return. Overall, changes in the structure of demand for grain in the aftermath of the Black Death appear to have been one cause of the relative increase in the production of wheat and barley in both the seigneurial and non-seigneurial sectors. It is argued here that the greater magnitude of the shift in the seigneurial sector may have been the result not of different production decisions in the two sectors, but rather differences in the types of data available.

V

This comparison of demesne output data and tithe receipts has demonstrated the similarity of the composition of the harvest in the seigneurial and peasant sectors. This is partly explained by the physical and economic geography of the regions under consideration, factors which affected both sectors alike. However, the comparison also sheds light on the impact of restraints and incentives on peasant producers. It is apparent that, in aggregate terms at least, peasant producers were not prevented from implementing demanding cropping regimes by poor soil, inadequate equipment or low levels of investment. On the contrary, producers outside the seigneurial sector were able to implement cropping regimes similar to, and often more intensive than, those put in place by managers of manorial demesnes. In the period following the Black Death, peasant producers were able to respond to changes in demand just like their counterparts in the seigneurial sector. Nor do peasants appear to have been producing solely for their own consumption. The prominence of the more valuable and demanding bread and brewing grains in tithe receipts indicates the importance of production for the market.

Tithe receipts represent one tenth of aggregate output and therefore reflect the composition of output on the larger holdings in each parish. This means that, whilst it is possible to confirm the similarity of aggregate output in the seigneurial and non-seigneurial sectors, significant differences in the composition of output on the largest and smallest holdings may be hidden in the data. It is possible that peasants with smaller holdings, little access to pasture and more limited resources to invest were not able to pursue such intensive cropping regimes as their wealthier neighbours. However, the Kentish parishes examined in this study suggest that the most commercially-minded non-seigneurial cultivators may have been found amongst smallholders forced to maximize the sale value of their output in order to make ends meet.

Medieval England is a long way chronologically and geographically from the fictitious scene in the seventeenth-century plains of Castile. However, Cervantes gave us a picture of a wealthy peasant family making strategic cropping decisions and it is from families such as these, we hope ones in which the eldest sons survived their unrequited love for local shepherdesses, that our tithe data derive. These data tell us that peasants were making decisions on cropping strategies and yield raising techniques, based perhaps on the movement of the stars but certainly on the opportunities presented by physical and commercial geography.