

Chicken Husbandry in Late-Medieval Eastern England: c. 1250-1400

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KEY WORDS

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ABSTRACT

The present article studies the place of the chicken within the changing environment of late-medieval England. First, it looks at the seigniorial sector of chicken farming, in terms of size of stocks, patterns of disposal and scale of consumption. It then explores the patchy data regarding the peasant sector. The study shows that overall patterns differed between the pre- and post-Black Death periods. After the pestilence, chicken husbandry started shifting from the demesne to the peasant sector of agriculture. The post-1350 changes reflect larger processes, which occurred in late-medieval society, economy and environment.

RÉSUMÉ

L'élevage des poulets en Angleterre orientale durant la période médiévale tardive : ca. 1250-1400

Cet article étudie la place du poulet dans l'environnement changeant de l'Angleterre médiévale tardive. Il examine d'abord le secteur seigneurial de l'élevage du poulet, en termes de dimension des stocks, modèles d'écoulement et échelle de consommation. Il explore ensuite les données, inégales, concernant le secteur rural. L'étude montre que les modèles globaux ont différé entre les périodes pré- et post- Peste noire. Après la peste, l'élevage des poulets a commencé à s'éloigner du domaine vers le secteur rural de l'agriculture. Après 1350, les changements sont le reflet de plus grandes transformations, qui se sont produites dans la société, l'économie et l'environnement de l'époque médiévale tardive.

MOTS CLÉS

Volaille,
poulets,
chapons,
œufs,
domaine,
paysans,
la Peste noire,
nourriture.

INTRODUCTION

The present paper explores the place and importance of the chicken within the shifting context of late-medieval English agriculture, society and environment, between *c.* 1250 and 1400. It shows how the history of chicken husbandry reflects larger processes and phenomena connected to this context. During this period, England experienced a long series of profound changes and shocks, which transformed its society, economy and environment. Perhaps the strongest shock was mass human mortality, known as the Black Death, which ravaged England between 1348 and 1351, killing around forty percent of its population. Besides its profound demographic impact, however, the Black Death represents the line between the “pre-Black Death” period of population pressure and lower living standards, and the “post-Black Death” era of low people-to-land ratio, high real wages and hence rising living standards. The post-pestilence period is also marked by the decline and eventual disappearance of direct demesne agriculture and the expansion of peasant farming. The research is based on about 3,500 manorial accounts from some 300 demesnes from eastern England (Cambridgeshire, Essex, Huntingdonshire, Norfolk, Suffolk and parts of Peterborough’s hinterland in Northamptonshire) (Fig. 1). This region was chosen for two reasons. First, it was an area of particularly high population density and relatively high land values (Campbell & Bartley 2006: 165-195), where chicken production might find a particularly viable niche. Second, the relevant sources, and especially the manorial accounts, are rich for this part of England at the time, particularly in Norfolk (Campbell 2003: 33-34).

Chronologically and geographically, the accounts are distributed unevenly, depending on availability of surviving material. In most cases, the more complete body of material comes from larger ecclesiastical estates, such as Norwich Cathedral Priory, Bury St Edmunds Abbey, Ely Bishopric, Ramsey Abbey and Peterborough Abbey. “Lay” demesnes constitute about forty per cent of the sampled *loci* and their accounts tend to be far less consecutive than their religious counterparts. The accounts become especially prolific towards the end of the

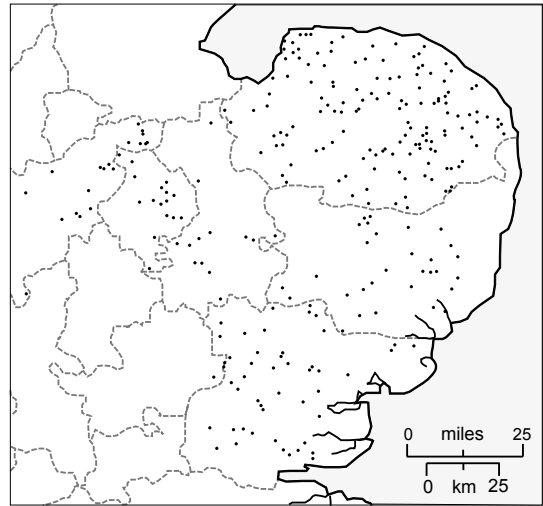


FIG. 1. — Demesnes Represented in Study.

thirteenth century and reach their height in the first decade of the fourteenth century, generally considered the peak of “high farming” in the Middle Ages (Fig. 2).

Although poultry occupied the smallest part of demesne livestock, constituting about two per cent of it (Table 1), its social importance and omnipresence cannot be understated, despite scholarly marginalization. Chicken meat constituted an important part of everyday diet, and it was afforded by virtually every social stratum both in England and the Continent (Schubert 2006: 120-5; Stone 2006: 154). This stood in contrast with “decorative birds”, that is swans and peacocks, stocked for consumption on the one hand, and the reasons of aesthetics and conspicuous social prestige on the other (Freedman 2002; Albarella & Davis 2002; Sykes 2004). Of all domestic birds, chickens (hens, cocks and capons) were the most numerous, kept on vast majority of demesnes. Just as with other poultry, chicken rearing was naturally labour-intensive enterprise, commanding high unit costs, but not necessarily high prices. Unlike today, late-medieval chickens were free-range. As available evidence suggests, chickens were tended by dairy-maids and occasionally by children (Langdon *et al.* 2008: 51). Their duties included walking and

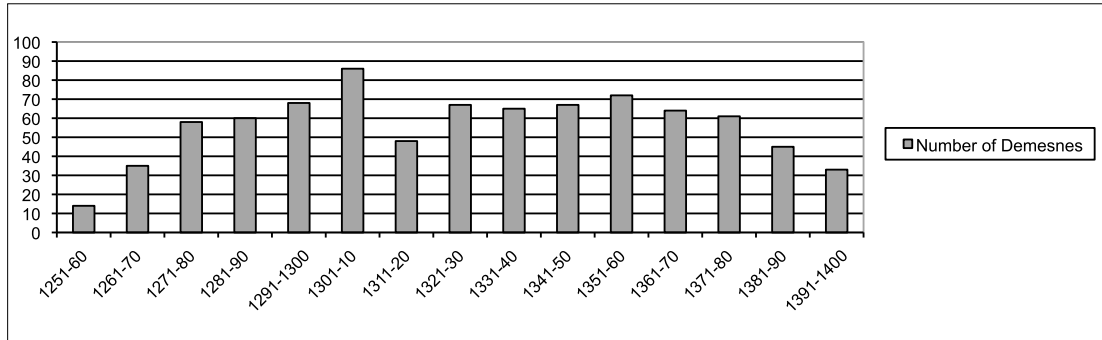


FIG. 2. — Chronological Distribution of Demesne Accounts Used in the Study.

TABLE 1. — Total Livestock Distribution in Norfolk, 1251-1400.

Decade	Equids	Bovids	Ovids	Suids	Poultry	Total
1251-1260	19%	69%	6%	5%	1%	100%
1261-1270	17%	67%	6%	7%	4%	100%
1271-1280	20%	63%	8%	5%	4%	100%
1281-1290	28%	62%	5%	2%	3%	100%
1291-1300	18%	65%	10%	3%	3%	100%
1301-1310	19%	55%	18%	5%	4%	100%
1311-1320	20%	53%	14%	6%	7%	100%
1321-1330	25%	52%	14%	6%	3%	100%
1331-1340	17%	58%	19%	4%	2%	100%
1341-1350	17%	60%	14%	5%	4%	100%
1351-1360	16%	57%	21%	3%	2%	100%
1361-1370	15%	60%	14%	5%	6%	100%
1371-1380	17%	52%	15%	10%	6%	100%
1381-1390	18%	60%	16%	4%	2%	100%
1391-1400	15%	52%	28%	3%	2%	100%
Average	19%	59%	14%	5%	4%	100%

Source: Accounts Database.

Note: The distribution is calculated, following and extending upon Campbell (2000), p. 104-5, in livestock units rather than total animal heads. Each animal group is weighted according to its relative financial value. Livestock units = [horses × 1.0] + [(oxen + adult cattle) × 1.2] + [immature cattle × 0.8] + [(sheep + swine) × 0.1] + [swans × 0.27] + [cygnets × 0.11] + [peacocks × 0.22] + [peachicks × 0.06] + [pheasants × 0.13] + [geese × 0.02] + [goslings × 0.01] + [(ducks + hens + roosters + chicks) × 0.01] + [capons × 0.02] + [pigeons × 0.002].

supervising the birds; watching for predators; feeding them with barley; walking them back to hen-houses; and driving them to local markets. In terms of maintenance costs, chickens were cheaper than

other birds. Unlike geese, they do not graze on pasture and are too small and weak to destroy crops. Chickens are *omnivores* feeding on seeds, grass, leaves, soil, insects, smaller animals and mollusks,

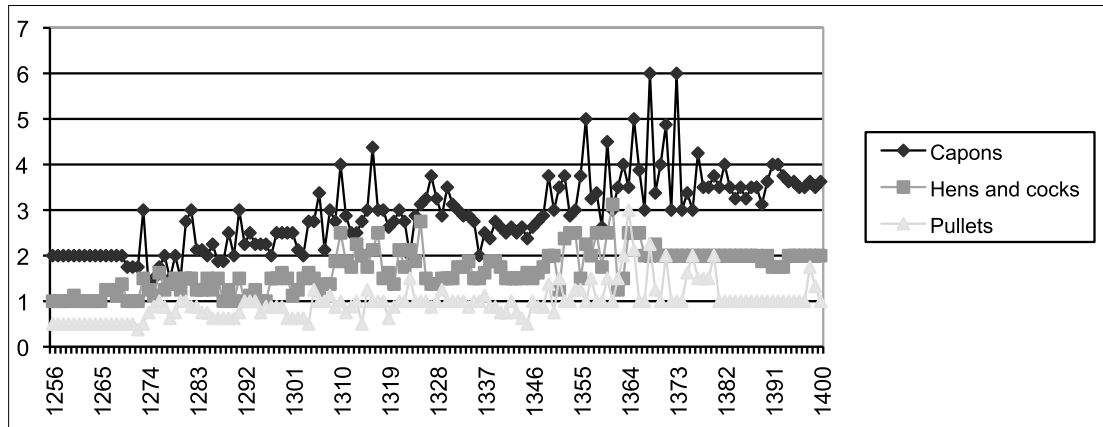


FIG. 3. — Chicken Prices in Eastern England, 1256-1400 (in pence per bird).
Sources: Rogers 1866; Rogers 1882.

including snails and slugs. By keeping the latter down, chickens contribute a great deal to organic farming, especially in rainy seasons. Hens lay more eggs than geese or ducks. Capons require about half the calories less than geese to be fattened (Stephenson 1977-1978: 22). Finally, chicken manure can be used as fertilizing agent, in contrast with that of water-fowls (Stratton & Rechcigl 1998: 67; Smil 2000: 67-8).

The British variety of chicken, known as the Dorking, seems to have been introduced by the Romans. The breed is described by Columella in his *De re rustica*, as fowls having square frame, broad breast and short legs with five claws (Stephenson 1977-8: 18). Chicken husbandry was prolific in both the Roman and Anglo-Saxon periods, as various sources, textual and archaeological alike, indicate (Brothwell 1997; Maltby 1997). It is not until *c.* 1250, however, that the historical data become quantitative enough to be subjected to robust statistical analysis, which can establish regional and chronological patterns of chicken husbandry in England. Before we establish the place and contribution of chickens to the poultry sector, it is necessarily to convert their raw numbers into "poultry unit" equivalents, on the basis of relative sale prices (Fig. 3). Here I follow and extend upon the method employed by Bruce Campbell regarding livestock animals (Campbell 2000: 104-5). Using the goose,

the most expensive bird within domestic poultry, as the guideline, we arrive at the following figures: geese $\times 1.0$; goslings $\times 0.63$; ducks $\times 0.48$; capons $\times 0.84$; hens and cocks $\times 0.50$; pullets $\times 0.29$.

Over the entire period, chickens constituted about 56 per cent of the poultry sector. The figures, naturally, varied from place to place and from year to year. In the 1260s, an average demesne expected to have stocked about 15 chicken units (Table 2). In the following decade, however, the figures fell, partially because of managerial decision to expand the goose stocks. The chicken sector expanded considerably in the 1290s, and between the 1300s and 1390s, the figures remained, to a large degree, stable, with each demesne rearing between 10 and 13 chicken units. After the Black Death, the chicken sector accounted for around 60 per cent of all demesne birds. This went hand in hand with the decline of geese and dairy farming, which by *c.* 1400 faded from the demesne and passed to the peasantry. This development will be discussed further. In the last decade of the fourteenth century, there was a further decline in chicken stocks, when an average demesne, if still kept in hand, reared some seven fowls. Evidence from manorial accounts closely agrees with archaeological findings. Chicken bones account for about sixty per cent of all avian bones recovered at various historical sites from the tenth to sixteenth centuries (Serjeantson 2006: 134-137).

TABLE 2. — Weighted Average Demesne Poultry Population in Eastern England, 1261-1400.

Decade	IN UNITS				As%			
	Geese	Ducks	Chickens	Total	Geese	Ducks	Chickens	Total
1261-1270	8	0	15	23	34%	1%	65%	100%
1271-1280	11	0	9	20	56%	2%	42%	100%
1281-1290	9	0	9	18	48%	2%	50%	100%
1291-1300	5	0	11	17	31%	0%	69%	100%
1301-1310	13	0	10	24	54%	2%	44%	100%
1311-1320	7	1	14	23	32%	5%	63%	100%
1321-1330	10	3	14	27	36%	10%	54%	100%
1331-1340	9	1	11	21	43%	6%	51%	100%
1341-1350	11	2	13	26	42%	8%	50%	100%
1351-1360	7	1	11	18	37%	6%	58%	100%
1361-1370	7	1	11	19	38%	5%	57%	100%
1371-1380	6	1	12	19	32%	6%	62%	100%
1381-1390	6	1	11	18	34%	4%	61%	100%
1391-1400	5	0	7	12	40%	4%	56%	100%
Average	8	1	11	20	40%	4%	56%	100%

Source: Accounts Database.

Note: The distribution is calculated in poultry units (PU) rather than poultry heads, relative to the goose. PU = geese $\times$ 1.0; goslings $\times$ 0.63; ducks $\times$ 0.48; capons $\times$ 0.84; hens and cocks $\times$ 0.50; pullets $\times$ 0.29. The table excludes semi-domesticated and wild birds, including swans, peacocks, pheasants, pigeons, cranes and herons.

DEMOGRAPHY, BIOLOGY AND PRODUCTIVITY OF CHICKENS

Over the entire period, there was a pronounced change in the proportion of chicken stocks kept on various demesnes. Around 1260, about 40 per cent of the sampled demesnes expected to have between five and fifteen chickens; stocks with 50 fowls or more were exceptional. Over 17 per cent did not house chicken cohorts at all. Somewhat different was the situation c. 1300, when the proportion of “chickenless” manors fell to below 10 per cent, while the proportion of demesnes with 15-to-30 fowls rose from some 13 to 31 per cent. The number of larger aviaries stocking between 30 and 50 chickens rose, too. On the eve of the Black Death, almost half of all the sampled demesnes

stocked between 15 and 30 birds, while only some 6 per cent of all manors did not house chickens. In the closing decades of the fourteenth century, the “Indian Summer” of demesne farming, the proportion of chicken-free demesnes rose to its 1260 level, mostly at the expense of the “15-to-30 chickens” group. What is interesting is that the proportion of meagre aviaries, with less than five birds, did not change over the entire period, having remained around three per cent of all observations. Naturally, chicken stocks varied in size from place to place (Table 3). Some demesnes had very large aviaries, by any standards. For instance, Westbury (Essex) populated well over 100 chickens in the 1320 s.¹ On the one hand, some demesnes, such as Cratfield and Framlingham in Suffolk, or Eastwood and Hadleigh in Essex, did not keep

1. The National Archives, SC 6/849/11.

TABLE 3. — Size of Chicken Stocks on Eastern England Demesnes: c.1260, 1300, 1340 and 1380.

Chickens	c.1260	c.1300	c.1340	c.1380
>150	1%	0%	1%	0%
100-150	1%	0%	1%	0%
75-100	5%	3%	1%	0%
50-75	4%	5%	1%	3%
30-50	14%	24%	18%	16%
15-30	14%	32%	45%	31%
5-15	41%	22%	25%	29%
1-5	3%	4%	3%	4%
no chickens	18%	10%	6%	17%
Total	100%	100%	100%	100%
<i>Demesnes Sampled</i>	74	154	137	110

Source: Accounts Database.

chickens at all.² The size of chicken stocks was by no means constant. At Ditchingham (Norfolk), there were as many as 522 chickens in the late 1260s, while there was not a single fowl in the following decade³.

Similarly, the internal composition changed over the entire period. The chicken stocks were made of three main components: capons (castrated cocks); hens and cocks; and pullets. Before the 1290s, most accounts did not distinguish between capons and hens/cocks and recorded them under the same rubric and the actual numbers of the former must have been strongly under-represented. Hence, to avoid false figures, Table 4 accounts for sexed and neutered chickens together before the 1290s. Mature chickens, that is capons, hens and cocks, were especially numerous in the 1260s, when their average number approached thirty. In the following decade, however, their number fell by about fifty percent. This was likely to have been influenced by relatively low prices of chicken in that decade. In the 1290s, most accounts started distinguishing between hens/cocks and capons and giving separate

statistics for each kind. As the accounts indicate, there were about five capons per demesne during that decade (Table 4). In the 1300s, however, the figures fell to about four capons per demesne. In the 1330s, when grain and livestock prices collapsed, demesne officials reduced the overall number of hen stocks, primarily by leasing hens with their issue. Between c. 1340 and c. 1390, one witnesses two reversed trends within the capon and hen/cock sectors: the augmentation of the former and decline of the latter. The expansion of capons mirrors their rising prices, brought about by increasing demand after the Black Death. Hen/cock prices rose too, but their numbers paradoxically fell. This phenomenon reflects the gradual waning of capons and hens from the demesne, which was a part of a larger process of the retreat from direct management of the demesne. Furthermore, this went hand-in-hand with the abandonment of small-scale and labour-intensive enterprises and the switch to larger scale sectors, commanding less labour inputs. This fact will be discussed below.

Pullets were always stocked in modest numbers. At the peak of their presence on the demesne, around c. 1300, they constituted over one-third of all gallian birds. After the Black Death, however, the pullets gradually vanished and disappeared from the demesne sector in the 1370s. Their disappearance has to do with the leases of demesne chickens, whereby the farmers retained the issue, both pullets and eggs.

In order to appreciate the demographic breakdown within the chicken sector, it is essential to consider the biology of these birds. Dorking hens start laying infertile eggs at the age of about five-six months, while the optimal age for the first copulation is twelve months. A healthy cock can serve up to 30 hens at a time, in contrast to drakes, cobs and ganders, which “marry” for life. The laying starts in January, intensifies in March and reaches its peak from April to June. At this point, also the brooding process begins. An average hen lays eight to ten eggs in the nest. Incubation period lasts three weeks and hatching success/failure depends of several factors, biological, ecological and human. As we shall see later, a full clutch by modern standards

2. The National Archives, SC 6/994/29-995/2, 9-12; SC 6/997/2-5, 7-8, 12-19; SC 6/840/19-21; SC 6/843/2-9.

3. The National Archives, SC 6/933/20, 23-934/3.

TABLE 4. — Demographic Distribution within the Chicken Sector, 1261-1400 (in Heads and as Percentage).

DECADE	IN HEADS				As%			
	Capons	Hens & cocks	Pullets	Total	Capons	Hens & cocks	Pullets	Total
1261-1270		29		29		100%		100%
1271-1280		15	2	17		91%	9%	100%
1281-1290		15	4	19		81%	19%	100%
1291-1300	5	12	5	22	22%	55%	23%	100%
1301-1310	4	9	9	22	18%	43%	39%	100%
1311-1320	4	19	5	28	14%	67%	18%	100%
1321-1330	6	16	4	27	24%	59%	17%	100%
1331-1340	5	12	4	21	22%	57%	20%	100%
1341-1350	8	10	4	22	38%	46%	17%	100%
1351-1360	8	7	1	16	48%	45%	6%	100%
1361-1370	8	8	0	16	47%	50%	3%	100%
1371-1380	9	8	1	18	52%	45%	4%	100%
1381-1390	9	8	0	16	53%	47%	0%	100%
1391-1400	6	5	0	10	53%	47%	0%	100%
<i>Average</i>	<i>5</i>	<i>12</i>	<i>3</i>	<i>20</i>	<i>30%</i>	<i>58%</i>	<i>13%</i>	<i>100%</i>

Source: Accounts Database.

Note: Before c. 1290, most rolls accounted for chickens and capons together, without differentiating between the two. Hence, the table includes both chickens and capons under the 'hens and cocks' heading before the 1290s. Similarly, in the 1260s, most accounts accounted for pullets and hens/cocks together.

was not achieved in the late Middle Ages. Brooding is followed by moulting (replacement of feathers), which may last between two and eight weeks, and during which hens do not lay eggs. Modern hens can lay up to 300 eggs a year: a figure never achieved by their medieval ancestors. Although hens can lay for several years, laying ability and overall fertility declines after the first laying season. An average lifespan of a free-range hen is around eight years. The majority of pullets are slaughtered and consumed well before reaching their maturity, and only few are left to replace older hens and cocks or to be castrated, and later consumed. Castration of male pullets, otherwise known as "caponization", is a complex and delicate operation, whereby the chicken's reproductive organs are removed. A mature

capon has a higher calorific and fat content, and, consequently, more weight than non-castrated chickens (an average capon weighs ten pounds, as opposed to cocks and hens weighing nine and seven pounds respectively).

Chicken biology dictated, to a large degree, the demographic composition and reproduction of late-medieval galline stocks. In terms of sex ratio, hens constituted the vast majority of chicken stocks (despite the fact that each hatch produced male and female pullets in a roughly equal proportion). Normally, there was one cock per fifteen hens, but the figures varied from place to place, and depended on the size of galline stocks. Thus, one cock serviced three to four hens at Widford and Samford (Essex) and as many as 24 hens at Gnatingdon (Norfolk)⁴.

4. The National Archives, SC 6/846/27-39; SC 6/843/12; SC 849/28-34; Norfolk Record Office, LeStrange Collection IC/14-25.

TABLE 5. — Egg Yields, as Recorded in Manorial Accounts.

Percentage Group	No of observations	Average	As% of total
>100	31	135	10%
81-100	33	90	11%
61-80	59	68	19%
41-60	107	50	35%
21-40	52	31	17%
<20	21	15	7%
Max	260		
Min	5		
Average	58		
Median	53		
Mode	46		

Source: Accounts database.

The demesne officials tended to leave very few sexed cocks, as hen fertilizers.

Lifespan of demesne chickens depended on the availability of younger fowls. Whenever hatches were successful, or the officials chose not to sell or slaughter the majority of pullets shortly after the hatch, the chicken stocks could be replaced on an annual basis. This was, however, not achieved in the majority of cases. Normally, the chicken's lifespan lasted more than one year, and an example from Sedgeford (Norfolk) might illustrate that. At Michaelmas 1321, the chicken stock there included two newly introduced pullets, four hens introduced in 1320, seven old hens introduced in 1319 and two older birds introduced in 1318⁵. Similarly, chickens were allowed to live for several years at Gateley (Norfolk)⁶. In other words, the lifespan of some demesne chickens could last up to four years and beyond.

Inevitably, chicken productivity went hand-in-hand with their fertility. In most cases, the accounts under-represent the actual numbers of chick issue, because the majority of pullets were butchered and consumed shortly after the hatch. Nevertheless, some rolls do indicate the total issue of pullets. On average, there were between six and seven chicks per nest⁷. This agrees closely with the anonymous *Husbandry*, whose author contended that a hen was ought to produce seven pullets each year (Oschinsky 1971: 424-425).

Establishing annual egg yields per hen is a tricky task, for several reasons. First, most accounts do not specify how many hens did actually lay eggs on an annual basis. Second, some accounts provide fixed and repetitive figures, which make one question their reliability. These "standardized" figures of egg issue were a commonplace in late-medieval accounts, including those from the manors of St. Swithun's Priory, Winchester (Drew 1947: 39). Moreover, it is likely that most accounts under-represent the actual numbers. For instance, at Hinderclay (Suffolk) between 1303 and 1320, eleven hens laid 555 eggs each year, namely 50 eggs per hen each year: a rather low figure, compared with that suggested by the contemporary Walter of Henley and the anonymous author of *Husbandry* (180 and 115 eggs respectively) (Oschinsky 1971: 384, 424-425)⁸. On the other hand, nine hens laid 800 eggs in 1301-1302 on the same demesne (89 eggs per hen a year)⁹. Third, most accounts do not differentiate between hen, duck and goose eggs. Finally, from the 1320s onwards, some chickens were leased out, while the farmers kept the egg revenue. Table 5, indicates that in the majority of cases the accounts report low yields, between forty and sixty eggs per hen. Much more reliable figures seem to have been recorded on some demesnes of Norwich Cathedral Priory, which reported between 70 and 80 eggs per hen a year. One demesne, Hemsby had overwhelming

5. Calculated from Norfolk Record Office, DCN 60/13/19-22.

6. Norfolk Record Office, DCN 60/13/9-15.

7. For instance, 6.4 chicks hatched at Clare (Suffolk), 6.5 Clopton (Suffolk) and 7 at Hinderclay and Redgrave. National Archives SC 6 992/11, SC 6/994/14 and Chicago University Library, Manuscript Collection, Bacon Rolls 325-6, 439-461.

8. Chicago University Library, Manuscript Collection, Bacon Rolls 438-449. It should be noted, however, that some manuscripts of Walter's treatise alter the figure of 180 to 50.

9. Chicago University Library, Manuscript Collection, Bacon Roll 436.

TABLE 6. — Caponization Rates on Hinderclay Demesne, 1300-1405.

Decade	Pullet Issue	Obtained from Elsewhere	Rendered	Total Pullets	Castrated	Castrated as% of total
1301-1310	70	27	0	97	36	37%
1311-1320	70	5	0	75	36	48%
1321-1330	70	16	0	86	36	42%
1331-1340	47	0	0	47	24	51%
1341-1350	0	0	0	0	0	
1351-1360	0	24	24	24	24	100%
1361-1370	0	24	24	24	24	100%
1371-1380	0	24	24	24	21	89%
1381-1390	0	24	24	24	23	94%
1391-1400	0	24	24	24	24	100%
1401-1405	0	24	24	24	24	100%
<i>Average</i>	23	17	13	41	25	76%

Source: Chicago University Library, Bacon Rolls, 435-510.

122 eggs per hen, on an annual basis¹⁰. All these demesnes reported different yields each year. Indeed, one clear indication of the figures' trustworthiness is the annual variances. Hence, one may conclude that late-medieval egg yields were certainly lower than those suggested by idealistic contemporary treatises, but they were higher than usually reported in the accounts, likely reflecting dishonesty of the officials. Seventy to hundred eggs per hen looks as an approximate, but not unlikely figure. It is unclear if differences in kind and quantities of feed account for the differences in egg production. After all, not every account mentioned fodder allocated for chickens.

Although the late-thirteenth century treatise *Husbandry* recommended that three out of seven pullets are to be made capons (43 per cent), caponization rates varied from demesne to demesne (Oschinsky 1971: 424-425). For instance, at Hinderclay (Suffolk), 36 male pullets were castrated each

year between 1300 and 1334 (about 45 per cent of the total pullet numbers, of both sexes). After the Black Death, the number fell to around 24, which accounted for 100 per cent of all pullets rendered by peasants as rent (Table 6). Caponization is a delicate process, which may result in injury and death of a pullet and our rolls are abundant with such incidents. Thus, at Sedgeford 30 capons (out of the total 82) died in the process of castration in 1375¹¹. On average, about 14 per cent of sampled observations of caponization resulted in death¹². As the accounts indicate, the age of castration varied. For instance, between 1312 and 1319, pullets were castrated after Michaelmas (29 September), when they were around the age of five months. Between 1320 and 1334, however, the caponization occurred sometime before that feast, which implies that pullets were younger than that¹³. Typically, caponization can be undertaken when pullets are anywhere between 1.5 and 5 months

10. Norfolk Record Office, DCN 60/4/1-42a; 60/14/6-23, 62/1-2, LeStrange Collection/IC/2-6; DCN 60/23/6-24, 62/12, NNAS 5890 20 D1; DCN 60/33/8-27, 35/18a, 62/1, LeStrange Collection/IB/16-17; DCN 60/15/4/-16.

11. Norfolk Record Office, LeStrange Collection IB/34.

12. For instance, Norfolk Record Office, LeStrange Collection IB/25-40.

13. Chicago University Library, Manuscript Collection, Bacon Rolls 415-461.

old. An anonymous accounting treatise, compiled probably in the thirteenth century, states that the cocks are to be castrated either in March, or between the Feast of Assumption (15 August) and Nativity of Mary (8 September) (Oschinsky 1971: 473)¹⁴. Once castrated, capons were ready to be marketed. Indeed, the accounts hint that capons were never kept on the demesne for more than several months.

CHICKEN DISPOSAL

Annual patterns of disposal, namely incomings and outgoings of chickens, were dictated by the demand, which, in turn, influenced markets and prices. Chicken husbandry, just as dairy, pig and goose farming, was purely a market-oriented sector. Our manorial accounts carefully specify the disposal trends and reveal some changes over the period. The accounts record these patterns according to the following formula: charge (chickens remaining in stocks from a previous year + rendered by peasants/received from elsewhere + added from pullets + purchased) = sum (the total number of all chickens to have been on a demesne at a given year) = discharge (chickens sold + died / butchered + transferred elsewhere + allowed to peasants + remaining in stocks by the time the account is rendered). As Table 7 indicates, one has to distinguish between the pre- and post-Black Death trends. Both before and after the plague, the vast majority of chicken gains came from the peasant sector, rendered as annual rents. Over the entire period, these accounted for over sixty per cent of all chicken incomings. In the 1340s and 1350s, the rents accounted for about two-thirds of the annual incomings. From the 1360s onwards, however, we witness a gradual decline of chickens rendered by the peasants. By the end of the fourteenth-century, when most demesnes were farmed out, these represented less than half of all annual chicken incomings. As our accounts indicate, the vast majority of the rendered chickens were intended for sale, and not for restocking or consumption on the demesne¹⁵.

As we have seen above, the majority of pullets were transferred from the demesne shortly after hatch, to be sold and consumed. Hence, only a small number of pullets joined the stock. Before the Black Death, they constituted about seven per cent of all incomings. From the 1360s onwards, however, their proportion rose to about 17 per cent. This rise went hand-in-hand with the diminished volume of sales after the plague.

Over the entire period, purchases represented a meagre fraction of total chicken incomings. The only exception was the 1270s, when prices were relatively low and it was profitable to rely on the market, rather than on biological reproduction of chickens. Demesne managers must have realized that fact and conducted large-scale purchases of birds.

Outgoing patterns varied, too (Table 8). Sales represented the vast majority of chicken annual outgoings, and they accounted for over 40 per cent, over the period. Again, the exceptional decade here was the 1270s, when the sales constituted around 16 per cent of all chicken outgoings. This, naturally, coincided with exceptionally high volume of purchases. As we have seen above, in this period the lords and their reeves did their best to profit from the deflation within the chicken sector. It is possible that the low prices were created by vigorous peasant production of the bird, in a time of growing population (see Fig. 3). The prices rose in the 1280s, and the sale levels rose in accordance. They reached their peak in the 1350s, when they accounted for around 55 per cent of all chicken expenditure. It seems that this has to do with price behaviour in that decade. With more coin per head of population, the prices continued rising immediately after the Black Death and they remained high throughout the 1350s. For instance, in 1356 a capon was selling for an unprecedented 5d apiece, while a hen/cock was valued at 2.25 per bird (Rogers 1866: 359-60). It should be remembered that the prices behaved similarly in other sectors, including grain and livestock (Farmer 1991: 502, 508-509; Munro: 2006). After the 1360s, however, the share of annual

14. Gloucester Cathedral Library, MS. 43.

15. For instance, Norfolk Record Office, DCN 60/14/1; DCN 62/2; DCN 60/37/11; DCN 60/35/20 and 34.

TABLE 7. — Composition of Annual Chicken Incomings on Norfolk Demesnes, 1261-1390.

Decade	Numbers carried over from previous year	Rendered/received	Pullets hatched during the year	Purchased	Max.
1261-1270	21%	68%	4%	7%	100%
1271-1280	26%	53%	6%	16%	100%
1281-1290	27%	59%	11%	3%	100%
1291-1300	30%	60%	11%	0%	100%
1301-1310	22%	67%	9%	3%	100%
1311-1320	24%	67%	8%	1%	100%
1321-1330	25%	64%	9%	1%	100%
1331-1340	27%	62%	7%	4%	100%
1341-1350	19%	77%	2%	2%	100%
1351-1360	22%	73%	4%	0%	100%
1361-1370	24%	59%	16%	1%	100%
1371-1380	23%	58%	16%	2%	100%
1381-1390	35%	46%	19%	0%	100%
<i>Average</i>	<i>25%</i>	<i>63%</i>	<i>9%</i>	<i>4%</i>	<i>100%</i>

Source: Accounts database.

TABLE 8. — Composition of Annual Chicken Outgoings on Norfolk Demesnes, 1261-1390.

Decade	Sold	Unforeseen Losses	Transferred	Consumed	Allowed to peasants	Numbers remaining at end of year	Max.
1261-1270	42%	6%	26%	9%	0%	18%	100%
1271-1280	16%	8%	26%	12%	0%	36%	100%
1281-1290	44%	4%	17%	5%	0%	30%	100%
1291-1300	44%	4%	20%	4%	1%	27%	100%
1301-1310	48%	6%	19%	5%	1%	21%	100%
1311-20	43%	4%	21%	7%	2%	24%	100%
1321-1330	44%	3%	20%	5%	2%	24%	100%
1331-1340	50%	8%	11%	2%	4%	25%	100%
1341-1350	46%	5%	22%	3%	3%	21%	100%
1351-1360	56%	3%	14%	2%	3%	21%	100%
1361-1370	36%	3%	26%	4%	9%	22%	100%
1371-1380	35%	4%	22%	4%	12%	23%	100%
1381-1390	41%	1%	20%	4%	5%	29%	100%
<i>Average</i>	<i>40%</i>	<i>5%</i>	<i>21%</i>	<i>6%</i>	<i>3%</i>	<i>25%</i>	<i>100%</i>

Source: Accounts database.

sales decreased to around 38 per cent of all chicken outgoing. This was despite the fact that the poultry prices were still high, before they collapsed in 1367. On some demesnes the sale rates were astonishingly high. Thus, at Eaton, Sedgeford (Norfolk) and Hinderclay (Suffolk) the sales accounted for about 70 per cent of all chicken expenditure in the pre-Black Death period. Two major factors determined the scale of chicken sales. First, the geographical proximity to markets had a clear impact on the sale rates. Eaton, Gnatingdon, Martham, Sedgeford and Taversham were all located within the range of 15 miles from major Norfolk urban markets. Hindringham and Hindolveston, on the other hand, were located far away from markets and hence marketed lower proportions of their chicken stocks. The second factor was the physical size of chicken stocks. Gateley and Monks Granges stocked modest chicken flocks and consequently could not conduct large-scale chicken trade.

Unforeseen losses included occasional thefts and sudden deaths by different predators. The most widely recorded predator was the fox¹⁶. Thus, at Taverham (Norfolk) in 1370 eleven out of twenty-four chickens were killed by a fox¹⁷. The idea of the fox seizing poultry had an important place in late-medieval English imagination, both on naturalistic and allegorical levels. This concept was eternalized by Chaucer in his *Nun's Priest* (c. 1392), where a fox carried away the old widow's cock (Pearsall 1983: 244-260). Other predators included pigs, dogs, polecats, curlews, buzzards, and, naturally, humans¹⁸. For instance, at Sedgeford, one capon and two chickens were destroyed by the retinue of Isabelle, Queen mother, on her itinerary through Norfolk in 1345. This reference is by no means exceptional¹⁹.

Although mortality rates were very low, several instances of epizootic proportions are recorded. These ravaged Gateley in 1273 and 1278²⁰,

Gnatingdon in 1324-1328 and 1340²¹, in Norfolk, and Wisbech-Barton (Cambridgeshire) in 1314²², and claimed between 25 and 50 per cent of their galline stocks. There are variety of diseases that chickens are prone to, including Fowl (Chicken) Pox, Newcastle Disease (ND), Avian Influenza (AI) and others (Saif *et al.* 2003). Naturally, we cannot speculate about the nature of mortality mentioned in our accounts, since they do not provide any descriptions of symptoms.

Thefts were reported rarely and occurred mostly at times of crisis. For instance, at Eaton (Norfolk) in 1318, eleven capons were stolen²³. This happened at a time of agrarian and pastoral crisis, otherwise known as the Great European Famine of 1314-1322. As some research has shown, thefts of livestock reached unprecedented levels during the famine years (Hanawalt 1974; Hanawalt 1979: 238-260). The accounts do not reveal who conducted the thefts, but it is likely that chickens and other poultry were snatched by local villagers. There are numerous references in manorial court rolls to chicken and other livestock thefts committed by peasants (Hilton 1975: 42; Baildon 1906: 4, 129; Jewell 1981: 210; DeWindt 1990: 1280 (89), 1326-7, 1294 (116), 1311 (22), 1312 (8)). Moreover, detection rates were low, because peasants used to receive and protect thieves (DeWindt 1990: 1294 (116), 1311 (22), 1312 (8)).

As we have seen, it is unlikely that even laying hens were allowed to achieve their natural lifespan in the Middle Ages. In most cases, the birds were either consumed or transferred elsewhere, to be eaten, long before reaching their natural death. Over the entire period, inter-manorial transfers accounted for about 21 per cent of chicken expenditure. Direct consumption on the demesne, during the harvest time or a manorial court session, represented less than six per cent of all expenditure. "Transfers" meant mostly dispatches of chickens

16. For instance, Norfolk Record Office, DCN 60/35/3, 32, 33, 38 (Taverham accounts).

17. Norfolk Record Office, DCN 60/35/38.

18. Norfolk Record Office, DCN 60/26/24; DCN 60/26/18; DCN 60/20/16; DCN 60/20/23; DCN 60/13/9.

19. Norfolk Record Office, LeStrange Collection/IB/20; DCN 60/20/25.

20. Norfolk Record Office, DCN 60/13/4 and 6.

21. Norfolk Record Office, DCN 60/14/21, 22, 23 and DCN 62/1.

22. Norfolk Record Office, LeStrange Collection/IC/6.

23. Norfolk Record Office, DCN 60/8/17.

TABLE 9. — Composition of Annual Goose Incomings on Norfolk Demesnes, 1261-1390.

Decade	Numbers carried over from previous year	Purchased	Goslings hatched during the year	Rendered/received	Other	Max.
1261-1270	37%	42%	16%	5%	1%	100%
1271-1280	43%	43%	13%	1%	0%	100%
1281-1290	28%	32%	37%	2%	1%	100%
1291-1300	12%	61%	26%	2%	0%	100%
1301-1310	11%	69%	13%	5%	2%	100%
1311-1320	13%	52%	33%	1%	0%	100%
1321-1330	21%	43%	33%	2%	0%	100%
1331-1340	30%	37%	32%	1%	1%	100%
1341-1350	30%	36%	23%	11%	0%	100%
1351-1360	21%	37%	28%	13%	0%	100%
1361-1370	16%	18%	58%	8%	0%	100%
1371-1380	23%	12%	64%	1%	0%	100%
1381-1390	27%	6%	72%	1%	0%	100%
<i>Average</i>	<i>24%</i>	<i>37%</i>	<i>35%</i>	<i>4%</i>	<i>0%</i>	<i>100%</i>

Source: Accounts database

to the lord's table. These accounted for over 20 per cent of all expenditures and the figures varied from place to place and from year to year. For instance, at Catton (Norfolk) no chickens were ever sent to Norwich Cathedral Priory between c. 1280 and 1366. Between 1366 and 1369, when chicken prices were especially high, the demesne dispatched each year over fifty birds to Norwich. Once the prices dropped in 1369, Norwich brethren stopped receiving chickens from that demesne²⁴. In other words, the level of demesne chicken supply to the lord's table was undoubtedly dictated by annual price fluctuations.

Annual disposal patterns within the chicken sector differed radically from the goose sector (Table 9). Within the latter, the purchases constituted the vast majority of annual incomings, at least in the pre-Black Death period. Younger geese joining the mature cohorts represented about one-third of all incomings. On very few manors the peasants had the obligation to render geese as custom, and the

overall proportion of all geese coming from the tenants did not go beyond four per cent, over the period.

Disposal of chicken stocks reflects, to a large degree, larger processes that occurred in the history of late-medieval English agriculture. The gradual decline of chicken rearing on demesnes reflects the retreat from direct management to and switch to farming out of the demesne. From c. 1310 and especially after the great cattle pestilence of 1319-1320, many demesnes leased out their cows and dairy-houses to better-off peasants (Slavin 2008: 53-57). The aftermath of the Black Death created a pronounced differentiation between the demesne and the peasant sector, in terms of specialization and production-orientation. First, the demographic decline diminished the market for agricultural products. Second, falling prices and rising real wages after c. 1376 encouraged the lords to diminish labour-intensive sectors of the demesne and to expand extensive forms of husbandry, which were suited for

24. Norfolk Record Office, DCN 60/4/2-57.

larger-scale enterprises, commanding relatively high prices and low unit-costs. Thus, in the closing decades of the fourteenth century we witness the decline of arable and dairy sectors, on the one hand, and the expansion of sheep and rabbit sectors, on the other (Mate 1986; Bailey 1988; Dyer 1991: 235-237; Campbell 1992; Stern 2000: 217-222; Stone 2002: 1-2; Stone 2005: 214). Conversely, gradually improving living standards in the post-Black Death years increased the *per capita* consumption of meat, poultry in particular (Dyer 1988). This fact encouraged many better-off peasants to expand some forms of small-scale enterprises, chiefly the meat and dairy production. Thus, one witnesses the augmentation of cattle and swine stocks within the peasant sectors (Dyer 1991). There are no doubt that chickens, and other birds, fitted into the category of labour-intense husbandry, commanding high unit-costs, and relatively low prices. It is, then, hardly surprising that chicken husbandry shifted from the demesne sector into the "peasant" one. To some degree, the poultry sector, sharing so many characteristics with the dairy one, can be seen as the adjunct of the latter.

CHICKEN CONSUMPTION

Chicken meat and eggs were an important component of non-grain foodstuffs, afforded and shared by virtually every social stratum of late-medieval English society. Chicken consumption was especially vital in years of famine or bad harvests. Thus, several demesnes of Norwich Cathedral Priory, and Hinderclay (Suffolk) augmented their chicken stocks between 1315 and 1322, the years of the Great Famine and a severe cattle pestilence²⁵. Naturally, the scale of chicken consumption varied not only between different social strata, but also within same-class communities, and it was dictated by

both demand and cultural preferences of each community.

According to some estimates, poultry constituted about ten per cent of the meat consumed by aristocratic households in late-medieval England (Stone 2006: 148). The household of Dame Katherine de Norwich consumed twenty geese, forty-three capons and chickens, thirty-nine pigeons and 361 eggs, between 29 September and 1st November 1336 (calculated from Woolgar 1992: 179-187)²⁶. At Norwich Cathedral Priory, house to some 300 persons (including some 60 monks), the cellarer spent around 47s on chickens and eggs each week, between 24 September and 16 December 1328. The eggs alone accounted for almost three-quarters of all poultry expenditure (around 28s) and this was enough to buy as many as 11,000 eggs on a weekly basis. Here, chickens constituted about 40 per cent of all non-grain foodstuff expenditure and about 90 per cent of all poultry purchases²⁷. In addition, Norwich Cathedral Priory was supplied with capons and chicken eggs by four demesnes, Hemsby, Hindolveston, Hindringham and Martham, sending together 190 birds and 1,080 eggs each year, between c. 1260 and 1400²⁸. After the Black Death, there was an overall decline in chicken consumption at the Priory, and by the 1360s chickens were substituted with geese and red meat²⁹. This, in turn, reflects the rising standards of living and consumption in the post-Black Death era, at least among high echelons of the society. A similar tendency is found elsewhere in England. At Battle Abbey (Sussex), poultry meat constituted around one-quarter of all meat expenditure in the late-thirteenth century. Between 1352 and 1413, however, poultry, and chicken in particular, only represented about eight per cent of all meat expenses (calculated from Searle 1967: 55-108).

Norwich Cathedral Priory, Battle Abbey and Dame Katherine were wealthy lords and hence their

25. Norfolk Record Office, DCN 60/14/15-21 (Gnatingdon); 60/15/11-13 (Hemsby); 60/18/21-22 (Hindolveston); 60/20/17-21 (Hindringham); 60/26/15-18 (Monks Granges); 60/29/16-19 (Plumstead); 60/35/17a-19 (Taverham); 60/39/6-9 (Worstead); Chicago University Library, Manuscript Collection, Bacon Roll 449 (Hinderclay).

26. Calculated from Woolgar 1992, vol. 1: 179-187.

27. Norfolk Record Office, DCN 1/2/15.

28. Norfolk Record Office, DCN 60/15/1-16; 60/18/1-52; 60/20/1-36; 60/23/1-25, 62/1-2, NNAS 5890 20 D1, 5892 20 D1 and 6894 6 20 D1.

29. Norfolk Record Office, DCN 1/2/19-32a.

consumption reflects cultural choices and social norms of aristocracy. The demand for and consumption of chickens by the poor is reflected in some hospital accounts. The Great Hospital of St Giles in Norwich, whose main objective was to care for and provide food and shelter for the poor and sick (the two terms were virtually interchangeable in late-medieval urban context), is one such example (Rawcliffe 1999). Between c. 1310 and 1340, six landed estates of the hospital shipped about 54 geese, 75 chickens and 6,000 eggs annually³⁰. The numbers were even higher during the famine years: in 1316, the demesne of Calthorpe alone dispatched as much as 47 geese, 78 chickens and 2,520 eggs³¹. Much more poultry was purchased directly at local markets. After the Black Death, red meat came to replace poultry, and, consequently, very few birds were sent to the Hospital.

The post-Black Death switch from poultry to red meat is evident also in the distribution of foodstuff among demesne harvest-workers. Thus, before the pestilence, the manorial authorities of Sedgeford used to allocate, on average, eleven geese, twelve pullets and 225 eggs among 37 workers during the harvest period, lasting normally five weeks. After the plague, however, Sedgeford authorities distributed, on average, seven geese, and no chicken or eggs, among 29 labourers. Instead, the proportion of beef, pork and mutton were augmented, to take place of chickens³². This change in structure of the harvesters' diet, as sampled from Sedgeford accounts, has been studied and analyzed by Dyer (Dyer 1988). There is no doubt that this switch points into the the improvement of living and consumption standards after the Black Death. Whoever could afford, substituted chickens with either goose or red meat. The increased demand for non-chicken meat drove up the prices of livestock around 1364. The chicken prices, on the other hand, remained virtually unchanged all the way until the Price Revolution of the 1520s (Rogers 1866: 359-360; Rogers 1882: 346-355).

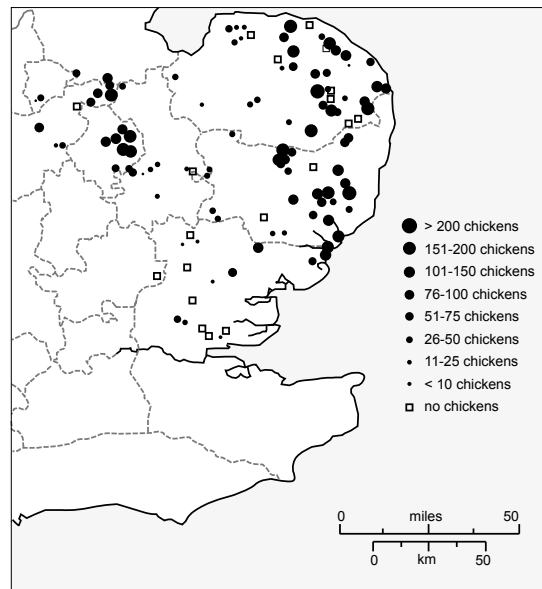


FIG. 4. — Chicken Rents in Eastern England before the Black Death.

Source: Accounts database.

THE PEASANT SECTOR

Much less is known about chicken rearing within the peasant sector. The peasants did not keep annual accounts recording livestock numbers. Moreover, few surveys recorded poultry, as a part of the peasants' assets. Hence, our knowledge of the subject is very patchy. In particular, the manorial accounts speak about annual renderings and leases of chickens, thus providing additional indirect evidence. As we have seen above, it was chicken rents, rendered by tenants that constituted the largest portion of annual chicken incomings on the demesne. The amount of chickens paid as rent varied from manor to manor and from region to region. As Figure 4 shows, the lowest chicken rents were in Essex and Cambridgeshire, where the majority of tenants

30. Norfolk Record Office, NRO, NCR Case 24, Shelf C (Calthorpe Accounts); NCR Case 24, Shelf C (Costessey Accounts); NCR Case 24, Shelf D (Cringleford Accounts); NCR Case 24, Shelf E (Hardley Accounts); NCR, Case 24 Shelf F (Mundham Accounts); NCR, Case 24 Shelf F (Seething Account).

31. NRO, NCR Case 24, Shelf C (Calthorpe Accounts for 1315-6/1316-7).

32. NRO, DCN 60/37/1-30 and LeStrange Collection IB/15-70.

TABLE 10. — “Collective” Chicken Rents imposed on Ramsey Abbey Tenants.

Demesne	Year	Chickens Rendered	Virgates	Chickens per virgate
Abbot's Ripton	1363-4	93.5	31.5	3
Abbot's Ripton	1368-9	99	33	3
Elsworth	1324-5	41	41	1
Elton	1311-2	84	14	6
Elton	1324-5	90	15	6
Graveley	1382-3	11	11	1
Holywell	1355-6	37	17	2
Houghton	1382-3	31	31	1
King's Ripton	1382-3	89	30	3
Slepe	1313-4	130	17.5	7
Wistow	1350-1	55	21.5	3
Warboys	1341-2	35	35	1
<i>Average</i>		66	25	3

Source: Accounts database.

either rendered the fowls in small numbers, or was free from this obligation. By contrast, Suffolk, Norfolk and Huntingdonshire all exhibit high chicken rents, on average well over 75 chickens per year. On some manors, the figure exceeded 150 chickens each year. The high rents there correlate with the highest proportion of recorded instances of labour services, as part of manorial rents in Norfolk, and high rents exercised in Huntingdonshire (Campbell & Bartley 2006: 253-254).

The number of rendered chickens also depended on the aggregate value of the lords and financial worth of individual demesnes. In Norfolk, around 1300, the highest rents are found on the manors of Roger Bigod, earl of Norfolk (d. 1306), one of the wealthiest lords of his age (Campbell & Bartley 2006: 71). Lowest or non-existent rents can be spotted on the manors of the Great Hospital of Norwich, whose total net worth was low compared to other religious houses. Large and productive demesnes of Norwich Cathedral

Priory, such as Hemsby and Martham, had much higher chicken rents than smaller and less productive demesnes belonging to the same institution.

After the Black Death, two main trends can be seen. The first trend was either to keep the chicken-rents at their pre-pestilence level, or reduce them slightly. This was the situation on the Huntingdonshire demesnes of Ramsey Abbey, the Suffolk demesnes of Bury St Edmunds Abbey and the Norfolk manors of Norwich Cathedral Priory. The second trend was either to set lower chicken rents, or abolish them altogether. This was the situation at Boroughbury (Northamptonshire), Elsworth, Knapwell and Oakington (Cambridgeshire), Costessey (Norfolk), and Dunningworth and Kelsale-cum-Carlton (Suffolk)³³.

The rolls from Ramsey Abbey demesnes specify how many chickens were rendered per one virgate of land (thirty acres)³⁴. The figure varied from one to 16 birds per virgate (Table 10). In some cases,

33. Northamptonshire Record Office, FM Rolls 2388, 233, 2389, PDC ARI.5-6; The National Archives, SC 6/766/26-29; SC 6/769/2-6; Cambridge University Library, Ad.25; NCR Case 24, Shelf C (Costessey Accounts); The National Archives, SC 6/995/25; SC 6/1000/23-1001/1.

34. This is assuming that all Ramsey virgates contained 30 acres, as implied by Raftis (1975: 224).

the figures varied within the same manor. At Slepe in 1313-1314, the chicken-paying tenants were divided into two groups: the one, occupying 15 virgates rendered 90 chickens, and the other one, holding 2.5 virgates rendered 40 chickens, on an annual basis. The chickens were rendered on a specific term, chiefly Christmas or Easter.

Chicken egg rents were yet another source of seigniorial income within the poultry sector and they provide another clue as to the size of peasant chicken stocks (Table 11). As our accounts indicate, chicken eggs were rendered in hundreds, sometimes in thousands on an annual basis. The rents were exceptionally high on Huntingdonshire manors of Ramsey Abbey. Here, each peasant community rendered well over 1,000 eggs a year, while the manor of Slepe stands out, rendering about 4,200 eggs in the pre-Black Death period and over 5,000 eggs after the pestilence. These were clear exceptions, however, and the majority of manors rendered between 100 and 750 eggs a year. Some communities were exempt from paying egg rents. This was the situation on some Cambridgeshire manors, as well as some Norfolk manors of Norwich Cathedral Priory and the Great Hospital of Norwich. After the Black Death, some demesnes lowered or abolished the rents altogether. These included the Huntingdonshire and Cambridgeshire demesnes of Ramsey Abbey, and some Northamptonshire properties of Peterborough Abbey. On the other hand, some demesnes kept the pre-1348 level of egg-rents. Conversely, many Norfolk demesnes kept the pre-1348 level of egg-rents. Paradoxically, some lords actually raised the egg-rents after the pestilence. Thus, the tenants of Catton (Norfolk) had to render 300 chicken eggs after the Black Death, in contrast with no eggs before that³⁵. While most demesnes practiced "fixed" rents, there were some demesnes on which poultry rents fluctuated from year to year, especially in the pre-Black Death period. This was the situation on Huntingdonshire demesnes of Ramsey Abbey.

The decreased rents during and in the aftermath of the Black Death undoubtedly indicates that the poultry stocks of the peasants shrank, simply because there were not enough hands to tend fowls and

TABLE 11. — Chicken Egg Rents in Eastern England, 1250-1400.

Quantity	Pre-Black Death	Post-Black Death
>2000	3%	1%
1000-2000	12%	9%
750-1000	9%	10%
500-750	15%	9%
250-500	21%	16%
100-250	12%	21%
50-100	6%	9%
<50	2%	3%
no eggs	21%	21%
Total	100%	100%

Source: Accounts Database.

hence, the lords could not expect their tenants to pay the pre-1348 poultry rents. This reduction also reflects the post-Black Death falling land-rents, created by the altered land-to-labour ratio, on the one hand, and the decline of direct demesne farming, on the other. Furthermore, it implies the admission of peasant tenants on new terms after the Black Death.

The recorded number of poultry rents should be taken with a certain reservation. Keeping in mind that late-medieval English agriculture saw a growing practice of commutation of labour services into money payments, we may assume that in some cases the tenants may have simply rendered cash payments in lieu of the actual birds and eggs. It seems that the only cases where we can be certain that there were real rents of real hens and eggs are where the number sold exceeded the number rendered. Thus, on Norfolk demesnes of Eaton, Gnattingdon, Taverham and Thornham, the number of chicken sold indeed exceeded those rendered, while at Hindolvetson, Hindringham, Martham, Sedgford the chicken sales were lower than their rents. Poultry was considered too unimportant to be recorded in lay subsidies and manorial surveys. Occasional patchy and indirect references indicate

35. Norfolk Record Office, DCN 6/4/47-62.

that a peasant household could be expected to own several hens. For instance, in 1304 most peasants of Cuxham held between three and five hens (Harvey 1976: 712-4). The *Liber Gersumarum* survey of Ramsey Abbey, running between 1398 and 1458, indicates that in the early fifteenth century, many peasant households reared several capons (calculated from DeWindt, 1976). At Ombersley (Worcestershire), in 1414, a certain John Mashon held 20 geese, one cock and four hens (Hilton 1975: 42). Perhaps, one is reminded here about Chaucer's widow from the *Nun's Priest* (c. 1392), who had one cock and seven hens. The large number of chickens rendered on some manors, on the other hand, hint that at least some peasant families held larger chicken stocks.

These patchy figures do not, however, account for the demesne chicken stocks leased out to the tenants. From the late thirteenth-century onwards, there is an increasing tendency of the lords to lease their demesne fowls, most likely to local better-off tenants, and thus, to engage the latter in small-scale commercial activities. In the course of the fourteenth century, and especially after the Black Death, leases of chicken stocks were an important channel of seigniorial income from poultry farming. As early as the 1270s, Sir Adam de Stratton leased out a hen-house (*domus gallinarum*) at Quickbury (Essex)³⁶. Although Walter of Henley, writing his influential treatise around 1286, mentioned chicken and goose leasing, it was not until the early 1320s that we hear about frequent chicken-leases in eastern England (Oschinsky 1971: 338-339). The pioneering demesnes here were Hinderclay in Suffolk (1323-1324), Gateley and Hindringham in Norfolk (1324-1325)³⁷. From the late 1320s, this was a common practice on many demesnes, and on the eve of the Black Death it became an omnipresent phenomenon. What characterizes pre-Black Death leases is the fact that these were *partial* leases, when the lords kept a larger part of their chicken stocks to themselves. After the Black

Death, and especially in the last quarter of the fourteenth-century, we witness leases of *entire* chicken stocks. This was just one minor aspect of the disintegration of the collapsing demesne farming and manorialism.

There were clear regional variances in leasing prices of chicken stocks, despite the fact that there were no regional differences in chicken prices (Fig. 5). Before the Black Death, the leasing prices varied from 3d in Norfolk and overwhelming 12d apiece on Suffolk demesnes³⁸. It should be remembered that 12d would buy about six mature chickens (Fig. 3). It is unclear what accounted for these surprising gaps and it seems that each lord set leasing prices as he pleased. Even in Norfolk, where the leasing price were comparatively low (3d apiece), the latter actually exceeded purchasing price of chicken. Several hypothetical factors may explain this paradox.

First, the actual number of leased chickens was higher than the recorded one, since most rolls accounted for hens only. Some accounts, however, clearly state that the hens were leased together with a cock³⁹. Ten hens, for example, meant ten hens *and at least one cock*.

Second, the farmers were to keep the whole issue of the hens, namely pullets and eggs. Most accounts specify that no pullets and eggs were produced on the demesne, "because the hens were sent to a farm" (=leased out) (*quia galline misse sunt ad firmam*). In other words, the tenants did not have to render any pullets or eggs to the leasing lords. Some six months after the hatch, the pullets would mature and their value would double. Thus, the eventual return from the lease would exceed the initial investment. For instance, in 1334, the tenants of Eaton (Norfolk) rented 13 hens (and presumably one or two cocks) for 3s 3d (at 8d per hen, excluding the cocks). Assuming the annual issue of seven pullets and one-hundred eggs per hen, we arrive at 91 younger chickens and 1,300 eggs, whose total value would be around

36. The National Archives, SC 6/839/22-27.

37. Chicago University Library, Manuscript Collection, Bacon Roll 452; Norfolk Record Office DCN 60/13/22 and 60/20/22.

38. The National Archives, SC 6/836/7-10; SC 6/922/25; Chicago University Library, Manuscript Collection, Bacon Rolls 452-466.

39. Norfolk Record Office, DCN 60/13/22-24 (Gateley).

19s. The total profit from the chicken rent would be 15s 9d, with each hen earning the tenants about 1s 3d (Table 12).

Third, the leased hens seem to have been young and healthy birds, as opposed to those sold at markets, which, in contrast with pullets, were older

and ready for butchery, rather than reproduction. Moreover, it is possible that the hens were leased around the brooding period, namely around May. This would save the peasants some expenses connected to chicken rearing in a period preceding the brooding.

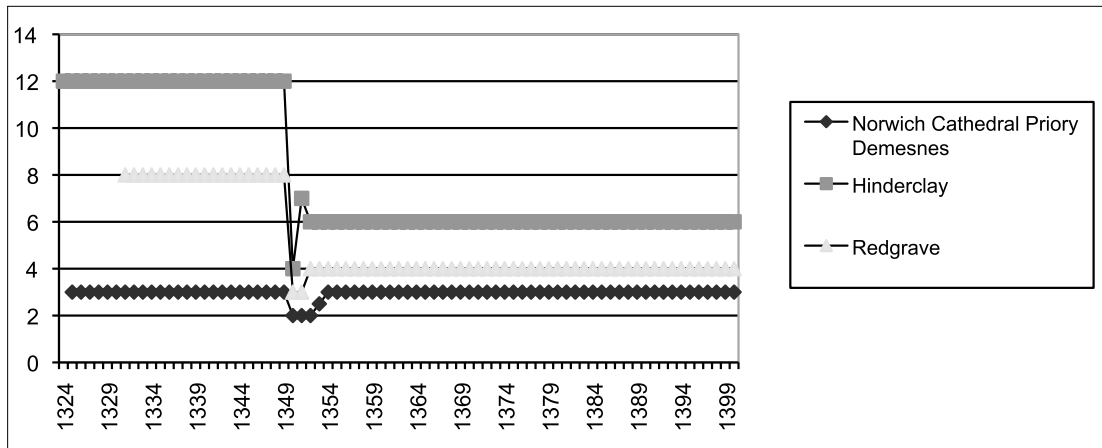


FIG. 5. — Leasing Prices of Chickens (in pence per mature bird), 1324-1400.
Source: Accounts Database.

TABLE 12. — Hypothetical Profit of Chicken Leases, before and after the Black Death.

	Year	Hens	Leasing Price (s)	Per unit (d)	Hypothetical total value (in s)*	Hypothetical profit per hen (in d)	Total profit (in s)
1330s							
Eaton	1333-4	13	3	3	19	15	16
Hinderclay	1334-5	10	10	12	18	9	8
Redgrave	1336-7	10	7	8	18	13	11
Barfield	1337-8	15	8	6	20	10	12
Average		12	7	7	19	12	12
1360s							
Gnatingdon	1363-4	24	6	3	28	11	22
Hinderclay	1364-5	10	5	6	22	20	17
Redgrave	1363-4	10	3	4	22	22	18
Average		15	5	4	24	18	19

Source: Accounts Database.

Notes: * assuming one cock per twelve hens, the issue of seven pullets (worth 2d each in the 1330s and 2.5d in the 1360s) and one-hundred eggs (worth 0.56 in the 1330s and 0.60 in the 1360s, per dozen). The calculations do not include labour input and additional possible expenses, connected to chicken rearing.

Furthermore, one may speculate that the leasing money might have actually been due *at the end* of a leasing term, and not at the beginning. These terms would make the leasing prospects even more attractive. After all, it would have been more convenient for the peasants to pay, say, 2s 6d for ten hens, having earned further 10s by the end of the leasing term, than at the beginning of the term, having earned nothing yet.

Finally, it is plausible that the leased chickens were allowed to graze freely on the demesne, or perhaps the lessees received a monopoly on chicken production on the manor. The later term would correspond to the monopolistic “suit of mill”, given to the lessees of the demesne mills by the lords (Langdon 2004: 185-217).

In other words, there is no doubt that there were some hidden perks involved, not mentioned in the manorial accounts or any other contemporary source, which made the issue of chicken leasing profitable for both the lords and the tenants.

The regional gap in leasing prices became less evident during and after the Black Death. During the pestilence years, the lords did their best to attract the few potential lessees, survivors of the plague, by reducing the leasing costs. Thus, at Hinderclay and Redgrave (Suffolk), the leasing prices collapsed from 12d and 8d to 4d and 3d apiece, respectively⁴⁰. On Norfolk demesnes of Norwich Cathedral Priory, the prices fell from 3d to 2d per unit⁴¹. The prices rose anew, as soon as the pestilence was, more or less over. In Norfolk, they rose to 3d apiece. In Suffolk, however, the prices never returned to their pre-1349 level: at Hinderclay and Redgrave they stood at 6d and 4d respectively (that is, fifty per cent of their pre-Black Death level). Interestingly enough, the fall in leasing prices of chicken stocks coincided with a rise in selling prices of poultry, in the 1350s (Fig. 3). This fact undoubtedly made the leasing prospects more attractive than ever before. This reflects the gradual shift of the poultry sector from the seigniorial to the “peasant” sector, a process which started in the 1320s and gained ground especially after the Black Death. The lords, no longer attracted by small-scale and labour-intense

enterprises, did their best to encourage their tenants to expand their dairy and poultry sectors. The leases of dairy houses and poultry are the clear example of this tendency. The vanishing of chickens from seigniorial diet and the demesne does not necessarily contradict the archaeological evidence, which points that chickens were omnipresent both before and after the Black Death. It is likely to reflect that the scale of chicken husbandry within the peasant sector did not change much after the Black Death.

CONCLUSIONS

Despite its relatively minor contribution to the demesne sector of late-medieval economy, the importance of chicken husbandry cannot be ignored. First, it was an important component of non-grain diet of every social stratum, especially in the pre-1350 period. Second, and most importantly, its history reflects larger processes within the society, economy and environment of late-medieval England. The decline of chicken from the demesne sector after the Black Death went hand-in-hand with changes in dietary preferences of higher echelons of the society, which tended to substitute poultry with red meat, on the one hand, and the retreat from labour-intense forms of husbandry to more extensive enterprises, on the other. In this sense, chicken husbandry can be seen as an adjunct sector of dairy husbandry. Both sectors suited the “peasant” sector better and it can be hardly surprising that by c. 1400 poultry husbandry virtually vanished from the demesne.

Within the “peasant” sector, so it seems, the scale of poultry husbandry seems to have been somewhat larger than within the demesne. This can be judged mostly from the large number of chicken and eggs rendered by the tenants. The post-Black Death tendency to diminish or abolish chicken rents on some demesnes reflects the decline of direct demesne management. Another symptom of the retreat from direct management was widespread leases of dairy and poultry stocks, from the late 1310s, that is shortly after the harvest failures of 1315-1317.

40. Chicago University Library, Manuscript Collection, Bacon Rolls 469 and 336.

41. DCN 60/14/24 (Gnatingdon) and 60/20/26 (Hindringham).

Chicken leases seem to have been profitable for both the lords and their tenants: they generated a steady source of cash income for the former and improved economic initiative, and consequently widened market possibilities of the latter.

Apart from statistical analysis of managerial trends, however, the manorial accounts provide a unique glimpse into the biology of late-medieval English chicken. These sources allow reconstructing the fertility of hens, in terms of annual hatch and egg yields; sex and age ratio within chicken stocks; caponization rates among younger roosters; an average lifespan of the demesne chicken; birth, death and replacement rates of the birds. All these add yet another, ecological dimension to the topic under discussion and point out that economic and environmental aspects of late-medieval agricultural history cannot be separated. After all, humans were only a small part of *the wider biological cosmos*, populated by other animals, domesticated and wild alike. To fully appreciate late-medieval rural experience, it may be instructive to divert from the *anthropocentric* perspective and to concentrate on the interactions between humans and other living creatures and organisms. The history of poultry is just one such example.

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