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The Management of Working Horses on the Battle Abbey Manor of Barnhorn, 1325-1494

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Introduction

This aim of this paper is to examine how a single English demesne (the personal farm of a seigniorial lord, as opposed to the land of their peasant tenants) managed its stock of working horses over a period of almost 170 years. It leverages the exceptionally rich body of surviving manorial accounts from the Battle Abbey manor of Barnhorn to look very closely, not only at how the demesne managed its horses, but how it operated within the context of the larger Battle Abbey estate. Before 1200, oxen were the most common work animals on both farms and roads in England. However, by the sixteenth century, horses had achieved almost total dominance in the world of work animals, especially in the more economically active south and east of the country.¹ With accounts surviving from 1325 to 1494, this corpus of material offers an unparalleled opportunity to examine how working horses were acquired and employed in seigniorial agriculture from before the Black Death to the end of the fifteenth century, the period when working horses became so prominent. Such opportunities are rare because significantly fewer manorial accounts exist for the decades after 1350 than the ones that preceded the

* I am grateful for the support of a Huntington Library Mayers Fellowship in 2022 which facilitated this research, both materially and in offering the opportunity to work closely with the Battle Abbey manuscript collection. I also thank Ryan Wicklund for research assistance.

¹ Peter Edwards, *The Horse Trade of Tudor and Stuart England* (Cambridge: Cambridge University Press, 1988); John Langdon, 'Horse Hauling: A Revolution in Vehicle Transport in Twelfth-and Thirteenth-Century England?' in *Past and Present* no. 103 (1984): 37-66; John Langdon, *Horses, Oxen and Technical Innovation: The Use of Draught Animals in English Farming from 1066-1500* (Cambridge, Cambridge University Press, 1986); Joan Thirsk, *Horses in early modern England: for Service, for Pleasure, for Power*. The Stenton Lecture 1977 (Reading: The University of Reading, 1978).

plague. This is due to the growing trend from the mid fourteenth century, and especially after the Black Death, for lords to lease their demesne farms for cash rents, rather than manage them directly. The farmers who assumed the management of these lands typically did not have a need to record their agricultural activity in the same way as seigniorial lords had done; the consequence for historians is that the detailed information about activities such as livestock management disappears from the historical record at the point when demesnes were leased. In this respect, Barnhorn is exceptional even within the context of the Battle Abbey estate. While twenty of the estate's twenty-eight manors had been rented out by 1383,² Barnhorn was kept in-hand for a further century. The Barnhorn accounts, therefore, provide detailed insight into estate management and manorial decision-making in general, and animal husbandry and demesne horse management, in particular, for a period where evidence is typically scant.

I have argued elsewhere that, at least at the beginning of the fourteenth century, demesnes tended to be significant consumers of working horses, but did not typically breed sufficient numbers to sustain their own needs, let alone a surplus that could have supplied the market.³ We can test this supposition here with long-run study of a single manor. Such a *longue durée* perspective also offers an opportunity to observe any changes in the management of the horse herd. There are a number of important questions to explore: Was there any appreciable change in the types of horses kept on the Barnhorn demesne? Did the demesne breed its own working horses, buy them on the market, or pursue some kind of hybrid approach? If it maintained a breeding program, how successful was it? If horses were purchased, where were they purchased from? Perhaps most significantly, we can see if the answers to any of these questions changed over time. Such insights are only made available by a close study of a long run of accounts like the series offered by Barnhorn. This paper is very descriptive, and this is deliberate. By

² Eleanor Searle, *Lordship and Community: Battle Abbey and its Banlieu, 1066-1538* (Toronto: Pontifical Institute of Medieval Studies, 1974): 259.

³ Jordan Claridge, "The Role of Demesnes in the Trade of Agricultural Horses in Late Medieval England." *Agricultural history review* 65, no. 1 (2017): 1–19.

providing a portfolio of indicative figures at the annual level it provides unprecedented insights into the myriad considerations in managing working horses in the seigniorial context. In so doing, it will provide further insights into demesne horse management and the over-arching market for working horses in late medieval England.

Historiography

How does this study fit within the wider literature? It aims to build on existing studies of single estates and manors, but at significantly higher resolution and with working horses at the center of inquiry rather than as a secondary concern to wider agricultural enterprises. There are some key studies within which this present study is situated. Kathleen Biddick's *The Other Economy* was a pioneering work in the examination of the pastoral sector of medieval England, an umbrella under which she includes working horses. With an in-depth examination of the accounts of Peterborough Abbey, an ecclesiastical estate centred in East Anglia and reaching to North Lincolnshire, Biddick argued that the estate's pastoral and arable sectors were complementary, existing in a synergistic rather than an antagonistic relationship. In terms of the estate's horse herd, she notes that the number of horses kept on the estate trebled between 1125 and the first years of the fourteenth century.⁴ By ca. 1300, the proportion of horses relative to oxen had risen to 40-45% up from the 1125 proportion of ~2.5%.⁵ Over this period, Peterborough demesnes also began stocking specialized cart-horses for transportation.⁶ Biddick notes that while Peterborough Abbey manors typically pursued a policy of maintaining internally bred, self-replacing animal herds, it managed its horses rather differently. The Abbey did, by and large, replace its plough horses through internal breeding, but it bought its carthorses on the market.⁷ Through the survival of an estate survey from 1125, Biddick was able to

⁴ Kathleen Biddick, *The Other Economy: Pastoral Husbandry on a Medieval Estate* (Berkeley: University of California Press, 1989): 116.

⁵ Biddick, *The Other Economy*, 116.

⁶ Biddick, *The Other Economy*, 116.

⁷ Biddick, *The Other Economy*, 116-7.

make some long-run comparisons of the estate's management of its working horses. However, her analysis stretches only to the first decades of the fourteenth century. The Barnhorn accounts that form the foundation of this study essentially pick up where Biddick's study ends and continue to the end of the fifteenth century.

A study more similar in data and approach is David Stone's *Decision-Making in Medieval Agriculture*. This work examines the accounts of a single manor, Wisbech, part of another East Anglian estate belonging to the Bishop of Ely. Stone leverages the strong series of surviving manorial accounts for Wisbech, which span from the early 1310s to the 1420s. Within the context of the decisions involved in managing a medieval demesne, Stone explores demesne work-horse procurement, and explains how, after the Black Death, demesne managers of Wisbech took the decision to stop purchasing horses entirely and to rely on internal production as a cost-saving measure.⁸ An implicit, yet vitally important implication in this finding is that in order for this policy to be viable, Wisbech managers must have been confident in their ability to acquire horses readily via the market. Stone also asserts that, however procured, the demesne managers of Wisbech Barton seemed to always have "had a clear conception of the numbers of livestock that should ideally be kept on the demesne"⁹ which influenced the ways in which demesne horse herds were managed, specifically in managing the surpluses and deficits that could occur in in any given year.

Of course, one cannot speak about Battle Abbey without discussing Eleanor Searle's magisterial *Lordship and Community: Battle Abbey and its Banlieu, 1066-1538*.¹⁰ Searle's work leverages the entirety of the surviving Battle Abbey archive and provides an exhaustive overview of its economic and social history. Work horses are not a particular focus of Searle's work, a likely reflection of the relatively minor role they played in the overall seigniorial economy of the Battle

⁸ David Stone, *Decision-Making in Medieval Agriculture* (Oxford: Oxford University Press, 2005): 114.

⁹ Stone, *Decision-Making*, 114.

¹⁰ Searle, *Lordship and Community*.

Abbey estate. The book does, however, touch on the most important aspects of horse herd management and motivates these discussions with the observation that the estate's stock accounts provide insight into "animal husbandry in the [Sussex] wield during a period for which evidence is largely lacking..."¹¹ This is a motivation shared with this paper.

To date, our understanding of working horses, and how they fit into the larger seigniorial economy has been provided by an array of estate-level studies where horses are treated as only a part of wider agricultural and commercial endeavours. Those wishing to consider any aspect of the horse economy, be it the breeding, trade of animals or even an understanding of their working lives, have been forced to scour the indices of such works to uncover any insights. This paper, by focusing solely on working horses, hopes to augment the works discussed above, and others like them, and provide a more comprehensive picture of horsepower in the seigniorial context.

Battle Abbey and the Manor of Barnhorn

Battle Abbey was founded personally by William the Conqueror shortly after his invasion of England to atone for the bloodshed he had caused with his conquest.¹² William initially endowed the abbey with a modest banlieu for its sustenance. These were lands, granted to the abbey, that fell within one league (~three miles) from the church's high altar, itself to be placed at the spot where the Saxon king, Harold, had fallen at the battle of Hastings. This land is referred to as the *leuga* in Battle Abbey documents, a reference to the specified diameter of the banlieu. The *leuga* had been endowed to provide for the abbey's material needs, but William's insistence that its epicenter be the *exact* place of Harold's death meant that resources were limited, because the banlieu lay in a relatively inhospitable

¹¹ Searle, *Lordship and Community*, 292.

¹² Searle, *Lordship and Community*, 21; J.S. Brewer *Chronicin de Bello*, 1846, pg. 2: '*ibique coenobium, quo Dei servi congregarentur, pro omnium illorumque nominatum qui in eodem bello occumberent salute construeret. Qui locus refugii et auxilia omnibus est, quaintus jugi bonorum operum instantia commissa illic effuse cruoris redimerentur*'.

tract of land.¹³ To address this, starting in the early twelfth century, successive abbots went about acquiring additional properties that could augment the abbey's original endowment and provide it with important assets that the initial grant had lacked.¹⁴ Bodiam Meadow, acquired during King William's reign, gave the manor essential meadow as well as access to the river Rother which runs from Rotherfield in the Northern part of Sussex in a South-easterly direction through the county and drains into Rye Bay.¹⁵ Further acquisitions were made closer to the sea: two salt pans were acquired at Rye and the manor of Fruntington, part of the original endowment, was exchanged with the English Crown for Appledram, which itself held a farm called Bosham on the Sussex coast.¹⁶ One of the most important of the abbey's acquisitions was the manor of Barnhorn.¹⁷ Lying around five miles directly South from Battle, along the coast between modern-day Hastings and Eastbourne, it was comprised of both coastal marshes and uplands, theoretically well-suited to both arable agriculture and pastoral grazing. By the early fourteenth century, the Barnhorn demesne comprised some 460 acres of arable, twelve acres of woodland and thirteen acres of meadow.¹⁸ Ultimately, at its height in the fourteenth century, the Battle Abbey estate held at least twenty properties in eleven different counties. This property portfolio extended in all directions from the original banlieu. Further south were additional Sussex manors and in the West were holdings in Wiltshire. North of Battle were manors in the London hinterland such as Greenwich, Deptford, Southwark and Camberwell. The estate extended all the way to East Anglia with additional manors in Norfolk and Suffolk.¹⁹

With our focus on Barnhorn, we must begin by noting that the organization of seigniorial agriculture in coastal Sussex deviated in some significant ways from the classic 'midlands' open-field system most commonly associated with medieval

¹³ Indeed, the Battle Abbey chronicle records that the original banlieu was "situated on a hill, barren, dry and without any water in the vicinity". Searle, *Lordship and Community*, 45.

¹⁴ Searle, *Lordship and Community*, 38.

¹⁵ Searle, *Lordship and Community*, 39, 40.

¹⁶ Searle, *Lordship and Community*, 40.

¹⁷ Searle, *Lordship and Community*, 40.

¹⁸ S.R. Scargill-Bird, ed. *Customs of Battle Abbey: In the Reigns of Edward I and Edward II (1283-1312)*. (London: Camden Society Vol. 41, 1887): xv; Searle, *Lordship and Community*, 254.

¹⁹ Searle, *Lordship and Community*, 447.

English agriculture. Barnhorn practiced ‘convertible husbandry’ or ‘ley’ farming, where grass pastures were regularly ploughed for conversion into arable fields. These were farmed for a period of consecutive years and then rested. This was a different model than the three-field rotation most frequently employed in open-field manors, where the proportions of arable and pasture land were more fixed.²⁰ In the paradigm of convertible husbandry, demesne lands and tenant farms were not intermingled like they tended to be on open field manors; instead demesne lands were often separated from peasant holdings, sometimes with a physical barrier.²¹ This would have had implications for the management of working horses on the Barnhorn demesne. The soils on the upland portions of the manor were particularly sensitive to weather conditions during ploughing and sowing,²² so any speed advantage conferred by horses over oxen may have been helpful. Indeed, managers at Barnhorn often employed mixed plough teams of oxen and horses, which leveraged the low-speed ‘torque’ of oxen while relying on horses to set the pace of ploughing.²³ In addition, the arrangement of ley agriculture, with its clearly divided (and possibly fenced or hedged) fields may have made the breeding of horses and other livestock a more straightforward endeavor than it was on classic open field manors, as animals could be more easily managed. The wealthy owners of ‘elite’ horses, like the warhorses of the aristocracy and the hunters and palfreys of Battle Abbey abbots, were seemingly aware of the requirements for successful selective breeding of their own prized mounts, and were keen to not have the work of many generations of managed mating undone by liaisons with lower-quality farm animals. This was likely a factor in the decision of successive abbots of Battle Abbey to pasture their own riding horses at Barnhorn in the

²⁰ P.F. Brandon, “Agriculture and the Effects of Floods and Weather at Barnhorne, Sussex, During the Late Middle Ages” *Sussex Archaeological Collections* Vol 109, pp. 74-5. For a thorough discussion of convertible husbandry in the early modern context see: Mark Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500-1850*. (Cambridge: Cambridge University Press, 1996): 116-7.

²¹ P.F. Brandon, “Demesne Arable Farming in Coastal Sussex During the Later Middle Ages.” *Agricultural History Review* 19, no. 2 (1971): 121.

²² P.F. Brandon, “Agriculture and the Effects of Floods and Weather at Barnhorne, Sussex, During the Late Middle Ages” *Sussex Archaeological Collections* Vol 109, pp. 71.

²³ Searle, *Lordship and Community*, 292.

summers, where they could be kept separate from the ungelded working horses of the demesne.²⁴

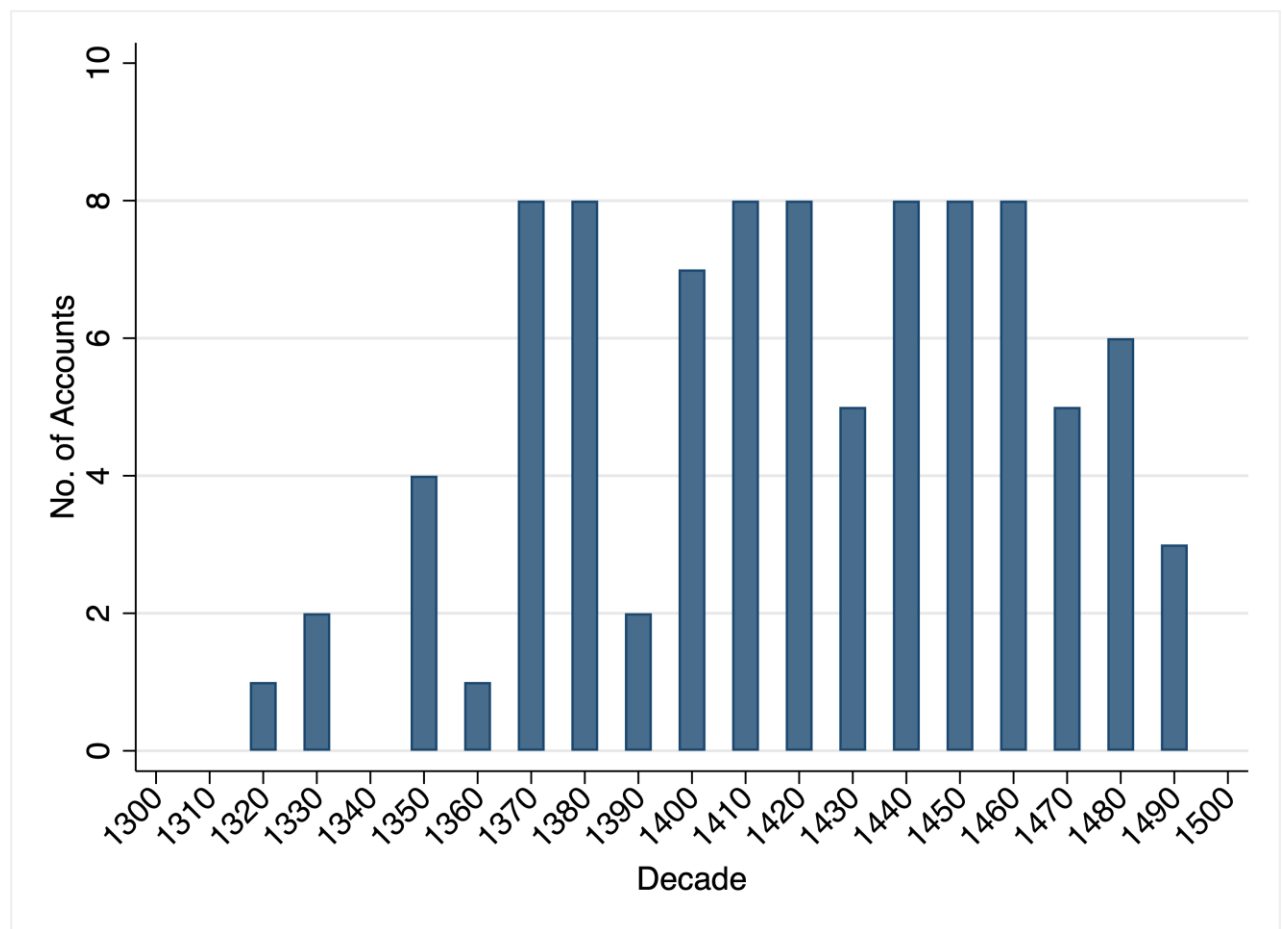
The Data Sample

This paper relies on the exceptional corpus of surviving manorial accounts for the manor of Barnhorn.²⁵ It was possible to extract demesne horse data for a total of ninety-three accounts from a period of 168 years between 1325-6 and 1493-4. Figure 1 shows the distribution of the sample. While the series begins near the beginning of the fourteenth century, there are relatively few surviving accounts from the pre-Black Death period. The coverage is, however, particularly good for the 1370s and beyond. In this period, accounts survive for at least five years in most decades, and many have a 70 percent survival rate or better. The 1370s and 1380s as well as the 1410s and 1420s, 1440s, 1450s and 1460s all have eight of a possible ten surviving accounts. Ultimately, this series, in terms of both of the range of years covered and the frequency of surviving accounts within those years, is as good as one could hope for. The fact that the series extends almost to the end of the fifteenth century makes the sample even more unique.

²⁴ Working horses were never castrated, or gelded: See: Searle, *Lordship and Community*, 41, 294. The exception that proves this rule is illustrated in the account of 1488-9, when a stray horse that arrived on the demesne was specifically noted as having been castrated by its previous owner: See, BA 415, Battle Abbey Archives, The Huntington Library, San Marino, California.

²⁵ See: BA 335-430. Battle Abbey Archives, The Huntington Library, San Marino, California.

Figure 1: Distribution of Extant Barnhorn Accounts



Source: Author's Manorial Account Database

The Barnhorn Horse Herd

Between 1325 and 1494, the Barnhorn demesne stocked four different kinds of horses: stotts (*stottus*), mares (*jumenta*), foals (*pullanus/a*), and 'horses' styled as both *equi* and *equae* in the documents. Stotts were 'all purpose' horses, most often associated with use as plough beasts, but also employed on occasion in a variety of other work and better understood as a general-purpose agricultural horse that preformed several duties, especially at a manor like Barnhorn, which never stocked the more specialized and more expensive cart horses (*equus carectarius*). The Barnhorn stotts would likely have taken on any carting duties as well as ploughing, harrowing, and as riding and pack horses as well.²⁶ On other manors

²⁶ Searle observed a wide variety of tasks performed by stotts at Marley, another of the Battle Abbey manors. See: Searle, *Lordship and Community*, 292. A number of affers and stotts

across medieval England, these horses might have been called ‘affers’. The distinction between the two terms was seemingly one of nomenclature and the decision about categorical title was most likely down to local and institutional customs or perhaps even managerial or scribal preference. ‘Affer’ was used widely across the country, while ‘stott’ was a term restricted to manors in southern England and especially common near London and in East Anglia.²⁷ Table 1 gives the sum of the horses enumerated at the opening of each individual account, which provides us with a rough sense of the proportions of horse types kept on the demesne over the whole period of study.²⁸ The adult (and mostly male) stotts comprised 75 percent of all horses while young horses and mares accounted for 16 and 6 percent. A small number of *equi* and *equae* round out the figures, with about twice as many male as female animals. As discussed below, and with the exception of 1387-8 when a single *equus* was purchased, the terms *equi* and *equae* came into use at Barnhorn in 1468 and were likely practically synonymous with ‘stott’, although the use of this nomenclature, with the distinct Latin gendered endings in *Equus/Equi* and *Equa/Equae* does allow a more precise understanding of the ratio of male to female horses.

Table 1: Summary of Working Horse Proportions, 1325-1493

Type of Horse	Total Number	Total Proportion
Stott	783	75%
Foal	164	16%
Mare	60	6%
Equus	23	2%
Equa	14	1%
Total	1044	100%

Source: Author’s Manorial Account Database

employed on the manors of Norwich Cathedral Priory were also ‘all-purpose’ draught horses and stotts were often used for harrowing on the Bishop of Ely’s manor of Wisbech. See: Philip Slavin, *Bread and Ale for the Brethren* (Hatfield: University of Hertfordshire Press, 2012), 8; David Stone, *Decision-Making*, 73.

²⁷ Jordan Claridge, ‘The Role of Demesnes in the trade of agricultural horses in late medieval England’, *Agricultural History Review*, Vol. 65, Part I (2017): 5.

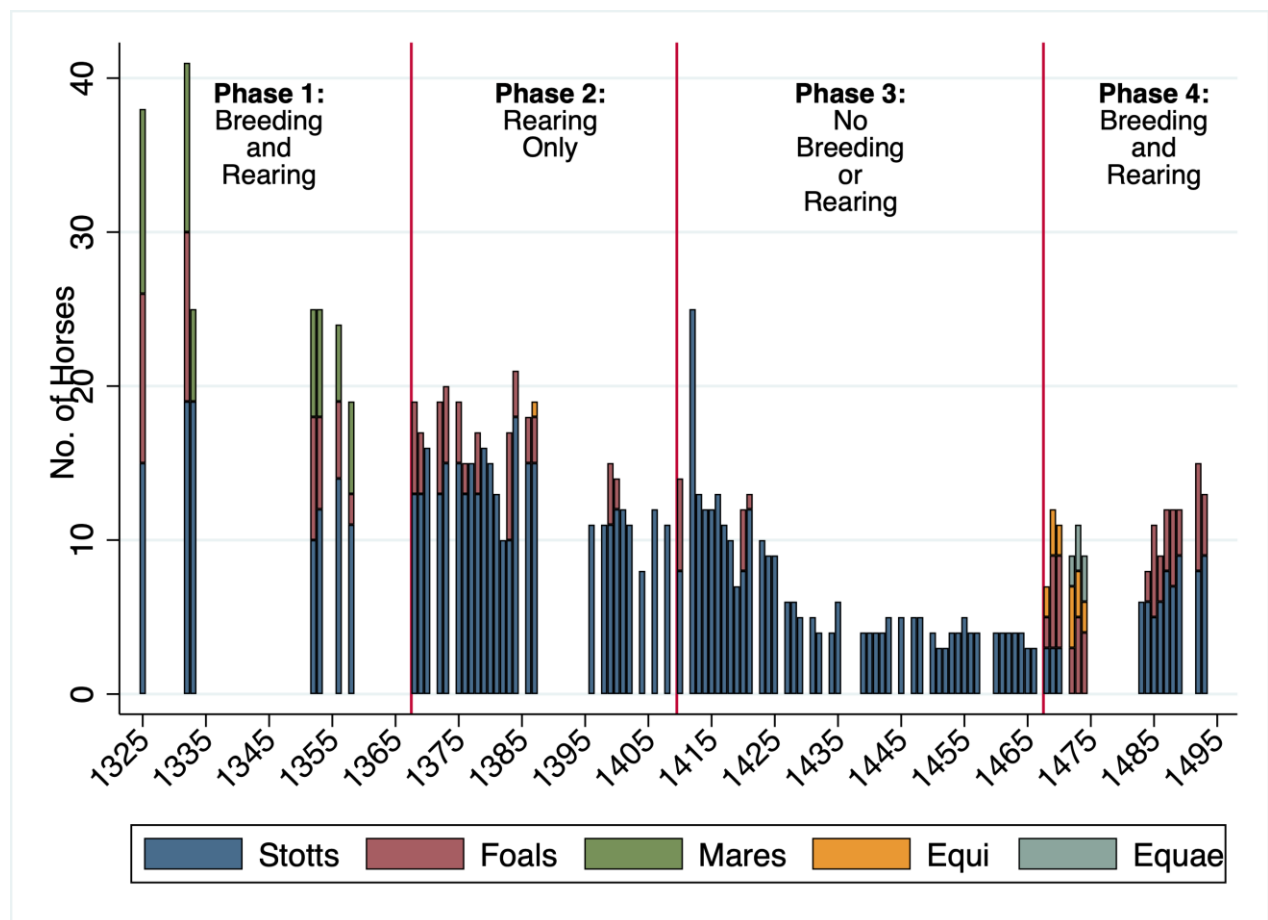
²⁸ This approach treats each account individually and is therefore most instructive in terms of proportions rather than absolute figures, as individual animals will be counted multiple times in consecutive years.

Not only did the size of the horse herd fluctuate over the course of the fourteenth and fifteenth centuries, but its composition changed dramatically as well. This can be seen in Figure 2. In terms of size, the numbers of demesne horses declined steadily throughout the fourteenth century. In the earliest extant account of 1325-6, the demesne herd numbered thirty-six. By 1332, the year of the next surviving account, the numbers had grown to forty horses. This was a height that would not be eclipsed, or even matched, over the next 150 years. By 1352-3 the herd had shrunk to twenty-seven animals and continued to contract from there. While the absolute numbers of horses would decline from 1325-6 to the late 1350s, the relative proportions of the different horse types remained broadly similar. At Barnhorn, the total absence of cart horses is striking, given that, on the national level, specialized horses for carting typically accounted for 15 percent of demesne stocks ca. 1300.²⁹ Other ecclesiastical estates, like Peterborough Abbey and the Bishopric of Ely stocked cart horses at some points in the fourteenth century.³⁰

²⁹ Claridge, 'The Role of Demesnes', *Agricultural History Review*, Vol. 65, Part I (2017): 5.

³⁰ Stone, *Decision-making*, 73; Biddick, *The Other Economy*, 116.

Figure 2: Horse Types at Barnhorn, 1325-1493



Source: Author's Manorial Account Database

An early fourteenth century custumal for Barnhorn suggests that some of the demesne's transport needs might have been met by the customary labour performed by servile tenants who, at least in some cases, were required to bring their own draught animals for this work.³¹ In cases where customary labour was not available, the demesne would have relied on stotts or mares, or even oxen, for cartage.³² Of all the horse types kept on the demesne, the population of young horses fluctuated most dramatically in size over the first half of the fourteenth century. With the uncertain success of breeding practices due to high rates of

³¹ One specified service required of servile tenants was 'to carry the lord's hay for one day with a cart and three of the tenant's own beasts...' See: S.R. Scargill-Bird, ed. *Custumals of Battle Abbey: In the Reigns of Edward I and Edward II (1283-1312)*. (London: Camden Society Vol. 41, 1887): xvi.

³² One specified labour service outlined in a custumal from 1307 was 'to carry manure for two days, with a cart and two oxen...' See: S.R. Scargill-Bird, ed. *Custumals of Battle Abbey: In the Reigns of Edward I and Edward II (1283-1312)*. (London: Camden Society Vol. 41, 1887): xvi.

sterility among mares, discussed in more detail below, and significant mortality of both mares and foals, the numbers of young horses in any given year could change significantly. So, when the relative proportion of stotts rose to near 60 percent in 1333-4, this was not due to an increase in the number of these adult animals, but rather a fall in the numbers of young horses, and to a lesser extent, mares.

By 1368-9 the demesne stocked fewer than twenty horses. The size of the herd would fluctuate between ten and twenty animals, with an average of 16.6 recorded each Michaelmas, for the following two decades. The years between 1396-7 and 1425-6 saw a further reduction; an average of twelve horses, but ranging from seven to twenty-six in 1412, when a bumper crop of foals came through the demesne stock. A further step change is evident between 1439-40 and 1457-8, by which time the demesne herd entered a 'small and stable' phase, with numbers ranging between three and six horses for a period of almost thirty years. In 1468-9 the size of the demesne herd began to reverse the trend of the previous century and started to grow once again. This growth was driven by the re-stocking of brood mares and the re-introduction of demesne horse breeding. This brought the average number of horses up to 9.3 animals between 1468-9 and 1474-5. There is a gap in surviving records between 1475 and 1483-4, by which point the numbers of horses had contracted back to an average of six, but, with horse breeding reinstated and a more regular flow of stray and other seigniorially-acquired horses, the herd continued to grow to around fifteen animals by 1493-4, when the demesne was leased in its entirety and the accounts ceased to be recorded.

Phases of Horse Management Policy

The management of demesne horses at Barnhorn can be divided into four distinct phases. Phase One, from 1325-6 to 1368-9, saw the demesne engaged in the breeding and rearing of work horses; managers regularly stocked mares and young horses were frequently born on the demesne, reared for three years, and promoted to the adult groups. In this phase, stotts comprised around 40 percent while the mares and all the young horses together accounted for 30 percent each. Demesne

managers seemingly had a clear plan in place to breed as many young animals as possible. Phase Two began in 1369-70 and ran to 1410-11. In this phase the demesne ceased to breed young horses but still raised, and presumably trained, foals that had been purchased on the market or acquired through other channels. This phase is defined by the absence of mares; the horse herd was comprised of ~70 percent stotts and ~30 percent young horses. The numbers of female horses on the demesne had been steadily dwindling up to 1368-9, when the three remaining mares died. The demesne would never stock horses categorized specifically as 'mares' again, and no foal would be born on the demesne for the next one hundred years, until 1469-70. The demesne did still keep young horses in this phase, but they were purchased rather than bred on the demesne. This is significant because it demonstrates that there must have been a reliable source of young horses that demesne managers could reliably purchase from. 1411-12 marks the beginning of Phase Three, in which no breeding or rearing activity was carried out on the demesne. This phase is characterized by an almost total absence of mares *and* young horses. The lone exception to this is 1421-2 when four foals are recorded at the beginning of the year, with three promoted to the adult stocks over the course of the year and a single male of three years remaining in Autumn of 1422. The presence of young horses in this single year bucks a fifty-five-year trend and the fact that the arrival of the foals was not recorded in the accounts makes their presence even more conspicuous. Phase Four began 1468-9 when a horse breeding program was reinstated on the demesne. Young horses appear first with three foals recorded at Michaelmas 1468. Unfortunately, we cannot tell whether these young horses were purchased or bred internally as this likely occurred in 1467-8, a year for which there is no surviving account. However, one young foal was born on the manor in 1468-9. Female horses are explicitly recorded once more in 1472-3, although the accounting nomenclature had again changed; female horses were now called *equae* rather than *jumentae*. It is difficult to know if the difference between the two terms was intentional or significant, or if the use of one term or another was simply a difference in scribal practice with a 100-year gap between accounts. The latter is probably more likely, as, in 1487-8 and 1488-9 adult horses are referred to simply as stotts in the stock account and described

with the separate categories of *equus* and *equa* elsewhere.³³ The Barnhorn demesne continued to actively breed horses until at least 1493-4. For this latter half of the fourth phase, when the demesne recorded no mares, a proportion of the adult working horses must have been female, although the accounts do not explicitly specify this.

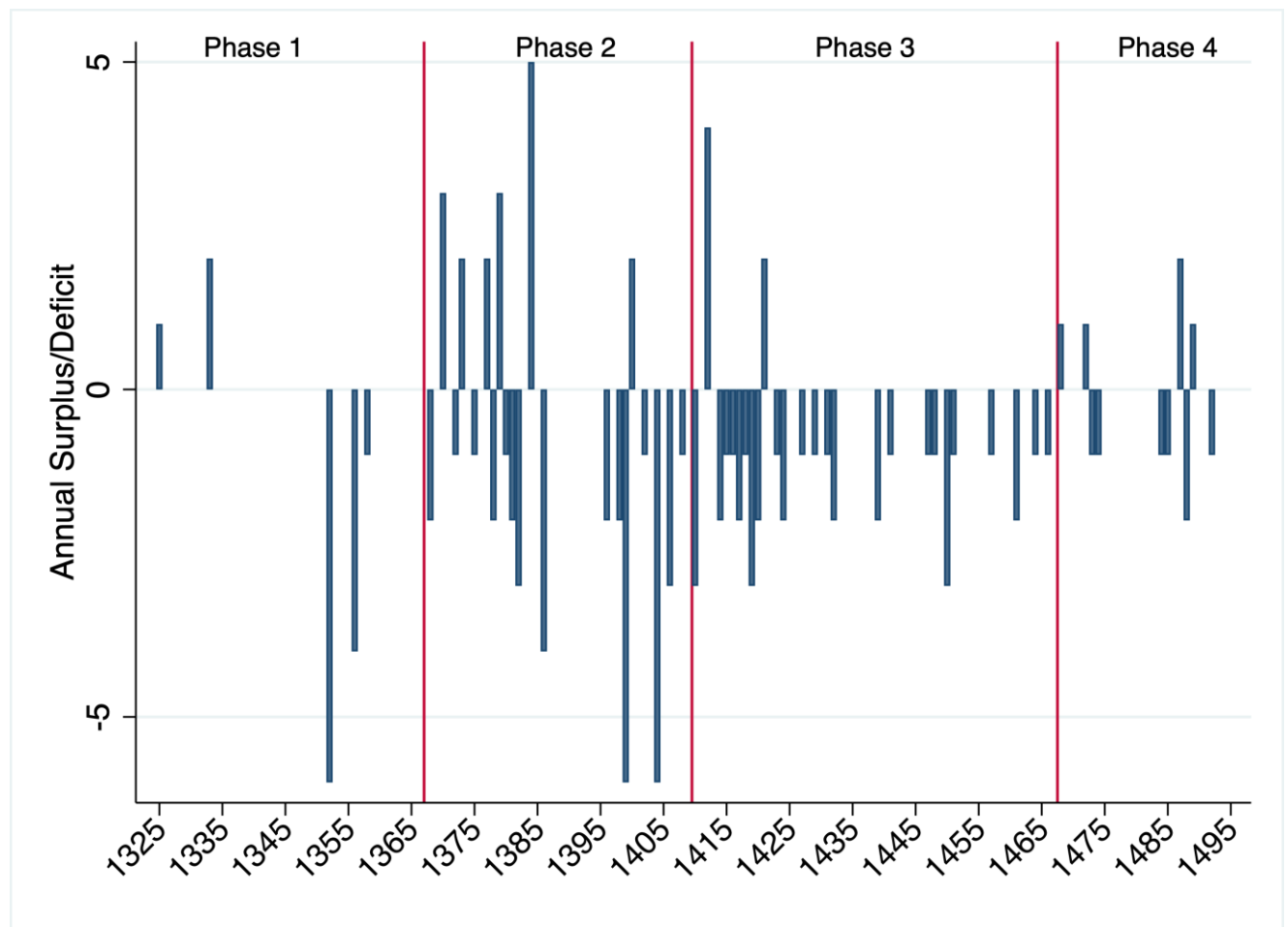
Annual Surpluses and Deficits

Having examined the composition of the demesne horse herd and how it changed over time, we will next look at how demesne managers procured working horses. In order to contextualize information about how (and how many) horses the Barnhorn demesne acquired, we first need to get an understanding of how many working horses managers *needed* to source. Figure 3 provides this by plotting the surplus or deficit of work horses for every surviving account year. This is determined by first taking the number of workhorses that would need to be replaced in any year. These are the animals that died, those that were sold, and any manors transferred to other parts of the Battle Abbey estate (*Deaths + Sales + Transfers Out*). From this, we subtract the number of young demesne horses that had been ‘graduated’ to the adult working stock as well as any horses transferred in from the estate administration (*Foals Promoted + Transfers In*). A result of zero would indicate that the demesne had produced internally, through the rearing and/or breeding of young horses, a sufficient number of animals to maintain their stocks at current levels. A positive sum would indicate a surplus of horses. These could be kept on the demesne if the manager desired to increase the size of the horse herd. If not, surplus animals would be moved out, either to other Battle Abbey demesnes or sold on the market. A negative result is indicative of a deficit where more animals had been lost over the course of the year than were produced internally. This would either result in the shrinking of the horse herd or would require that adult horses be found to replenish stocks. In deficit years, the

³³ At Michaelmas 1487 the account enumerates six stotts/three *equi* and three *equa*. A further foal and filly were promoted over the course of the year, so in Michaelmas 1488 the account records eight stotts or four *equi* and four *equa*. See: BA 422, Battle Abbey Archives, The Huntington Library, San Marino, California.

demesne would have had to rely on seigniorial sources of animals like heriots and strays or purchase horses to maintain its stocks. In surplus years the Barnhorn could have supplied other Battle Abbey manors and/or the local market with its surplus draught horses.

Figure 3: Annual Surplus/Deficit of Adult Horses



Source: Author's Manorial Account Database

Over the ninety-two account/years in our sample, forty-seven were deficit years. In practical terms, this meant that the demesne would have had to acquire adult working horses every second year to maintain the size of the horse herd. In twenty-three years internally-produced horses were sufficient to replace those that had died or been sold, so stocks could be maintained without any action from the demesne manager. In twenty-two years, or about one in every four years, a surplus of adult working horses was created. However, these surplus animals would not

normally be carried over to the next year. At Barnhorn, like other demesnes, managers were very clear about the number of draught animals needed on the demesne in any given year,³⁴ so surplus animals were usually sold very quickly. This means, however, that a surplus in one year could not soften the blow of a deficit in a subsequent year. Understandably, surpluses were most regularly created in phases one and four, when the demesne was actively breeding young horses.

Sources of Horses

So, how did demesne managers acquire working horses when they needed to? To get an overview of the methods of horse procurement we will initially explore all ninety-three years together. This is illustrated in Table 2. Overall, the primary methods of acquisition for horses on the demesne were the purchase of animals and internal breeding. The third most significant source of working horses was Battle Abbey itself; thirty-three horses were transferred from Abbey authorities to the Barnhorn demesne. These animals could be described as having arrived *de Bello* or *de dominus*, or on occasion directly from another of the abbey's manors,³⁵ but ultimately came from the estate's central administration in efforts to move draught animals between individual properties as and when necessary. The Barnhorn demesne also acquired horses through a number of seigniorial channels. These were various customary perquisites of lords which facilitated, under certain circumstances, the transfer of animals from individuals in the community. Heriots – a form of death duty where tenants owned their 'best beast' to their lord upon their death – were one such source of horses. The Barnhorn demesne acquired a total of five stotts and one foal in this manner. Rounding out these acquisitions are four stray animals, which would have been impounded by an agent of the lord when discovered on the manor and remained unclaimed for a year and a day,

³⁴ Stone, *Decision-Making*, 114.

³⁵ In 1399-1400 two stotts, described as 'de dominus' were added to the Barnhorn stocks; in 1421-2, 1435-6, 1441-2, 1443-4 small numbers of stotts were added with the notation 'de Bello'. In 1484-5, two foals and one stott were added 'from the horses of the lord'. In 1398-9, three stotts were added from Marley, one of Battle Abbey's other manors.

ultimately becoming the Abbey's property.³⁶ A single stott came on to the demesne as forfeited chattel of a felon when Richard Akerman was hanged in 1489-90.³⁷ These proportions are broadly similar to patterns of acquisition nationally at the turn of the fourteenth century.³⁸ Barnhorn relied slightly more on the internal breeding and rearing of horses than was typical of demesnes, and was therefore perhaps slightly less dependent on the market, although this was still the single largest source of working horses in most years. Barnhorn received fewer horses via seigniorial perquisites than the average English demesne did. Given Barnhorn's more clearly demarcated (and perhaps hedged/fenced) divisions between tenant properties and the demesne, a by-product of its convertible husbandry mode of agriculture, we might expect that fewer stray animals would be found than on a classic open-field manor, where livestock less encumbered.³⁹ The numbers of strays, and especially animals funnelled via other seigniorial channels, namely heriots and the forfeited chattel, would also have been a function of the size of the local population. The pool of potential animals for seigniorial transfers like heriots may have been relatively smaller, as persistent flooding in the fourteenth century had driven many residents out of the coastal country surrounding the manor.⁴⁰

³⁶ For a more detailed discussion of the process surrounding the impounding of stray animals see: Jordan Claridge and Spike Gibbs, "Waifs and Strays: Property Rights in Late Medieval England." *The Journal of British Studies* 61, no. 1 (2022): 50–82.

³⁷ BA 420, Battle Abbey Archives, The Huntington Library, San Marino, California.

³⁸ Jordan Claridge, "The trade of agricultural horses in late medieval England" PhD Thesis, University of East Anglia, 2015: 51-70.

³⁹ See: Claridge and Gibbs, "Waifs and Strays", Appendix 2.

⁴⁰ Searle, *Lordship and Community*, 254; P.F Brandon, "Demesne Arable Farming in coastal Sussex during the late Middle Ages" *Agricultural History Review* Vol. 19, No. 2 (1971): 43-134.

Table 2: Horse Acquisitions at Barnhorn, 1325 – 1498

Horse Type	Purchased	From Foals (Adults Only)	Born (Foals Only)	Transfer In	Heriot	Stray	Chattel	Other	Total
Stotts	34	52	-	12	5	2	1	4	110
Mares	0	8	-	0	0	0	0	0	8
<i>Equi</i>	1	4	-	1	0	1	0	0	7
<i>Equae</i>	0	4	-	0	0	1	0	0	5
Foals	37	0	46	3	1	5	0	4	96
Total	72	68	46	16	6	9	1	8	226

Source: Author's Manorial Account Database

When we turn to the annual figures, in order to appreciate how any demesne breeding and rearing functioned alongside other avenues of procurement, we must look at the adult animals and young animal separately. Internally-produced adult horses were added to one of the working categories from the pool of young horses when they were between three and four years old. These were coded in the account database as ‘added from foals’. These animals could have been born on the demesne and reared for the full three years or they could have been acquired at some point and only raised and trained on the demesne for part of their ‘childhood’ years. Conversely, for a young horse to be classified as internally produced, it had to be born on the demesne. These animals were coded in the database as ‘born’. Because a newly mature adult horse would have impacted immediately on the capacity of the horse herd, we must treat these ‘added from foals’ additions separately from foals that had been born that year, but would not contribute to work on the demesne for some years.

We will begin by examining the year-to-year acquisitions of adult horses, plotted in Figure 3. In Phases one and two, while acknowledging that the coverage of our sample in the early decades of this period is rather spotty, we can see that animals were almost exclusively acquired via purchase and breeding. The exceptions were few. In 1375-6 one stray horse arrived and in 1398-9, three stotts were transferred to the demesne from Marley, another Battle Abbey manor, and a further two were added ‘from the lord’ in the following year, along with another stott added via heriot. In 1408-9, another heriot was rendered as a stott, from one William Giles. In phases three and four the methods of acquisition become more varied. Phase three was a period where no breeding or rearing activity occurred, so we would expect the demesne to have relied more heavily on other sources of horses. The market was the main channel of acquisition in this phase with twelve horses purchased in the eighteen years of surviving accounts. Nine foals were still promoted to the adult groups; at least three of these had been purchased late in Phase two,⁴¹ the others must have been acquired in the years not covered by our data sample. The central administration of Battle Abbey clearly stepped in to

⁴¹ Three foals were purchased ‘in patria’ in 1410-11. See: BA 362.

support Barnhorn's need for working animals in this period, as transfers in from other parts of the estate, which occurred only rarely in previous decades, became somewhat more regular. Heriots also became a much more regular source of horses in this period, only to seemingly disappear again in Phase Four. The source of some animals could not be determined. For example, in 1420-1, three stotts were added to the demesne stock. In the case of one stott, the manuscript is simply too faded to read the full note concerning where the animal had come from. Others are recorded only with the note that the animals had arrived after the death of the monk who had been in charge of the Barnhorn demesne, Thomas Henxhill. Thomas left a servant in charge of the demesne, at least for the rest of the year, but apparently some details were lost in the transfer. In phase four the demesne returned to its breeding program as its main source of working horses. Eighteen of the twenty-three acquisitions (78 percent) came from the manor's pool of young animals. These were supplemented by three strays and two further transfers in from the Battle Estate. By this point, at least some of the demesne was being leased, although the Abbey continued to retain some part of it and continue to make accounts. However, while the Abbey retained ownership of the animals, the responsibility for the horse herd had been placed with the farmers who leased the land.⁴² Indeed, at the opening of the 1483-4 account, six stotts are noted explicitly as being 'received from the lord per the hands of the farmer'.⁴³

The acquisitions of young horses are much less complicated. In phase one, the demesne's primary source of young animals was its breeding program. Nineteen of a total of twenty-four animals were born on the demesne. Two were purchased in 1325-6 and three more in 1368-9, although these are probably best understood as belonging in phase two. Phase two was characterized by the purchase, rather than breeding of young horses; this was the only method of acquisition between 1369-70 and 1410-11. There were few acquisitions of young horses in phase three, which is not unexpected, given that the demesne opted not to stock young animals

⁴² See: Barnhorn Manorial Accounts for 1474-5 (BA 413).

⁴³ See: Barnhorn Manorial Account 1383-4 (BA 428).

at all in these years. In 1420-21, one foal was provided via the heriot of John Cony, and a further four were among the untraceable additions that occurred after the death of Thomas Henxhill, as discussed above. With the return of a breeding program in phase four, foals began to be born in significant numbers by 1468-9. These were supplemented by five strays and three young animals transferred in from the Battle administration.

Figure 3: Adult Horse Acquisitions at Barnhorn, 1325 - 1498

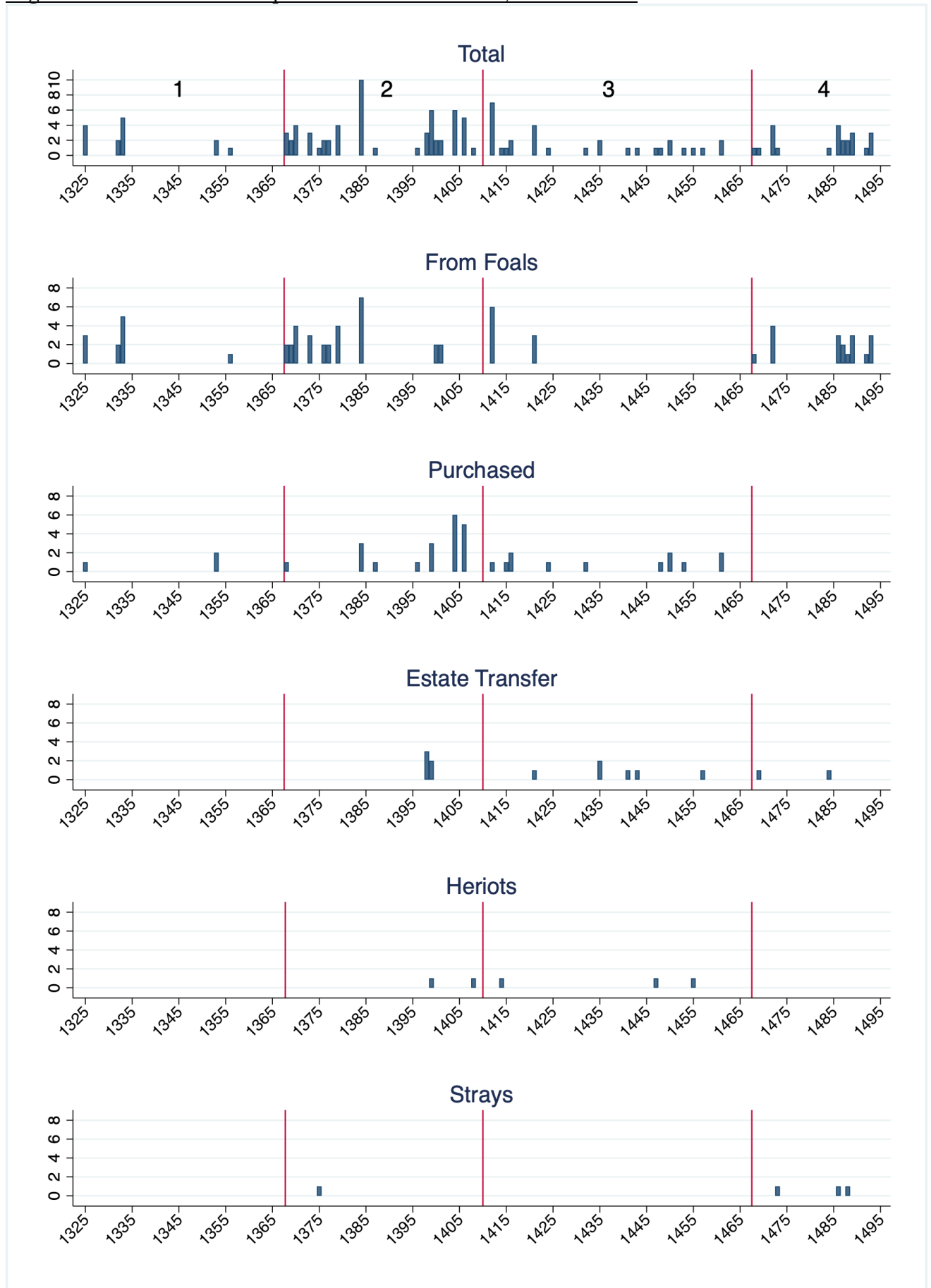
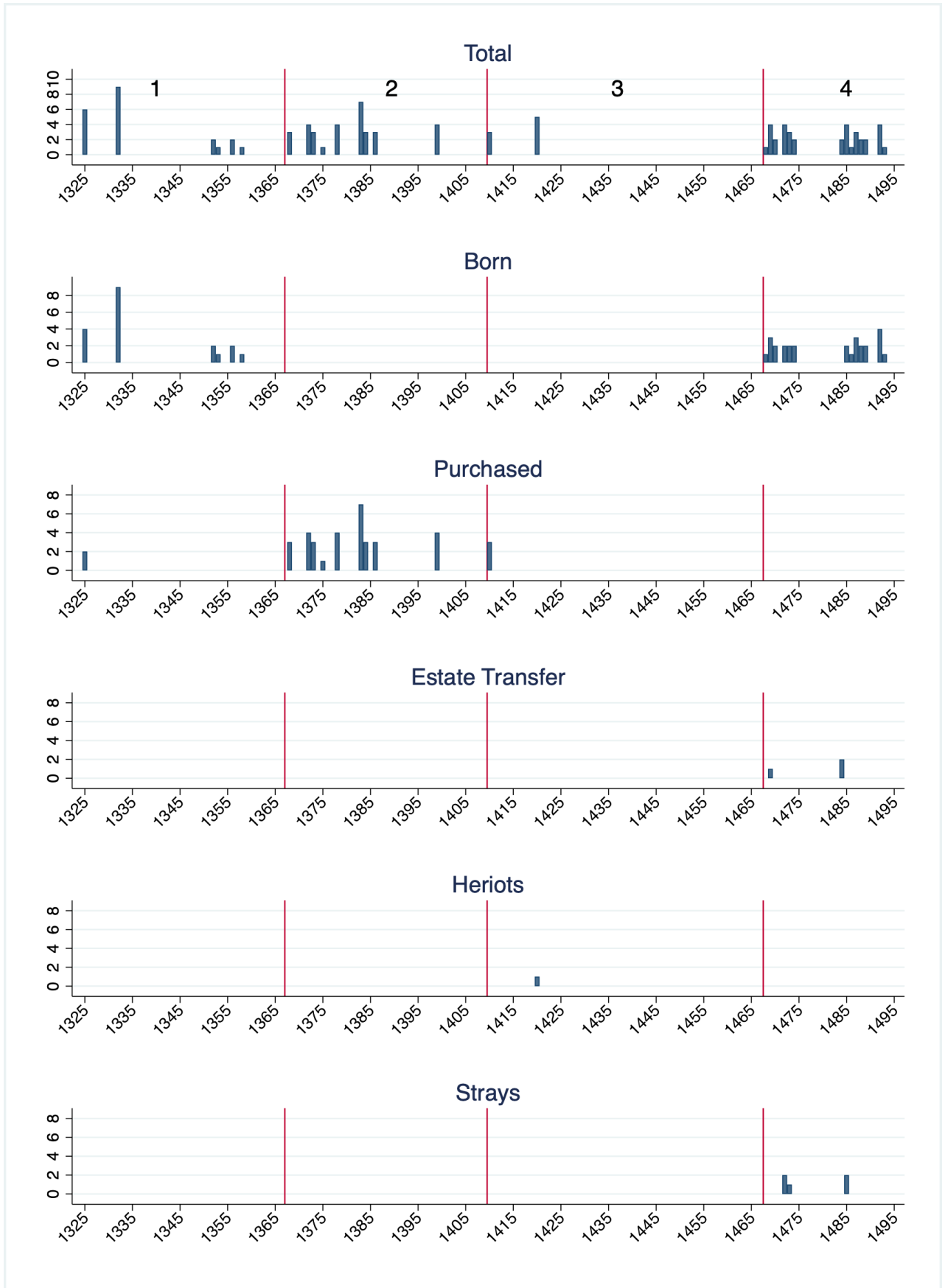


Figure 4: Young Horse Acquisitions at Barnhorn, 1325 - 1498



Now that we have an understanding of the various channels used to acquire horses, and their relative importance over time, we can delve deeper into these methods of procurement. We know that purchases were an important source of horses for the duration of our study. Is there any indication of where these horses were purchased, or from who? In terms of a breeding program, we have seen that the Barnhorn demesne was actively engaged in breeding work horses at some points and not at all at other points. We might ask, then, how successful the breeding program was. Did it ever reach a point where the horse herd was self-replacing?

Purchases

Manorial accounts typically record very few details about livestock purchases other than quantities and prices. In many cases it is not even possible to determine individual purchase prices, as multiple animals could be lumped together in a single sum.⁴⁴ In these cases, it is only possible to calculate average prices. The entries that describe horse purchases tend to be even less informative than for other types of livestock. Some Barnhorn accounts do contain, however, some more details that might point to the origins of purchased horses. Beginning in the late fourteenth century, some horses begin to be described as having been bought (and sold) ‘*in patria*’.⁴⁵ This was not a term restricted to horses, or even to livestock, as it was applied to purchases of cattle and grain as well. Taken literally, this would mean the animal had been purchased ‘in country’, but as Barnhorn did not lie near any borders, and working horses were almost always procured from within the British Isles, it must have meant something different in these contexts. These ‘*in patria*’ notations occur frequently enough that they could not have been entirely exceptional. The question in these cases becomes one of interpretation. What

⁴⁴ For example, the 1372-3 account records four foals were purchased for the total sum of 26 s. See: BA 354.

⁴⁵ Between 1383-4 and 1416-17 a number of horses were described as being bought and sold ‘*in patria*’: 1383-4 (BA 353): seven foals purchased; 1384-5 (BA 341): three stotts and three foals purchased; 1386-7 (BA 351): three foals purchased; 1387-8 (BA 349): one *equo* purchased; 1410-11 (BA 362): one stott sold; 1412 (BA 384): one stott sold; 1412-13 (BA 363): one *equo* sold; 1415-6 (BA 364): one stott bought; 1416-17 (BA 388): two stotts bought.

exactly did it mean to purchase an animal ‘in patria’? David Farmer assumed that these referred to purchases made in the locality; in many cases even from the tenants of the manor or an adjacent one.⁴⁶ The term becomes even more puzzling when it is used alongside other contextual information about purchases. For example, in 1396-7, a number of cattle were purchased. Some animals are described as having been purchased from a named individual and others are simply described as having been bought ‘in patria’.⁴⁷ In sum, it is likely that purchases from named individuals likely reflected transactions between demesne managers and people familiar to manorial administrators and the wider community. In many cases these were probably tenants. Alongside these entries, purchases described as ‘in patria’ could be seen as transactions that occurred outside of a formal market with individuals who lived locally, but who were not known to the administrators, perhaps, as farmer suggests, the tenants of nearby manors.

Breeding and Rearing

Of course, another main source of horses was the demesne’s own breeding program. How successful was this? The demesne’s policies with respect to mares and young horses are key to understanding the relative importance of raising working horses on the manor versus buying them on the market. Barnhorn only stocked (or at least distinguished in the accounts) brood mares for breeding in twelve of the ninety-two years in our study. Breeding would have been possible in some other years, because it is clear that some female horses were included in the gender ambiguous categories of ‘stott’ and ‘equi’ and not explicitly distinguished as mares.⁴⁸ Brood mares, called *jumenta* in the accounts, were stocked in Phase 1; by 1368-9 none remained on the demesne. Mares were reintroduced to the demesne in 1472-3 but were styled as ‘equae’. When examining young horses, we

⁴⁶ David Farmer, “Marketing the Produce, 1200-1500” in Edward Miller, ed. *The Agrarian History of England and Wales* vol. III, 385.

⁴⁷ See: Barnhorn Manorial Account for 136-7 (BA 342).

⁴⁸ For example, in 1470-1 some of the *equi* must have been female because foals were born that year and the account notes that some of the horses were sterile. Similar notes can be found in the account for 1485-6. See BA 412 and BA 414.

must distinguish between breeding and rearing as separate activities. We will define 'breeding' as when an adult female horse, owned by the demesne, produced a foal. These are recorded as *de exitu* or 'of issue' in the accounts. These foals, if they survived, would be classified in the accounts as young horses for three years, and then 'graduated' to one of the adult categories. Foals of both sexes are recorded in the accounts at four different age 'stages': foals born that year, foals recently separated from their mothers, foals older than 1.5 years and foals older than two years. However, as we have noted above, demesne managers at Barnhorn also purchased a number of foals of various ages. These were not born on the demesne but were probably reared and trained on it. Demesne breeding, that is, when foals were born on the demesne, only occurred in Phase 1 and Phase 4. However, the demesne did raise and rear young horses in Phase 2.

We can track the success of the demesne breeding program in these years simply by looking at the number of foals produced relative to the number of mares stocked. This is given in Table 3. The question then becomes how to define 'success' in horse breeding on the demesne? Where should the threshold be set? We might start with the anonymous author of the didactic *Husbandry* text. The text asserts that mares should produce one foal each year, and in cases where this target was not met, demesne managers should provide specific reasons for the shortfall:

The reeve ought to answer for the issue of the mares of the manor, that is to say for each mare one foal in the year. And if there is any mare which has no foal an inquiry ought to be made whether this is due to bad keeping or lack of food, too much work or through lack of a stallion, or whether the mare is barren and that the reeve could have changed her – and in time – for another but did not do so. In these cases he [the reeve] ought to be charged fully for the foal or the value.⁴⁹

⁴⁹ Oschinsky, *Walter of Henley*, 423.

Table 3: Breeding Success

Year	Breeding Stock	No. of Mares	Foals Born	Foals per Mare
1325-6	Jumenta	10	4	0.40
1332-3	Jumenta	11	9	0.82
1333-4	Jumenta	6	0	0.00
1352-3	Jumenta	8	2	0.25
1353-4	Jumenta	7	1	0.14
1356-7	Jumenta	9	2	0.22
1358-9	Jumenta	6	1	0.17
1472-3	Equa	2	2	1.00
1473-4	Equa	2	2	1.00
1474-5	Equa	3	2	0.67
1487-8	Equa	3	3	1.00
1488-9	Equa	4	2	0.50
Total		68	28	0.42

These were clearly lofty goals. The Barnhorn demesne only met the one-foal-per-mare goal in three of the twelve years it stocked brood mares. All of these ‘good’ years occurred in phase four when breeding we re-instated on the demesne. In the first phase, the breeding operation performed relatively poorly and became less productive over time. In 1332 nine foals were born from eleven mares, for a foaling rate of .82, but this was success that would never be reached again. Between 1332 and 1333 the demesne almost halved its herd of mares from eleven to six and no foals were born in 1333. In the 1350s, the group of mares had stabilized to between six and nine animals, but breeding success remained poor with only .14 to .25 foals produced. Overall, between 1325 and 1359, the Barnhorn demesne only managed to breed 0.3 foals for every mare, well off the mark set by the *Husbandry*.

There are a number of entries in the accounts that describe poor maternal health and sterility among the mares. As the *husbandry* treatise instructed, demesne managers often offered explanatory notes when demesne mares produced fewer

foals than expected.⁵⁰ Rates of sterility were higher among horses relative to other livestock, so female horses tended to produce fewer young examples than the cow herd produced calves. The high rates of sterility among horses, especially relative to those of cattle, might be attributed to the fact that mares were often used for harrowing in the Spring, at a time when they would have been heavily pregnant.⁵¹ Ultimately, given the dismal track record of demesne breeding in the first half of the fourteenth century, it is not surprising that Barnhorn managers gave up on breeding entirely at this point.

The breeding operation was much more successful the second time around. Brood mares were likely reintroduced in 1471-2,⁵² and between 1472-3 and 1488-8 the demesne stocked a small number of dedicated breeding animals but had much more success in producing foals. Over this period .83 foals were born for every *equa*, meaning that, in this phase, the average success in breeding almost matched the most successful year from the fourteenth-century attempts. Such success likely had an effect the expansion of the horse herd in the late 15th century. The demesne incrementally moved from two to four brood mares while managing to maintain previous success in breeding on a 'per mare' basis.

There are some other interesting observations. When we encounter female horses explicitly designated as 'mares' in the accounts (as opposed to the female horses that were lumped in with the stotts or equi, we see that these were only ever raised internally and never purchased. This suggests that managers would attempt to breed horses if the composition of the herd in any given year would support an attempt, but breeding stock were never sought on the market. We also observe that in only very few instances were stotts promoted from foals and purchased in the same year. So, demesne managers did not go to the market for working horses

⁵⁰ For example, in 1353-4 the account notes that one foal was born 'and no more because of heavy work with the plough and harrow.' In 1470-1, when two foals were born, the account notes 'and no more because the mare was sterile'. The end-of-year reckoning in 1485-6 records that, of two stotts remaining on the demesne, 'one is female, but sterile'. See: BA 348, BA 412, BA 414.

⁵¹ Searle, *Lordship and Community*, 293.

⁵² No account survives for 1471-2, but there were no brood mares recorded in the account of 1470-1 and two *equa* are already present when the 1472-3 account opened in Michaelmas 1472; these were likely either purchased or transferred in from another Battle Abbey manor.

if they had an internally produced horse maturing that year. The only exceptions to this general policy are in 1368-9 , when the demesne promoted two foals to the stotts category and purchased one further. Similarly, in 1384-5 the manor promoted seven foals and purchased a further three. This must have been a deliberate re-stocking of adult horses after a few successive years of high mortality, which had seen eight demesne horses perish in five consecutive years. A similar policye is evident among the young horses. Foals could be acquired by both purchase and breeding, but both sources were rarely tapped in the same year.

How did Demesnes Lose Horses?

Working horses generally only left the demesne when they died, when they were sold or if the central administration of Battle Abbey decided to reallocate them elsewhere, usually to one of the estate’s other demesnes or to the stable of the Abbot himself. The proportions are given in Table 4.

Table 4: Horse Losses at Barnhorn

Horse Type	Died	Transferred Out	Sold	Other
Stott	85	11	12	5
Mare	10	2	1	0
Foal	14	8	2	1
Equus	2	0	2	0
Equa	3	0	1	0
Total	114	21	18	6

Source: Author’s Manorial Account Database

The mortality of working horses was significant. In the 93 account-years in our study, 114 horses perished on the demesne, or 1.2 horses per year. Given the uncertain nature of medieval horse breeding, it might have taken all of the demesne’s breeding capacity simply to replace the animals that died. The numbers of horses transferred out is also relatively small. It does not seem like Barnhorn was acting in any way as a breeding ‘hub’ for the larger Battle Abbey estate. We can appreciate that very few working horses were sold from the demesne. That significantly more horses died than were sold at Barnhorn is another strong

indication that these animals were bred for work and not for the market. Indeed, that so many horses were described as 'old' or 'weak' at the time of their sale might be an indication that the sale of horses was outside the demesne's normal scope of economic activity, in that they were not expected to be sold unless they were no longer useful for work on the lord's farm.

Conclusions

This paper has offered an opportunity to explore a single demesne's management of its working horses, on an annual basis, over a period of 170 years. Such a detailed analysis has produced some notable insights. First, we can appreciate the range of approaches the demesne took in managing its stock of working horses. We have divided our period of study into four separate phases when appreciably different management strategies were taken with the horse herd. Our study began in Phase 1, when the demesne was stocking and breeding young horses, although with only limited success. There are some potential factors we can point to for this poor performance. Requiring the breeding mares to work on the demesne must have negatively impacted on their fertility. This was likely a calculated risk taken by Barnhorn managers who probably felt that the benefits of their labour outweighed the cost of poor breeding performance. The resources available to the working horse herd might also have faced competition. The abbots of Battle grazed their own horses on Barnhorn pastures, as the manor was the abbot's preferred place for recreation, and he often visited to go hawking and riding.⁵³ This might have limited the demesne's ability to breed agricultural horses if available pasture was already earmarked for the Abbot's riding horses. In Phase 2, which began in 1369-70, the demesne stopped breeding young horses, likely in response to the poor and declining performance of the demesne's breeding operation to that point. By 1369 William Lomherst had taken over as manager of the demesne (and would hold the position until at least 1373-4), so this change in horse management policy might be attributable to him. The demesne did continue to raise young animals that it purchased, which in itself is perhaps a vindication of this decision, as it

⁵³ Searle, *Lordship and Community*, 255. Barnhorn account 1333-4. (BA 344)

demonstrates that young horses were readily available for purchase at reasonable prices. In Phase 3, the demesne stocked only adult animals and did not engage with any breeding or rearing activity. This period also saw the average size of the horse herd fall from around ten animals to around five. Finally, in Phase 4, a breeding program was re-started at Barnhorn, and this time it had more success. A decisive factor here might have been the fact that much of the demesne was leased out to farmers who were, by that time, maintaining and managing the horse herd. Local farmers had a completely different set of incentives than a manager working for an ecclesiastical estate would have done. They also may well have had more local and specialized knowledge about breeding and caring for horses.

While we do see a shift in the nomenclature used for horses in the accounts, mainly from *stott* and *jumenta* to *equus* and *equae*, there is no sign of the more specialized horse types, like the Suffolk punch or the Cleveland bays, that were apparently established by the Early Modern period.⁵⁴ Early modernists have also observed that horse breeding activity had become concentrated in pastoral areas by the end of the Middle Ages.⁵⁵ By the middle of the fifteenth century, Barnhorn had moved towards pastoralism itself by leasing out parts of the demesne and focusing particularly on cattle rearing. Eleanor Searle has argued that new developments in transportation allowed increased specialization in animal husbandry which was better suited to the marginal soils than arable farming.⁵⁶ Despite this, we do not ever see a significant horse breeding operation at Barnhorn. Perhaps the reinstated breeding program of the late fifteenth century was eventually scaled up in the years that extend beyond our account evidence, but the more likely explanation is that cattle farming was simply a more profitable use of pastoral resources.⁵⁷ Ultimately, even with close scrutiny of almost 200 years we do not ever see any horse breeding at scale at Barnhorn, and the most successful years

⁵⁴ Early modern scholars discuss the emergence of a number of horse breeds which were mostly unknown in the Middle Ages. Joan Thirsk "Farming Techniques" in Joan Thirsk, ed., *The Agrarian History of England and Wales Vol. IV, 1500-1640* (Cambridge: Cambridge University Press): 191-2.

⁵⁵ Joan Thirsk "Farming Techniques", 192.

⁵⁶ Searle, *Lordship and Community*, 275.

⁵⁷ P. F. Brandon, *The Commonlands and Wastes of Sussex*, unpublished Ph.D. thesis, University of London, 1963

of horse production occurred in the years when local farmers had taken over the horse herd, at which point it is debateable whether one could consider the Barnhorn horse herd to be seigniorially-managed at all.