

PART II



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CHAPTER 9

THE PRODUCTION OF HOPS ON THE GENERAL FARM I

Hop gardens and all the paraphernalia of hop growing - poles and pockets, bags and baskets, bins and oast houses - have been part of the Kentish farming scene for over four hundred years. Travellers through Kent have rarely failed to point out the county's premier role in hop cultivation. Despite this, however, very little has been written about the early history of the hop industry. Hop growing before the nineteenth century remains shrouded in mystery. Fallacies abound. And the history of hop growing in Kent has yet to be written.¹

A Origins - A Critical Assessment

Origins are almost always difficult to pin-point. There are three salient questions to bear in mind when considering the first appearance and use of hops in England: When and where were hops first grown? When were they first used in English brewing? When were hops first cultivated commercially in England? Most of the confused answers in the past have concentrated on the early sixteenth century, with one of the following versions of a popular jingle thrown in as evidence:

Hops, Reformation, bays and beer
Came into England all in one year.

¹The only comprehensive attempt is, H.H. Parker, The Hop Industry (1934), but this work concentrates mainly on twentieth century developments: the history of hop growing before 1800, for instance, is covered in less than 50 pages and is based solely on printed sources, the nineteenth century similarly. D.C. Coleman, The Economy of Kent under the Later Stuarts, University of London Ph.D. Thesis (1951), devotes a few useful pages to hop growing, but the narrow basis of the primary evidence leads to over-optimistic conclusions. An illustrious work, E.C. Lodge ed., The Account Book of a Kentish Estate, 1616-1704, Records of the Social and Economic History of England and Wales, VI, (1927), presents hop accounts uncritically (491-3) and suggests that hop gardens were "very profitable", whereas the evidence of the Godinton estate fails to support such a conclusion.

Hops and turkeys, carps and beer
Came into England all in one year.

Turkeys, carp, hops, pickerel, and beer
Came into England all in a year.

Opinions on the actual year implied have varied. The anonymous author of an excellent eighteenth-century treatise on hops believed without question that they "were first brought from Flanders into England in 1524". Laurence likewise thought "hops were first brought from Flanders into England, Anno 1524, in the 15th Year of K. Henry the 8th; before which, Alehoof, Wormwood, &c. was generally used for the Preservation of Drink". Banister, quoting the third version of the distich, averred that "hops were first planted in England in 1511".¹

Modern writers, too, have varied in their opinions. Lord Ernle thought 1524 too late, did not indicate very precisely his reasons for this conclusion, nor suggest an alternative. On the other hand, Parker concluded that "the cultivation of hops in this country probably began not very long before 1549". Others continue to repeat 1524 as the date of first planting in England, whilst admitting that hops were imported much earlier.²

|| Hops, in fact, were grown in England before the Norman Conquest. Almost certainly they were cultivated in late-Saxon Worcestershire, at Himbleton - "Hymel-tun" - which appears in Anglo Saxon deeds and indicates "a hop yard". || Furthermore, there is a record of 822 which tells us that the millers of Corbay were freed by the Abbot from all labour relating to hops. The hop was certainly known in England before the Conquest. There is a remarkable reference to the hymele or hop

¹Anon., Instructions for Planting and Managing Hops and for Raising Hop-Poles (Dublin Society, 1733), 4; J. Laurence, A New System of Agriculture (1726), 124; J. Banister, Synopsis of Husbandry (1799), 203.

²Lord Ernle, English Farming Past and Present, eds. G.E. Fussell and O.R. McGregor, (1961), 92; Parker, op. cit., 5; C. Clair, A Kentish Garner (Watford 1962), 61; M. Campbell, The English Yeoman (1960), 180.

plant in the Anglo Saxon version of the Herbarium of Apuleius. From the "hymele" was produced a "wort" which was reckoned to be "that degree laudable that men mix it with their usual drinks". The "usual drinks" were, of course, malt liquors or ale. This was the debut of English hopped ale or beer!¹

The European cultivation of hops for brewing dates from at least the eighth century, when small hop gardens existed in parts of France and Germany. Until the fourteenth century European hop culture was almost entirely in the hands of monasteries.² The monastic undertones of hop growing in pre-Norman England is hardly surprising. Yet subsequent references to cultivation in this country appear to be lacking until the early sixteenth century. This implies that, for some reason, they were not grown here in late mediaeval times. Some such fluctuation, I suggest, did in fact occur. A passage in William Harrison's Description of England, published in 1577, has been cited by some writers to indicate that hops were a recent introduction in Elizabethan England:³

Of late yeares also we have found and taken up a great trade in planting of hops, whereof our moorie hitherto and unprofitable grounds doo yeeld such plentie and increase, that their are few farmers or occupiers in the countrie, which have not gardens and hops growing of their owne, and those farre better than doo come from Flaunders unto us.

But Harrison had something else to say on the subject:

Hops in time past were plentiful in this land: afterwards also their maintenance did cease; and now being revived, where are anie better to be found? where anie

¹J. Bickerdyke, The Curiosities of Ale and Beer (1886), 66. 1

²A.H. Burgess, Hops: Botany, Cultivation and Utilization (1964), 1; B.H. Slicher Van Bath, The Agrarian History of Western Europe A.D. 500-1850 (1963), 274.

³For example Parker op. cit., 5.

greater commodity to be raised by them?¹

We can reasonably conclude that, sometime during the first half of the sixteenth century, hop cultivation was re-introduced into England. We are witnessing a Tudor revival in hop growing after a long lapse; it was not the first attempt. Parker was aware of Harrison's statement but dismissed it for lack of further evidence: "Whether hops had been cultivated in England at some earlier period, and afterwards allowed to run wild, is a question which it is now almost impossible to answer definitely".² But John Bickerdyke, after diligent research, provided the answer almost a hundred years ago!

We must still account for the hop-less years of the intervening centuries. As with so many examples of small-scale intensive production requiring a high level of native skills, it was the Flemings who brought hop cultivation to a state of perfection: "The systematic growth and regular scientific rotation of crops were known and understood by the Flemings two hundred years before our English farmers attempted such progressive farming".³

On the Continent the commercial production of hopped ale or beer was already getting under way in the first quarter of the fourteenth century. In the later Middle Ages beer became a speciality of the Netherlands. Hop growing is recorded in Gouda (1361) and Breda (1373). Not surprisingly, the Dutch brewing industry was established near the hop growing districts of Heusden, Altena, the Barony of Breda, and the Meijerij van den Bosch.⁴ England therefore imported hops from Flanders

¹W. Harrison, Harrison's Description of England in Shakspeare's Youth (1577), ed. F.J. Furnivall, New Shakspeare Soc., 6th Ser. I (1877), 325.

²Parker, op. cit., 8.

³J. Arnold Fleming, Flemish Influence in Britain (2 Vols. 1930), I, 300.

⁴Slicher Van Bath, op. cit., 180, 274.

in the Middle Ages and, indeed, migrant Flemish brewers accompanied them. Beer brewing in England continued unabated. There is sufficient documentary evidence to support this claim.

In 1444 William Lounde and Richard Versey were appointed inspectors or surveyors of the "bere bruers" of the City of London, as distinguished from the ale brewers who were themselves already organised in a company governed by master and wardens. An ordinance for the government of the beer brewers was sanctioned by the Lord Mayor in 1454, from which date City records frequently mention beer brewers as well as ale brewers. For the fifteenth century "there is abundant evidence to show that beer continued to be made and sold with the sanction of the authorities and that the beer brewers, many of whom at this time were Dutchmen, practised a separate craft from that of the ale brewers."¹ Arnold's Chronicles, published in 1502, record that beer was first made "in London by byere brewers, straungers, Flemyngis, Ducheman".² Brewers of beer (birra) were mentioned as distinct from brewers of ale (cervisia) in Hythe as early as 1419. The two beverages were frequently offered for sale by the same retailer. In 1445 at the Hundred Court of Hythe certain women were presented for selling "cervisia et bere" before it was of lawful age.³

There are other indications that the authorities attempted to impose standards of quality control. In 1464 Edward IV granted a patent to three supervisors of the beer brewers to inspect the goodness of malt and hops.⁴ In 1485 the beer brewers were ordered to use only "gode clene, sweete, holsom and greyne hoppes". There were frequent

¹Bickerdyke, op. cit., 67, 69.

²Parker, loc. cit.

³Hist. MSS. Comm. 4th Report, 431, 435; W. Page, ed., The Victoria History of the County of Kent (3 Vols. 1908-32), III, 424.

⁴British Museum Lansdowne MS. 172, f.13.

prosecutions especially for putting hops into ale and then selling it as ale and not beer, presumably to avoid the tighter control of the beer brewers' organization.¹ Although Flemish hops were often of doubtful quality - there were frequent complaints of their adulteration before being shipped to England - there is no evidence that their use was prohibited at any time during the fifteenth century, as some have suggested. After a meticulous search of fifteenth-century state papers, Bickerdyke refuted any suggestion concerning prohibition of the use of hops for brewing or a ban on the importation of hops.²

It was only a matter of time before hops were once again grown in England. The influence of the Netherlands was crucial in this development, just as it was in other spheres where new or improved techniques were required, notably in the new branch of the cloth industry - New Draperies - and in market gardening. There is no doubt that the hop was held in high esteem on the Continent: John the Fearless, Duke of Burgundy, even saw fit to inaugurate the Order of the Hop.³ / Among the large number of Flemish weavers who migrated to England in the fifteenth and sixteenth centuries were those who had a thorough knowledge of hop growing techniques. / Dr Fussell affirms: "One thing is certain. The Tudor beer drinker, i.e. the whole population, owed Flanders a debt for the improvement of the beverage. Hops were introduced into the Eastern Counties towards the end of the fifteenth century, and by 1552 were important enough to become the subject of special legislation by Edward VI. Tusser discussed their cultivation in Suffolk, and they were grown

¹Bickerdyke, op. cit., 69.

²BM. Lansdowne MS. 22/19; Bickerdyke, op. cit., 70.

³Burgess, loc. cit.

in Kent and Yorkshire, probably elsewhere".¹ Bickerdyke believed that "about the year 1524 a large number of Flemish immigrants settled in Kent, cultivated hops and brewed beer, and soon caused that county to become famous for its hop gardens and the excellence of their produce".² It is well known, of course, that immigrants from the Lowlands settled thickly in the Eastern Counties, and in Kent, and it is no coincidence that Essex, Suffolk and Kent became the chief hop growing and hop trading counties in the sixteenth century. 1524 was probably a year of exceptional Flemish immigration but certainly not the first, nor the last. Trade in Kentish hops appears to have taken place before 1524, when Sir Edward Guldeford, a Kentishman, obtained a licence to export hops and madder.³

(In Kent in the 1560's, waves of Dutch and Walloon immigrants consolidated earlier influxes, the chief colonies being established in Sandwich, Canterbury and Maidstone.⁴ / The two latter towns became the core-centres of Kent's great hop growing districts.⁵ / The evidence points to a persistent Flemish influence in England, where the lost art of hop cultivation was soon rediscovered and perfected. In 1549 the Privy Council authorized a warrant for £140 "for charges in bringing over certain hopsetters". In April and May 1550, Peter de Woolfe

¹G.E. Fussell, 'Low Countries' Influence on English Farming', English Historical Review, 74 (1959), 612; Thorold Rogers, A History of Agriculture and Prices in England, V (1887), 289.

²Bickerdyke, loc. cit.

³A.M. Everitt, 'The Marketing of Agricultural Produce', The Agrarian History of England and Wales 1500-1640, ed. Joan Thirsk (Cambridge 1967), 529n, 551.

⁴C.W. Chalklin, Seventeenth Century Kent: A Social and Economic History (1965), 123-4.

⁵Netherlanders in Sandwich specialised in market gardening which required similar skills to those in hop 'gardening'.

received sufficient funds to pay "certain workmen under him for waiges ... for planting and setting of hoppes" and, in June 1553, a further £40 "for his relief and advauncement of the planting of hoppes which he hath lately practised within the realme". It has been suggested that Peter de Woolfe's hop gardens were situated in the Maidstone area.¹ In any case, "tradition avers that the hop was first successfully cultivated in the neighbourhood of Maidstone".²

B The First English Writers on Hops

Once the cultivation of hops was re-established in England, contemporary writers on agricultural subjects were careful to include references to the plant: the works of Mascall, Tusser, and Harrison, for instance, all of which appeared in the 1570's.³ Mascall dealt with hop growing as practised in Flanders. Twenty stanzas of Tusser give good advice to the hop grower. Harrison included a few notes on the national significance of hops and, as we have seen, gave us the only printed clue to an earlier era of hop cultivation in England. These works have been adequately reviewed elsewhere.⁴ But it was a Man of Kent, Reynold Scot, who in 1574 wrote the first complete practical treatise on hop growing.⁵

¹Acts of the Privy Council, II, 426; III, 35; IV, 284; V.E. Morant, Historical Geography of Maidstone, University of London M.A. Thesis (1948), 197.

²J. Russell, The History of Maidstone (Maidstone 1881), 312.

³L. Mascall, Howe to Plant and Graffe (1572); T. Tusser, Five Hundreth Good Pointes of Husbandrie (1573); W. Harrison, Harrison's Description of England in Shakspeare's Youth (1577), ed. F.J. Furnivall, New Shakspeare Soc., 6th Series, I and VIII (1877 and 1881).

⁴G.E. Fussell, The Old English Farming Books from Fitzherbert to Tull 1523-1730 (1947).

⁵R. Scot, A Perfite Platform of a Hoppe Garden (1574, further editions 1576, 1578). A rare work, Kent County Council holds a copy of the second edition in the Library, Maidstone. Scot's work has been discussed quite fully in G. Clinch, English Hops (1919), 68-76; Parker, op. cit., 8-14; Clair, op. cit., 61-70.

Scot was careful to point out that his handbook was meant neither for the lazy nor cheeseparing man:

The covetous man that lyeth in wayte to spare his halfe-penye, the sluggarde that sleepeth away opportunitie, and the unskilfull that refuseth to learne the ryght order, maye happily rellesh the bitternesse of the Hoppe, but shall never savour the sweetenesse thereof.¹

Our knowledge of hop growing techniques in Tudor times derives almost entirely from Scot, who possessed an excellent knowledge of the subject. His quaint woodcuts are as informative as the text. Undoubtedly, he was citing the practices of the best Kentish hop growers. Reynold Scot was a member of the family of Scot, of Scott Hall, in the parish of Smeeth now Ashford. After his marriage in 1568 he apparently spent his life in Kent as an active country gentleman, managing property which he had inherited in Smeeth and Brabourne. He was returned as Member of Parliament for New Romney in 1588. We shall probably never know whether his farming activities included hop growing although it is reasonable to suppose that he practised the art about which he wrote so expertly. His work on hops - Perfect Platform of a Hop-garden, and necessary instructions for the making and maintenance thereof with Notes and Rules for Reformation of all abuses - was dedicated to Serjeant William Lovelace of Bethersden, a neighbouring gentleman-farmer.

Scot's only other work - "more noticeable and no less useful" - was published in 1584: The Discoverie of Witchcraft, wherein the Lewde dealing of Witches and Witchmongers is notablie delected in sixteen books ... whereunto is added a Treatise upon the Nature & Substance of Spirits and Devils. Bizarre possibly, but it quickly became a best-seller. Scot was a man of humanitarian principles and he wrote his Discoverie of Witchcraft in an endeavour to put an end to the cruel

¹Scot, op. cit., iv.

persecutions which in his time pursued those, often poor and old, who were credited by the superstitions of the age with being witches. Scot's books have been described as "each in its own province of high practical value and indicating in the author exceptional enlightenment".¹

C Hop Growing in Kent Before 1700

By the early seventeenth century hops were grown commercially in only a few English counties - Kent, Essex, Suffolk, Norfolk, Cambridgeshire, and Surrey. Essex and Suffolk may have been foremost in the hop trade at this stage, Stourbridge the chief mart.² Norden mentioned Suffolk, Essex and Surrey hop grounds, but not Kent. /Nevertheless, the nascent Kentish hop industry certainly experienced a rapid rate of growth in the half century or so before 1655.³ /

Examination of a sample of 166 Kentish inventories in the period before 1640, revealed only four instances of hops. The earliest, 1592, related to William Wilson of Faversham. The others, in 1617 and 1624, are for growers at Boughton Monchelsea and Chart Sutton on the sandstone ridge, and at Boxley in the Vale of Holmesdale. No acreages are given although the low valuations for hops and hop poles indicate small-scale enterprises. Only one reference to a Tonbridge hop ground has been found before 1650. /In these early years, documented hops are rather hard to find, despite the fact that hop gardens were becoming widely

¹DNB. s.v. Scott or Scot, Reginald or Reynold (1538?-1599).

²Everitt, op. cit., 511, 535-6; Campbell, op. cit., 180; Rogers, op. cit., 289-93.

³J. Norden, Surveyor's Dialogue (1608), 206; F.J. Fisher, 'The Development of the London Food Market 1540-1640', Essays in Economic History, ed. E.M. Carus-Wilson (1954), I, 142; BM. Lansdowne MS. 12/5 f.7.

established in the county.¹ Numerous small grounds, mostly between a half and two acres in size, were laid out in various parts of Kent, but mainly on the sandstone ridge in parishes near Maidstone, as well as in parts of the Weald. At Chart Sutton, south of Maidstone, George Franklyn, a gentleman farmer, said in 1604 that he had cultivated five separate hop gardens - amounting to 16 acres altogether - since 1588. At Goudhurst in the central Weald during 1617-18, Edward Bathurst possessed 5 acres of hops. In 1617 he sold his crop of 40 hundredweight for £100; the following year 25 hundredweight fetched £150.² A survey of the lands of the Dean and Chapter of Canterbury in 1649, shows that in the Manor of Loose, south of Maidstone, hop grounds of up to 7 acres apiece were numerous, most of them leased to a Maidstone mercer.³ Many - probably the vast majority - of the hop grounds of this period, were extremely small. The occupier of the manor farm of Oxenhoath, in West Peckham, cultivated a mere 3 roods of hops near his house in 1621; this was not untypical.⁴ In December 1619, Nicholas Toke of Godinton in Great Chart near Ashford "payd to Johnson for breakinge up one acer & 20 perches of hoppe grounde at £3 6s. 8d. the acer", in all £3 15s. 4d. The following spring, Toke paid a further £1 6s. to Johnson "for plantinge an acer & 20 yardes of hoppes". This small, newly-planted ground was subsequently extended until, by 1641, Toke was cultivating 8 acres of hops on his Wealden estate. His contemporary, Henry Oxinden of Great Maydeacon, planted cherry gardens, a vegetable garden, and a

¹F. Hull, unpublished MS. Kent from the Dissolution to the Civil War, 15-16; KAO PRC 10/25 f.45, 15/40 f.93, 10/55 ff.5, 13; C.W. Chalklin, A Kentish Wealden Parish, Tonbridge 1550-1750, University of Oxford B.Litt. Thesis (1960), 123.

²Chalklin, Kent, 92-3.

³Cathedral Archives and Library Canterbury, 1649 Parliamentary Survey, ff.138-40.

⁴Chalklin, loc. cit.

hop ground near the house in the 1630's.¹

Although the Kentish hop acreage was widely scattered, the largest concentration of grounds lay around Maidstone, on the fertile ragstone soils. Almost certainly, most of the commercial breweries were in this area too. In 1636 two weighers were appointed by the Corporation "to keep the weights provided for weighing of hops etc." Peter Mundy, who visited the town in 1639 in the middle of the hop picking season, observed that it was "a greatt country for hoppers".² Rather surprisingly, Kilburne made no mention of hops or beer when he published his Survey of the County of Kent in 1659. The following year, however, when the surveyor of the Archbishop of Canterbury's Kentish properties toured the county, he was asked to make special enquiries regarding hops in the tithery of Maidstone. He reported:

I am informed that the hops there they are one yeere with another worth a £100 a yeere the plantation still increasing.³

Brewing has had a long and continuous history in Maidstone: the industry has been closely associated with the commercial life of the town for over three hundred years. According to a survey of the manor in 1650, the "Lower Brewery" consisted of "one capital messuage, with brewhouse, two malthouses, barns and stables, and one piece of meadow". In 1652 John Saunders, the proprietor, was Mayor of Maidstone. There was also an Upper Brewery in the town which belonged to the family of

¹Lodge, op. cit., 43, 187; A.M. Everitt, The Community of Kent and the Great Rebellion 1640-60 (1966), 33. Gentlemen farmers in other counties behaved similarly. The inventory of Sir Henry Capell of Rainhall, Norfolk shows that he possessed 'hoppe poles in the Hoppegrounde' worth £14, together with a 'picker' [pitcher] for hophills when he died in 1622. SRO 87/25/3.

²Morant, op. cit., 195; 'The Travels of Peter Mundy in Europe and Asia 1608-1667', The Hakluyt Society, Series II, LV (1925), 40.

³Lambeth Palace Library, Archbishop's Temporalities 1660.

Cripps who, through marriage, became connected with the Staceys. The proprietorship of both establishments eventually passed into their hands. In the early part of the present century the Lower Brewery was known as Isherwood, Foster and Stacey Ltd.¹ Today the [lower] brewery of John Courage stands on this venerable site near the bridge at Fairmeadow. The [upper] brewery in Earl Street, once Fremlin's, now Bass-Charrington, also remains a large active establishment.

Maidstone's premier role in Kentish hop growing and brewing by the 1650's is thus virtually certain. New evidence confirms Kent's dominance in the national hop growing scene. A unique return of 1655 shows that 14 English counties possessed hop grounds. Nearly a third of the English acreage lay in Kent, more than a quarter in Essex, a tenth in Sussex. Some two-thirds of English hop cultivation was concentrated in three counties in the south-eastern quadrant. London breweries, producing at this time two-thirds of the nation's beer, provided the largest single market for the hops of Kent, Essex and Sussex. Kent and Norfolk were the next largest beer producers (10 per cent each), Essex following in fourth place with 7 per cent of the market.²

It might be significant that the leading brewing counties were precisely those where Flemish immigrants are known to have settled and founded sizeable colonies. The evidence is suggestive rather than conclusive. Professor Mathias has little doubt that aliens influenced the English brewing industry:

Beer brewing, where the wort was boiled with hops before fermentation, was an art brought from the Low Countries, perhaps by soldiers, or by camp followers brewing for them, coming back to England after foreign service at the beginning of the fifteenth century. The art became indigenous to these islands as the culmination point of a movement

¹VCH Kent, 425-6.

²BM. Lansdowne MS. 12/5 f.7.

which had seen increasing imports of beer from the older 'beer culture' region of the Low Countries.¹

Mathias concludes that "in Tudor England, aliens had as great an effect on changes in the brewing industry as they had in mining and textiles".²

Southwark became the great centre of the London brewing industry. Alien brewers from the Low Countries settled in Southwark in the sixteenth century. Adam Barl, one of the "beere breevers" who came over in Henry VIII's reign, obtained letters of denization in 1572. Henry Hock or Hook was another of the pioneer brewers in Southwark. He later founded the famous school of St. Olave. Jacob Wittenrong was yet another of the original Southwark brewers and City benefactors. At the southern end of London Bridge their bodies were laid to rest in "the Flemish burying ground", now covered by the approach to London Bridge station.³ As we shall establish later, although Kentish hops supplied local breweries in Maidstone, Sandwich, and above all Canterbury, the great mart for the finest bags and pockets was Southwark.⁴ It seems that well before the Restoration Kent's growers were supplying hops to established breweries in the county and in London. Clearly, in these formative years, Flemish influence permeated the production pipeline from hop set to beer vat.

Steady expansion of hop growing in the Maidstone area, and in Kent generally, continued throughout the remainder of the century. These hops were grown by the arable and fruit farmers of the district, some of them gentlemen, others of lesser stock. John Houghton remarked in 1699 that "many great improvements have been made by hop gardens ...

¹P. Mathias, The Brewing Industry in England 1700-1830 (1959), 3.

²Ibid., 4.

³Fleming, op. cit., 302.

⁴See infra, Ch. 13.

especially in Kent". He had heard from a Maidstone correspondent that "the town and 5 miles round it received two year since, £200,000 for hops exported thence that year".¹

In the 1680's Tobias Hammond rented a small hop ground at Willington on the eastern fringe of Maidstone, paying an annual rent of £1 15s. to Farnham Aldersey, a gentleman of Ospringe near Faversham. Aldersey owned other property in the Maidstone district, including orchards and nurseries, as well as two houses at Willington for which Robert Bishop paid a rent of 12s. 6d. in 1691.² Not far away, at the foot of the Downs in Aylesford, a narrow strip of gault clay meets the lower greensand giving rise to scattered pockets of fertile soil which, to this day, bear hops. It was here that Sir John Banks farmed during the last two decades of the century. His extensive hop grounds covered some twenty or thirty acres, surely one of the largest hop enterprises in Kent at this time.³ In 1697 Celia Fiennes paused in Maidstone during September. It was Thursday - market day. However, the usual bustling crowds were not in evidence "because the country people were taken up aboute their hopping so could not bring things to market". From Maidstone Celia Fiennes travelled the road to Rochester some 8 miles distant. As she approached the escarpment at Blue Bell hill, a glorious uninterrupted view across the landscape to Aylesford and the Medway must have prompted her to record: "I came by a great many fine hopp yards where they were at work pulling y^e hopps".⁴

But Maidstone already had a rival. Celia Fiennes had earlier

¹J. Houghton, A Collection For Improvement of Husbandry and Trade (1691-1703), Essay 3 Nov. 1699.

²PRO C5 98/29.

³KAO U234 A5, A10.

⁴C. Fiennes, Through England on a Side-Saddle in the Time of William and Mary (1888), 107.

passed numerous hop gardens near and within Canterbury. She had observed large numbers of French silk weavers coming home from their seasonal labours in the hop fields, for the picking season was in progress. Miss Fiennes could hardly have imagined, even then, that within a quarter of a century this cathedral city would become the hub of "the greatest plantation of hops" in the country.¹ The story of the rise of the Canterbury hop grounds is unparalleled and merits separate consideration.²

The scene in the Maidstone district, and in Canterbury, was repeated across the entire Kentish landscape before 1700. Probate inventories show hops, poles, and bins wedged between broad acres of wheat, barley and beans, lush meadows and fat cattle. Inventories, however, have an unfortunate tendency to miss out the items we most need. With regard to hops, the appraisers were under no legal obligation to record those growing on the bines. The same rule applied to grass, and fruit growing on the trees. All these were deemed to have come from the soil "without the industry or manurance of man!"³ They were considered part of the real estate and not personal property to be recorded in an inventory. There is no doubt that strict adherence to these rules in the sixteenth and seventeenth centuries accounts for the comparative rarity of fruit and growing hops in Kent inventories. The eighteenth century, however, brought a certain laxity in the application of ecclesiastical law relating to inventories. There is a human factor too, which in a haphazard sort of way helps the historian. The appraisers of the inventories did not always make a fine distinction between the vast majority of growing

¹Fiennes, op. cit., 101-2; D. Defoe, A Tour Through the Whole Island of Great Britain (2 Vols. 1962), I, 118.

²See infra Ch. 11.

³R. Burn, Ecclesiastical Law (1781), IV, 242.

crops which they were obliged to record on the one hand, and the few legal exceptions on the other. Of course, it was their duty, in any case, to record hops in store, hop poles, oast equipment, and tools used in hop growing - and frequently acreages are mentioned, or can be deduced. It can be suggested that, altogether, the information relating to hops is much more useful than has hitherto been considered. A grower who conveniently died after his hops had been picked, but before they were sold, is particularly helpful! An examination of inventories in north-east Kent in the 1680's and 1690's reveals that hop growing was already becoming widespread in the region with a concentration in the Canterbury parishes. In the overall sample of 45 inventories for 1680 not a single instance of hop growing has been found.¹ However, a complete search in selected parishes, together with random samples in others, has produced enough evidence to show that hops were grown in a variety of situations in north-east Kent before 1700.

(Of all the extant inventories for the parishes of Newington and Hartlip during these two decades only two record hops. Robert Downes of Hartlip possessed "a hop garden & hops & poles & hemp" worth altogether £8 when he died during the summer of 1691. In 1698 Mary Picknall of Newington possessed a thousand "old hop poles" valued at £3, together with a "pocket" of hops in store.² John Breacher lived and farmed some three miles away in Sittingbourne. (He died during the hop picking season 1690, while there were "hopps unpickt in the hopgarden" worth £10 3s. 3d. Six bags of his hops, however, had already been taken to "a storehouse att Milton", no doubt intended for shipment by coastal hoy to London. | Altogether, Breacher's hops and poles were valued at

¹KAO Probate Inventories, passim. The same number of inventories, 1713-17, revealed five hop growers, the sample 1740-60 twenty-four.

²KAO PRC 11/56/95, 11/61/119. (

£37 2s. 4d., a fifth of his total personal wealth.^{1/}

Thomas Preston, a Faversham grocer, had two hundredweight of hops in his well-stocked shop in 1683. It was normal practice for grocers to retail locally purchased hops to townsmen for their home-brewing. Hop gardens in the Faversham district at this time were very small: Thomas Proud, for instance, had less than half an acre in 1697; 750 poles on the ground were valued at 8s. a hundred, £3 in all.² In the 1690's hops were cultivated in the parish of Chartham, south-west of Canterbury: Steven Hosfeild owned five "wooden harrowes for hops" when he died in 1692, but no other hop growing items are recorded in his inventory.³ In contrast to the few scattered examples in the region at large, some two dozen inventories were found recording hops in small Canterbury parishes during these years.

Some years ago Professor Coleman suggested that the total area of hops in Kent around 1700 was in the order of 1,100 acres.⁴ However, his assumptions in order to arrive at this conclusion appear highly dubious. In 1699-1700, some 4,000 bags of hops were recorded in the Port Books for all the Kentish ports. These were hops sent to London; foreign exports were negligible. Coleman increased this figure by 100 per cent to allow for "omissions" and for "those sent by land or for local brewing". On the basis of hops yielding 7 bags per acre he arrived at his figure of 1,100 acres. It is impossible to know whether the crop of 1699 was "typical". Indeed, in the case of hops their yield is notoriously unpredictable and it is almost impossible to define what represents "typical" at this time. Nevertheless, prices are a good

¹Ibid., 11/54/37.

²Ibid., 11/47/41.

³Ibid., 11/56/207.

⁴Coleman, op. cit., 77.

guide. During the later 1690's the price of hops was abnormally high due to poor yields. In 1697 hops were "exceedingly dear" fetching £10 to £12 a hundredweight. Although prices fell in 1699-1700 they were still "abnormally high", with London prices averaging £5 a hundredweight, Dartford £6.¹ I suggest the 4,000 bags sent from Kent to London were the fruits of a below-average harvest which yielded, say two bags an acre; a bag weighed rather more than 2 cwt. I have assumed an "average" yield to be no more than 6 cwt. per acre, certainly no more than 3 bags. The assumption of 7 bags per acre by Coleman - he gives no reasons - is totally unrealistic, even for a "bumper" year, which 1699 certainly was not. On the basis of more realistic assumptions, a total Kent acreage of at least 2,000 in 1700 seems more likely. I can see no point in adding a fictitious number of bags to allow for omissions in recording and for hops consumed locally. Undoubtedly, there ought to be such a "weighting" but any figure must inevitably lie in the realms of pure guesswork. A 100 per cent weighting seems extravagant in view of the brisk trade in Kentish hops to London. With the missing, but unknown, statistic taken into consideration the area of land under hops in Kent could conceivably approach 3,000 acres. But there is no way of knowing precisely.

In summary, by 1700 there were perhaps 3,000 acres of hop grounds in Kent, producing at least one-third of the national output. Small gardens were scattered across the county on the general farms, with an especially large concentration in the Maidstone district. In north-east Kent grounds of modest size were dispersed thinly over the landscape, but this region was not yet well-endowed with hops; the possible exception was the Canterbury district where a concentration of hop growing was

¹Houghton, op. cit., Essay 3 Nov. 1699; Rogers, op. cit., 298-9.

apparent from about 1680.

D The Techniques of Hop Growing in Kent in the Early Eighteenth Century

Sources

Before discussing the yearly round of hop garden work in early Georgian Kent, the available printed source material for this aspect of the study must come under scrutiny. The only sustained discussion of printed works relating to hops before 1800 is in Dr Parker's book.¹

It is rather sketchy for a work based solely on printed sources, foot-notes are rare, and there are mistakes and erroneous statements.

Earlier, George Clinch produced a useful little book which attempted to cover the history of hop growing. The early chapters rely too heavily on Scot, with some of that author's interesting woodcuts reproduced.²

True, Scot's book, practical and concise, and with amusing wood engravings, is a gem for its time. And of course, Scot was a Kentish farmer which imparts a special relevance for the present study. However, another early Kentish writer produced a short treatise on hops at the beginning of the eighteenth century. Hitherto unknown, its discovery has been timely and fortunate. This concise, practical, well-written tract is entitled An Account of Hopps by a Kentish Gentleman. It was first published in 1712, was probably written sometime between 1707 and 1712, and must be rated quite highly; an edited version is included as an appendix to the present study.³ This small work has for long remained hidden in John Mortimer, The Whole Art of Husbandry, who included it as a supplement to the second edition, published in 1712;⁴ it was

¹Parker, op. cit., 8-46.

²Clinch, op. cit., 68-76.

³Henceforth referred to as Kentish Gentleman. (See Appendix IX, *Photo*.)

⁴J. Mortimer, The Whole Art of Husbandry (2nd ed., 1708-12), II, 222-40. /

also included with the editions of 1716 and 1721. Mortimer, an Essex farmer, was no plagiarist, and did not try to disguise or claim the work as his own; each edition of Mortimer contains a chapter on hops by the author himself. Dr Parker was unaware of the Kentish tract since he looked only at the first edition of Mortimer published in 1707 - in fact Parker dates this edition, incorrectly, 1705.¹ Dr Parker opines that "Mortimer's book enjoyed a long life, succeeding editions appearing until well on in the century". Dr Fussell says the publication of Mortimer's work "is considered to mark an epoch in agricultural literature".² The Kent treatise must remain anonymous. The only possible clue to the authorship lies in an old, passionately-written manuscript note in a British Museum copy of R. Bradley, The Riches of a Hop Garden Explain'd (1729): "This treatise belongs originally to Dr Corbett Ll D. near Canterbury but stole & publ^d by Bradley with some few things of his own inserted".³ However, Bradley's work does not appear to bear the imprint of the Kentish Gentleman. Whether or not Dr Corbett of Canterbury wrote the earlier work we shall probably never discover, but it is interesting to know that men in Kent were writing about hops in a practical way in the early eighteenth century, a fact which has hitherto escaped notice.

For the present purpose Richard Bradley is useful. He was certainly the most prolific writer in the years 1700-30.⁴ He frequently plagiarised, a not uncommon trait in this period of agricultural literature! Nevertheless, Bradley writes in a comparative style, contrasting the more advanced Kentish techniques with those of other counties, Surrey and Hampshire in particular. He also has something useful to say about

¹Parker, op. cit., 23.

²Ibid., 24; Fussell, Old English Farming Books, op. cit., 98.

³BM. Shelf Mark 966. f.23.

⁴Fussell, Old English Farming Books, op. cit., 96.

Southwark and marketing methods. It is difficult to understand why Parker held Bradley's work to be "of very little account".¹

Particularly valuable is the anonymous work, Instructions for Planting and Managing Hops, and for Raising Hop Poles, (Dublin Society (1733). In the opinion of Professor Mathias "this is one of the best contemporary reviews of the [hop] industry".²

Within our period there are three other works which can be profitably employed: John Houghton, A Collection For the Improvement of Husbandry and Trade (1691-1703); John Laurence, A New System of Agriculture (1726); William Ellis, The Modern Husbandman (1750). Houghton's Collections had a great reputation when they were issued and represent the first attempt to found a scientific agricultural paper.³ A New System of Agriculture was the last and most important of Rev. John Laurence's books, possibly the best agricultural work which had so far appeared, and "all that one could or should ask of a text book".⁴

William Ellis farmed at Little Gaddesden, Hertfordshire. The Modern Husbandman, first issued in 1731, was expanded and re-issued several times, brought the author into marked repute, and apparently sold well.⁵

Almost within our period is John Mills, A New and Complete System of Practical Husbandry (1765). A prolific writer, this was his most impressive work. The view has been expressed that Mills "carried away

¹Parker, op. cit., 27.

²Mathias, op. cit., 482n.

³Fussell, Old English Farming Books, op. cit., 82.

⁴Ibid., 101.

⁵Fussell, More Old English Farming Books from Tull to the Board of Agriculture 1731-93 (1950), 7.

the palm of agricultural writing at the time of its appearance"¹ although in Dr Fussell's opinion it was very largely a compilation from earlier writers like Evelyn, Worlidge and Tull.² Mills includes a useful chapter on "Culture and Management of Hops".

Valuable works by Kent authors who wrote later in the century are: John Boys, A General View of the Agriculture of Kent (1796); John Banister, A Synopsis of Husbandry (1799).

There are numerous other writers on agriculture in the eighteenth century. Most had something to say about hops. However, the present study attempts to relate the technical processes closely to Kentish practice by selecting writers of high quality, who lived in the county, or at least knew something about Kentish methods. The general statements and opinions of writers must be used with caution by the regional historian.

The Nature of Hop Growing

Growing hops is a hazardous business. It requires a wide range of intricate skills, more akin to horticultural techniques than farming. These skills reached perfection in the hands of the Lowlanders whose forte was profitable intensive production. Fortunately for us there were plenty of farmers, especially in Kent, with sufficient intelligence, ability and capital to learn the techniques of hop growing and propagate their ideas on the ground. There were also numerous writers from Scot onwards who recorded, often in minute detail, the requirements for commercial hop production. Two outstanding conditions dominated hop growing, and largely explain its unique structure: intensity and uncertainty. Intensity implies large capital and labour inputs in relation to the area of production. Uncertainty relates to the hop plant's extreme susceptibility to adverse weather conditions, pests and

¹J. Donaldson, Agricultural Biography (1854) quoted Fussell, More Old English Farming Books, op. cit., 48.

²Fussell, loc. cit.

diseases: hence the uncertainty of yields and selling prices, fluctuating profits, and all the attendant risks and worries. And the excitement!)

Situation

Soil, climate and aspect are all-important. Although "the hop is a plant of great vitality and is able to survive under remarkably poor soil conditions", attempts to raise hops commercially on second-rate soils are doomed to failure and "it is unwise to try to produce hops on unsuitable land" since high costs, even if yields are near-average, will lead to financial losses and disappointment.¹ The site or "platform" of a hop garden is a natural first consideration and "a barren, a moory or wet soil (though it perhaps do content a wild hop) shall never please nor maintain a good Hop". (But "a dry grounde, if it be rich, mellow and gentle is the soil that seemeth best for this purpose".) Nevertheless, a very light loam is not to be recommended "for it is a received and an approved rule that the heaviest ground will bear the most weight of hops".² A deep, well-drained, medium-to-heavy loam is indicated. Bradley advised that "all opportunities should be taken for draining any grounds that are annoyed by waters, before we begin to sow or plant anything upon them". He was precise about the hop plants' requirements: "I neither recommend sand nor clay but a medium between both, the sandy part to receive, and the clayey part to retain. So in dry and wet weather, every ground so prepared will avoid the inconvenience of being oversoaked with waters, or want showers too suddenly".³ Old orchards,

¹Burgess, op. cit., 63. See particularly the example of hops grown in the 1750's at "Gallow's Hole", Faversham, infra, 571-87.

²Scot, op. cit., 3.

³R. Bradley, The Riches of a Hop Garden Explain'd (1729), 10, 15. For a discussion on the importance of drainage see D. Baker, 'Tatlingbury: An Eighteenth-Century Wealden Hop Farm', Cantium, 3, no. 1 (1971), 4.

meadows, or leys, organically rich, were considered good potential hop grounds in Kent.¹

Having selected the most suitable land, a preparatory fallow year is beneficial: "a summer's plowing to mellow it, and to destroy the roots of weeds and grass, especially couch grass ...".² Writers, early and modern, stress the importance of a well protected site. Scot said precautions must be taken against the "violence and contagion of the wind" and that hills could afford better protection than trees. Houghton thought either would suit the purpose, given correct soil conditions. In "Kent, Surrey and Hampshire" it was common practice to plant hops "on rising grounds, which are their best soils". The same writer, in 1733, advised that hop gardens should be sited near the farmstead:

It will be some advantage to have your plantation near your house, for thereby you will save from expence in the carriage of dung or manure to your hop ground, and by being so near and under your eye, you will sooner redress any disorder that may happen to your poles or hops. The hedges about the hop ground ought to be made so strong and so close, as to prevent hogs, or any cattle or fowl from getting in to spoil them.

The older writers said little about climate except to stress the need for a sunny site. The hop is a hardy plant and, providing the ground is not liable to become waterlogged, can tolerate a fairly wide range of conditions. A temperate climate with a mean summer temperature of 60° to 65°F. is ideal. Wild fluctuations of temperature, particularly in the growing season, can cause a check in growth. Frosts

¹Kentish Gentleman, 748.

²J. Mills, A New and Complete System of Practical Husbandry (1765), V, 451.

³Scot, loc. cit.; Houghton, op. cit., Essay 8 Sept. 1699; J. Blagrave, The Epitomy of the Art of Husbandry (1669), 206; Instructions for Planting ... Hops, op. cit., 18, 20, 22.

in late May, or cold nights during early to mid-summer, especially when combined with high day temperatures, inevitably lead to reduced yields.¹ Growers in early modern England were not always cognisant of these finer points of tolerance: this is demonstrated by the wide range of regions in which hops were planted for commercial purposes in the eighteenth century. At least as early as the 1720's hops were grown in some forty English counties, as well as in various parts of Wales. But some of the county acreages were pathetically small: in the years 1723-31 Yorkshire, for instance, never boasted more than 4 acres, although Cornwall did rather better with 141 acres in 1726. More than 100 acres were scattered throughout Wales. However, over 90 per cent of the national hop acreage of more than 20,000 acres lay in only eight counties. Kent alone accounted for a full third of the total.² Clearly, many growers in the north and west were wildly optimistic of the hop's ability to tolerate local conditions of soil and climate. Or, more likely, they were oblivious to the true nature of the hop plant. Time made them wiser men.

Planting

Great care was necessary in choosing a good variety or strain of hop. It is quite untrue that "sorts were not in existence and any hops were hops".³ However Dr Parker's belief that Worlidge "is the first author to distinguish varieties" is equally untrue. The "sorts of hops, the green and the brown" mentioned by Worlidge, must refer to the condition of hops at picking time: the bright green hops, normally the bulk of a good harvest, gained a premium over the poorer quality brown. Richard Tylden of Milstead, for instance, always made this distinction which

¹Burgess, op. cit., 66-8.

²Customs 48/12/221-2; 48/12/369; PRO TI 278/41.

³The Kentish Estates Journal, V, pt. 8 (Oct. - Dec. 1927), 624.

necessitated two quite different rates of payment for picking.¹ By 1712, at least, there were four known varieties:

There are four sorts of hops, the wild garlick hop, the long and square garlick, the long white and the oval white. The first are not worth your care, the second are valuable; but by reason of the redness towards the stalk, are not so beautiful, and therefore do not yield so good a price. The long white are the most beautiful, being longer than the oval, and produce a greater quantity; both of them grow well together, ripening at one and the same time.²

The three varieties best suited to Kent at this time were the "White Bind", with its variation, and the "Grey Bind". The latter was earlier and hardier, a large hop capable of producing a heavy crop. It was considered bad practice to mix them in a single garden but three grounds, one variety in each, would produce a convenient succession of ripe hops, enabling labour resources to be used optimally.³

Hops are not normally raised from seed. Commercially they are propagated from cuttings by layering.⁴ The early growers well understood how to produce young hop plants or "sets". Selection played an important part in the propagation process. Scot advised the new grower to seek a well-established garden, where the plants were of good quality, and then negotiate with the owner for some choice sets "which in some places will cost sixe pence an hundreth, but commonly they shall be given unto you, so as you cut them your selfe".⁵ Tylden of Milstead sold over 4,000 hop sets to a Mr Jordan in 1718. He charged sixpence a hundred

¹Parker, op. cit., 20.

²Mortimer, op. cit., 42-3.

³Instructions for Planting ... Hops, op. cit., 28-9; Kentish Gentleman, 749.

⁴Burgess, op. cit., 53. For details of modern methods of propagation see Ibid., Ch. 4 passim.

⁵Scot, op. cit., 8.

which was the standard price paid by all his customers.¹ These small sums supplemented the main income from hop sales. Established growers, with an eye to improvement, selected certain plants for their outstanding or unusual qualities and propagated selectively from these.² This is precisely how new varieties evolved. A "bud sport" is an occasional occurrence which gives rise to a bine in which one or more of the characters are modified. Plants raised vegetatively from such a plant will possess the same modifications.³ There is no doubt that the early Kent growers knew a great deal about selective plant breeding, the practice if not the theory, a fund of knowledge built up from first-hand experience. Choice strains were discovered in this way and tried out locally for some years; a few of them later gained a national reputation. This was how the Canterbury hop, the famous Golding, and the Farnham hop evolved in the eighteenth century.⁴

In Kent, selected sets were planted out in March on well-manured ground, in groups of five. Ideally groups of sets were spaced 7 feet apart in the rows, the same distance allowed between rows. Each group was planted on a prepared mound which was then further earthed-up or "hilled". The capacity of an acre of ground was about a thousand hills. Where farmers planted more closely - 5 or 6 feet apart, "from avaricious motives" - the circulation of air and penetration of light were impeded, and a host of other consequent troubles resulted in a reduced crop.⁵

Within each ground the "hill" was therefore the smallest unit of

¹ KAO U593, A2. *William Jordan*

² Kentish Gentleman, 749-50.

³ Burgess, op. cit., 53.

⁴ Banister, op. cit., 206; Clinch, op. cit., 21.

⁵ Mills, op. cit., 444; Banister, op. cit., 207.

production and, from the sixteenth century, the term was in common usage among hop growers. Tylden recorded his newly-planted hops in 1742:

1742-3 planted the last parcel of hops in y^e upper hopground, about 988 hills.

The following year he carefully noted:

There is planted with hops 3 acre 1 yard rood 16 perches, whereon there is 3482 hills, whereof 1444 are¹ four yeare old, 1050 three yeare old, and 988 two yeare.

Poles

Hops are climbers. In the natural state, wild hops are found only in hedges or near trees, or in some situation where they can find support for their climbing bines. It is well known that unsupported hops quickly succumb to the effects of shade, and the ravages of pests and diseases. During the first year only, the early growers sometimes dispensed with supports or used only short poles three or four feet in length. In the second year longer poles of ten or twelve feet were required. But it was in the third year, when the plants reached full bearing, that poles of sixteen to twenty-four feet became necessary.²

Harrison, pleading the case for hops, warned that "onlie poles are accounted to be their greatest charge". He was probably correct at the time although the precise cost of poles varied from place to place. No preservative was used on the poles and the wastage was very great. My analysis of Tylden's accounts shows that the cost of poles together with the labour charges involved in erecting them - "poleing" - represented one fifth of the annual outlay and was the largest single expense in an average year. Such an estimate must necessarily depend on the current

¹KAO U593, A3 ff. 204, 208v.

²Burgess, *op. cit.*, 89; *Instructions for Planting ... Hops*, *op. cit.*, 36; *Kentish Gentleman*, 752; *Diary of John Evelyn*, eds. W. Bray and H.B. Wheatley (4 Vols. 1906), IV, 44.

price of poles and the annual rate of replacement. After considering numerous contemporary statements, and examining various accounts, there seems no reason to change the recent conclusion that an average price of 8s. 6d. a hundred, a useful life of six years, and a normal allocation of 3,000 poles to an acre, are the appropriate assumptions.¹ Of course there are difficulties. Many farmers produced their own poles and did not account for them as a specific charge against hop growing. Even the meticulous Tylden, who possessed an abundance of woodland for poles and other purposes, did not regard them as a hop ground expense.

Poles were not difficult for farmers to raise in plantations treated as coppice, cut at suitable intervals to produce the quantity and size of poles required. It seems likely that, with the surge of hop growing in the early eighteenth century, a temporary shortage of poles ensued, providing an incentive to farmers to produce their own:

It must be own'd, that there is no raising of hops without poles, and that at present there is no quantity of poles to be got at a reasonable price; this is one instance of our bad husbandry, no care having been taken, either by coping to preserve the growth of old woods, or to make new plantations of trees fit for poles. This want of poles is the chief cause that has hindred gentlemen from planting of hops, but this objection or difficulty will soon be remov'd, when it shall appear ... that a sufficient quantity of them may at a small expence be rais'd in 4 or 5 years time.²

Robert Sprakeling of Chilham, who cultivated $3\frac{1}{2}$ acres of hops, was already raising his own poles in an adjoining coppice in 1715.³ Poles surplus to requirements were sold to growers who possessed no woodland. At Faversham in the 1750's Robert Mein purchased from neighbouring farmers all the poles he required for maintaining 7 acres of hops. In

¹Harrison, op. cit., 325; KAO U593, A2, A3; Baker, op. cit., 10.

²KAO U593, A2, A3; Burgess, loc. cit.

³PRO E134, 4 Geo.I/Mich. 4.

1754 he bought-in several lots from "Mr. James Woolley's wood beyond Hockley Hole", and further supplies from John Ashbee and George Partis; in fact wherever they were available. He paid in these years, prices ranging from 5s. to £1 2s. a hundred, according to size and quality.¹

The type of wood most suitable for hop poles was the subject of serious debate. There were conflicting views, but chestnut, birch, alder, ash, willow and oak received frequent mention.² Thus, for example:

The bark of alder and birch is thought to help the climbing of the hop, but being apt to crack, it soon receives and soaks the wet, and rots the pole; for this reason, some that use them are at the trouble to strip off the bark. But the poles generally approv'd and made use of in England, are those of ash, which are tough and strong, and last 6 or 7 years. Poles of willow are also in esteem, and those of chestnut are most durable.³

Houghton said "alder poles are esteemed the best by reason of streightness and tapering form and rough rind, which suffers not the hop to slip down".⁴ Chestnut and alder were undoubtedly the most popular woods for hop poles in Kent.

Underwood and hop poles were frequently advertised in the pages of the Kentish Post. In 1726 Jacob Wright of Folkestone owned "several parcels of underwood" in Swingfield; these were described as "fit for husbandry or hop poles" and were sold "standing or felled if required". In the winter 1728-9 "a parcel of alder land" in West Marsh, Ash, no doubt attracted many buyers, including local hop farmers. More informative, the advertisement of John Ginder of Cowper's Moat, Canterbury, reminded

¹PRO C103/185.

²Bradley, op. cit., 59-60; Mills, op. cit., 447-8.

³Instructions for Planting ... Hops, op. cit., 39.

⁴Houghton, op. cit., Essay 22 Sept. 1699.

hop planters, in 1753, that he wished to sell "a quantity of fine large oaken hop poles of more than 20 years growth" for 8s. and 9s. a hundred. When hop gardens were offered for lease or sale it was common for the poles to be detailed separately. Edward Rigden, a Faversham brewer, owned hop gardens in the district:

This is to give notice that on Thursday 21 January at the George at Greenstreet in the parish of Linstead, will be sold to the best bidder the stock of poles on 2 acres and 3 yards of hopground lying at Greenstreet, with the lease of the said ground.¹

The most common possession of hop growers found in probate inventories is "poles" which were always worth a separate valuation, or at least a mention. Helpfully, the acreage is often recorded. John Gaskin of Rainham had "poles in the hopp ground" when he died in 1723 whilst Henry Underdown of Boughton under Blean possessed "5,000 hop poles on 2 acres" in 1719.²

Finally, at the end of their useful life in the hop garden, worn-out poles were sold cheaply for firewood. In the winter 1765-6 Lee Warly, a Canterbury attorney, paid 12s. to Jacob Sharp for "a load of old hop poles" delivered to his house in Blean for fuel.

Annual Hop Ground Work

Apart from picking, seasonal tasks comprised manuring, digging, dressing, poleing, hilling, tying, hoeing, weeding, and post-harvest clearance. Altogether this "hop ground work" represented between a fifth and a quarter of the annual outlay, the largest single body of expenditure.³ Even omitting the labour costs of poleing,³ hop ground

¹Kentish Post 22 October 1726, 4 January 1729, 6 June 1753, 16 January 1748.

²KAO PRC 11/80/232, 27/40/162.

³i.e. if these costs are added to the price of replacement poles to make a comprehensive item. See supra, 498.



work still accounted for almost a fifth of total expenditure. We are looking at a highly labour-intensive activity which kept many hands busy throughout the year.¹

One form of hop ground management was a contractual arrangement between grower and hop ground worker - "hop dresser" - whereby a man would undertake all the annual cultivations for a fixed sum of £3 or £3 10s. an acre. The comparable figure used in analysis of Tylden's accounts is £3 7s.² The contract system would work well in an urban setting, such as in Canterbury or Farnham, where planters had no other farming interests and therefore no supply of labour readily at hand. On the mixed farms of Kent, however, the labourers who were normally employed for the general run of farm work, both servants and day labourers, took their turn at hop ground work. Inevitably some of them became more proficient than others, the local hop "specialists". Such skilled labourers appear regularly in the accounts, undertaking the yearly succession of hop garden tasks. They were paid at standard piece-rates recognised in the locality. In this way "the constant charge of a hop garden is usually known" because "men order and dress them at a rate by the acre all the year".³ The Delaune family of Doddington possessed a small hop garden at Sharsted Court in the early years of the century: Goodman Gurr was their hop ground worker and accounts for 1704-5 include payments made to him:⁴

¹KAO U593, A2, A3. See infra, 561-3.

²Instructions for Planting ... Hops, op. cit., 64.

³W. Blith, The English Improver Improved (1653), 247.

⁴KAO U145, A7.

	£	s.	d.
6 May 1704 paid to Goodman Gurr for poleing the hop ground	2	0	0
15 June 1704 paid to Goodman Gurr for his summer digging y ^e hop ground	3	0	0
22 July 1704 paid to Goodman Gurr for his hilling of y ^e hops	1	0	0
11 October 1704 paid to Goodman Gurr for stripping & stacking of poles in y ^e hopground	1	0	0
23 December 1704 paid to Goodman Gurr for digging worke in y ^e hopp ground	1	10	0
19 January 1705 paid to Goodman Gurr in full for his digging of hopp ground	2	0	0
paid to him more for laying y ^e dung upon y ^e hills	0	12	6
15 March 1705 paid to Goodman Gurr for dressing y ^e hopp ground	1	15	0
√Total	12	17	6√

The hop is a greedy feeder. Hops require four times as much manure as wheat grown after the fallow.¹ All writers stressed the importance of regular winter applications of well-rotted manure and mould (rich loam or compost). Fifty cartloads of this mixture, once every three years, was considered sufficient for an acre. A Maidstone hop grower in 1754 reckoned that this quantity would cost £2 10s. Unwisely perhaps, the applications of manure on some farms amounted to no more than ten loads per acre annually. On a Wealden farm, in the parishes of Capel and Tudely, milch cattle, fattening beasts, and teams of draught oxen ensured a constant supply of farmyard manure, and there are frequent references in the accounts of the 1750's to "digging and spreading of mould".²

¹Slicher Van Bath, op. cit., 275.

²J. Boys, A General View of the Agriculture of the County of Kent (1796), 120; Maidstone Museum MS. Hop Accounts 1754; Reading University Library, Farm Records Collection, KEN 13/1/1: 'Farm Account Book for Tatlingbury Farm, Tudely, Kent, 15 October 1744 - 27 September 1758'; Instructions for Planting ... Hops, op. cit., 62-3.

Writers inveighed against the use of fresh dung, rightly so.¹

Dressing with chalk and lime was advocated. Indeed, Mortimer claimed - rather immoderately - that this was "the best manure". Modern research shows the need to test hop garden soils regularly for acidity and apply lime if necessary since, if the ground is allowed to become very acid, the intake of trace elements is inhibited, "growth of the plants is affected, and in severe cases they may be killed".² However, some managers of hop grounds in Kent were extravagant in the use of chalk. The methods employed, together with the heavy expenditure involved, could bring financial disaster.³

Manure, especially if fresh, was composted with earth or mud.⁴ In the winter 1740-1 Richard Tylden prepared manure for $1\frac{1}{2}$ acres of newly-planted hops:

Laid together in a mixen for y^e young hop ground in Great Seedcops /field name/ 121 load of mould and pond mud. I put amongst it 280 baskets of lime and mixt it together.

The following year:

Carryd into my young hopground in Great Seedcops 126 load of good mould mixt with lime and some dung.⁵

After manuring the hop grounds were dug or ploughed during the winter months ... "they compute that with one plow and 16 diggers they can plow and dig an acre in one day". More usually, the task was carried out by several diggers working over a longer period. The

¹Bradley, op. cit., 49.

²Mortimer, op. cit., II, 45; Burgess, op. cit., 119, 127-8.

³See infra Ch. 11 for the Faversham example.

⁴Houghton, op. cit., Essay 3 Nov. 1699; Mortimer, loc. cit.

⁵KAO U593, A3 f. 196v.

current rate for digging hop gardens in Kent in the 1750's was 18s. to £1 an acre; it remained unchanged at the end of the century. A further digging in late spring was recommended practice.¹

Early spring was the time to "dress" the hops which meant breaking down the hills and cutting away all old growth and unwanted suckers at the base of the stock. This left the plant in a neat, pruned condition before the period of rapid growth.² Bradley described "the Kentish way" of dressing hops:

//... the hills must be carefully opened, and the old shoots or binds must be cut within an inch or two of the old roots, and as these binds are very tuff, this operation must be done with a very sharp knife ... At the same time that we prune the binds we cut the roots clean off, which incline to spread to the outside of the hills.³ //

The standard rate in Kent for dressing hop plants was 5s. an acre.⁴

Hops were "poled" when the new growths appeared above ground. Workers who poled the gardens were paid 10s. to 12s. an acre by the middle of the century, a rate which did not rise beyond 12s. fifty years later.⁵ In Kent it was normal practice to set three poles to each hill, using an iron pitcher or peeler to drive the holes.⁶ These tools frequently appear in the inventories. In 1742 James Ward possessed a "hop picher" for poleing his ground at Linsted, as well as a "hop-pole tug"

¹Instructions for Planting ... Hops, op. cit., 23, 63; Lodge, op. cit., 492; PRO C103/185; Kentish Gentleman, 754.

²Ibid., 751-2.

³Bradley, op. cit., 56.

⁴Lodge, loc. cit.; PRO C103/185.

⁵Lodge, loc. cit.

⁶Kentish Gentleman, loc. cit.; Banister, op. cit., 212; Laurence, op. cit., 121.

on which to transport the poles along the alleys. At Goodnestone Court Farm, near Faversham, there were two "hop peelers" and an "iron crow", together with a vast number of hop poles worth £125, the property of John Blaxland in 1751. The wealthy Isaac Kemp of Newgardens, Teynham possessed a peeler as well as a "hop pole carriage" when he died in 1750.¹

Each group of plants was earthed up or "hilled" after poleing, and preferably at intervals throughout the growing season:

To make up the hills, after rain in May, pare the surface with a spade or hough, or run it over with a plough; and with these parings raise your hills in height, burying and suppressing all superfluous shoots of hops and weeds ... This work may be continued throughout the summer, but more especially after rain.²

In Kent "the size of the hills they are fully completed is somewhat more than two foot over, and about a foot and a half high". Scot had earlier described the mattock used for hilling as "a toole of yron fashioned somewhat lyke to a Cooper's Addes" which was adapted to receive a helve or handle. The freshly-earthed hills were a prey to certain livestock. Scot warned his readers to be on their guard against the ravages of domestic animals and to "arme every hill with a few thornes to defend them from the annoyaunce of Poultrie". There is no evidence, however, that Kent farmers followed this quaint practice! He warned especially against the goose, "the most noysome vermine that can enter into this garden, for a Goose will grabble upon every young scyence or Hoppe budde that appeareth out of the grounde, which never will growe afterwardes".³

The standard payment for hilling in the Ashford and Faversham dis-

¹ KAO PRC 11/82/115, 11/83/182, 11/83/68.

² Laurence, op. cit., 121.

³ Scot, op. cit., 15-16, 27.

tracts around 1750, 5s. an acre, appears to have been somewhat higher than the rate in some parts of the county at the end of the century.¹

It was important to keep the grounds cultivated and clean during the growing period. Hoeing, by hand and with the use of horses, was a regular summer operation, which was paid at the rate of 5s. an acre. At least two hoeings were necessary during the season although we can see that some farmers lacked the necessary incentive and industry:

The necessity of keeping the intervals perfectly clean during the growth of the hops, must, one would think, be obvious to every person; though there are planters, who from a native indolence of disposition, an habitual avarice, or from a straightness in their circumstances, neglect this prudent measure, and suffer their hop garden to be covered with weeds ... such gardens having been suffered to remain in a state of neglected cultivation during the whole summer, the surface will be covered with weeds and trumpery at picking time, and this is not only dreary and uncomfortable to the poor labourers, but a certain loss to the planter; for such hops which, by wind or other accident may be dislodged from the poles, cannot so easily be gathered up, not to mention the damage likely to await the future crops.

The horse-hoe or shim was used for cleaning the alleys, hand-hoes for the hills. In Kent there evolved, during the first half of the eighteenth century, a special type of horse-hoe for hop ground work. This was known variously as the shim, brake, or - in Kentish dialect - the nidget.³ Banister writes a lucid description of this new regional implement:

The best constructed instrument for cleaning the hop garden is the nidget, formed purposely for this use. It is made of a triangular form, with ten or a dozen hoes in the cross beams, and is so constructed that its extreme breadth, in the hinder-part, may pass between the rows of the hops without injury to the bind. To the hindermost

¹Lodge, op. cit., 492; PRO C103/185; Banister, op. cit., 240.

²Ibid., 217, 222.

³A nidget is: 'a shim or horse-hoe with 9 irons, used for cleaning the ground between the rows of hops or beans'. W.D. Parish and W.F. Shaw, A Dictionary of the Kentish Dialect (Lewes 1888).

beam are fixed a pair of handles, which are held by the person who directs the operation of the instrument.¹ It is drawn by a single horse, which is led by a boy.

Using a shim or nidget, 2 acres of ground could be cleaned in a day. Some farmers followed nidgeting by raking to get a better tilth, or they used "harrows formed in the shape of the nidget ... to reduce the ground to a still finer degree of pulverization".²

The possession of such implements is clearly illustrated in the inventories. Brakes and shims were certainly in existence by the second decade. William Beale of Luddenham, near Faversham, used a brake to cultivate "1 acre of hops newly planted" in 1716. //His contemporary, Abraham Bensted - a Milton yeoman - possessed a "bean brake", (another Kent innovation), and Francis Petley of Ash, two shims. Among the implements used by Richard Bushell, a Thanet yeoman, in the 1750's was a "niggitt", meant for beans rather than hops. Isaac Kemp of Teynham used a "hop-ground brake" until he died in 1750. So too did John Price, of Blean parish, in the 1740's. Until 1755 James Marsh used a "hop harrow ... on the hopp lands" of his farm in Dunkirk; he also possessed a "hop brake".³

William Ellis observed a variety of tools and implements when he visited hop farms in north-east Kent one summer in the late 1740's:

I saw them about Sittingbourne and Canterbury, draw the horse-plough with nine little houghs, fixed in a triangular manner through the alleys. In another plantation, they were drawing the horse-prong plough in the like form. In another, I saw a man striking in his three-tyne fork crooked tool; and in a fourth another was digging with a four-tyne hand spade.⁴

¹Banister, op. cit., 217.

²Ibid., 217.

³KAO PRC 11/73/9, |11/72/142, |27/40/66, 11/84/112, 11/83/68, 11/83/27, 11/83/187.

⁴W. Ellis, The Modern Husbandman (8 Vols. 1750), IV, 57.

Sometime between the middle of May and the end of June, when the young vines were two or three feet high, womenfolk were employed to "tie in" the growths to the poles. Loudon puts the matter succinctly:

Tying the shoots or vines to the poles is the last operation in the after or summer culture of the hop. This requires the labor of a number of persons: women are generally employed, who tie them in several different places with withered rushes.¹

Banister regretted that tying was work "often consigned to the management of ignorant women" who could earn as much as 9s. or 10s. for each acre completed.²

With the long succession of hop ground tasks complete by the beginning of August:

It is at this time when a hop garden appears to the greatest advantage; for when the poles are well stored with fruit, the alleys perfectly clean, and the hills properly and neatly rounded, there are few vegetable productions that afford a³ scene so pleasing to the eye, or so fragrant in the scent.

Anxious eyes watched an August sky with fervent hope that heavy rain or hailstones would not descend to undo their hard-gotten harvest, or strong winds wreak havoc among the poles and vines. The climax of their year was soon upon them and, at the end of the ^{August} month or in early September, hop picking began. For a brief spell, farm workers and their womenfolk assumed new guises: pickers, binmen, measurers, and carters. The hop dryer was king, the east his castle, in this transitory scene of

¹J.C. Loudon, Encyclopaedia of Agriculture (1825), 862; Kentish Gentleman, 753; Instructions for Planting ... Hops, op. cit., 40.

²Banister, op. cit., 216; R. Arnold, A Yeoman of Kent (1949), 174.

³Banister, op. cit., 218.

the Kentish hoplands.¹ In the aftermath, only the clearing, sorting, and stacking of poles remained, before the yearly round of work started all over again.

E Hop Growing in North-east Kent 1700-60

There are no available statistics of hop acreage by parishes until the early nineteenth century; the first year for which we have this information is 1807.² It is therefore impossible to produce an accurate hop distribution pattern for north-east Kent in the early eighteenth century. Nevertheless, by using inventories - despite their shortcomings - it is not difficult to find the parishes where hops were grown. Within their limitations, the inventories serve us well: we find hops where we should expect them to be; there are none to be discovered where we know, from experience or other evidence, that they would never flourish. Hops were grown mainly in the area described in the Land Utilization Survey Report³ as the North Kent Fruit Belt, as well as in that part of the Arable-Fruit Belt of East Kent which falls in our region. With few exceptions, they were not grown in the Isle of Sheppey, the Blean, the coastal marshes, or the Isle of Thanet. Hops were cultivated in:

the belt of deep loams on the brick earth, the chalk, and the Thanet sands, stretching along the old Dover road from a little way outside Rochester through Teynham, Sittingbourne, Faversham, to Canterbury, and then a little further east on the similar soils about Wingham.⁴

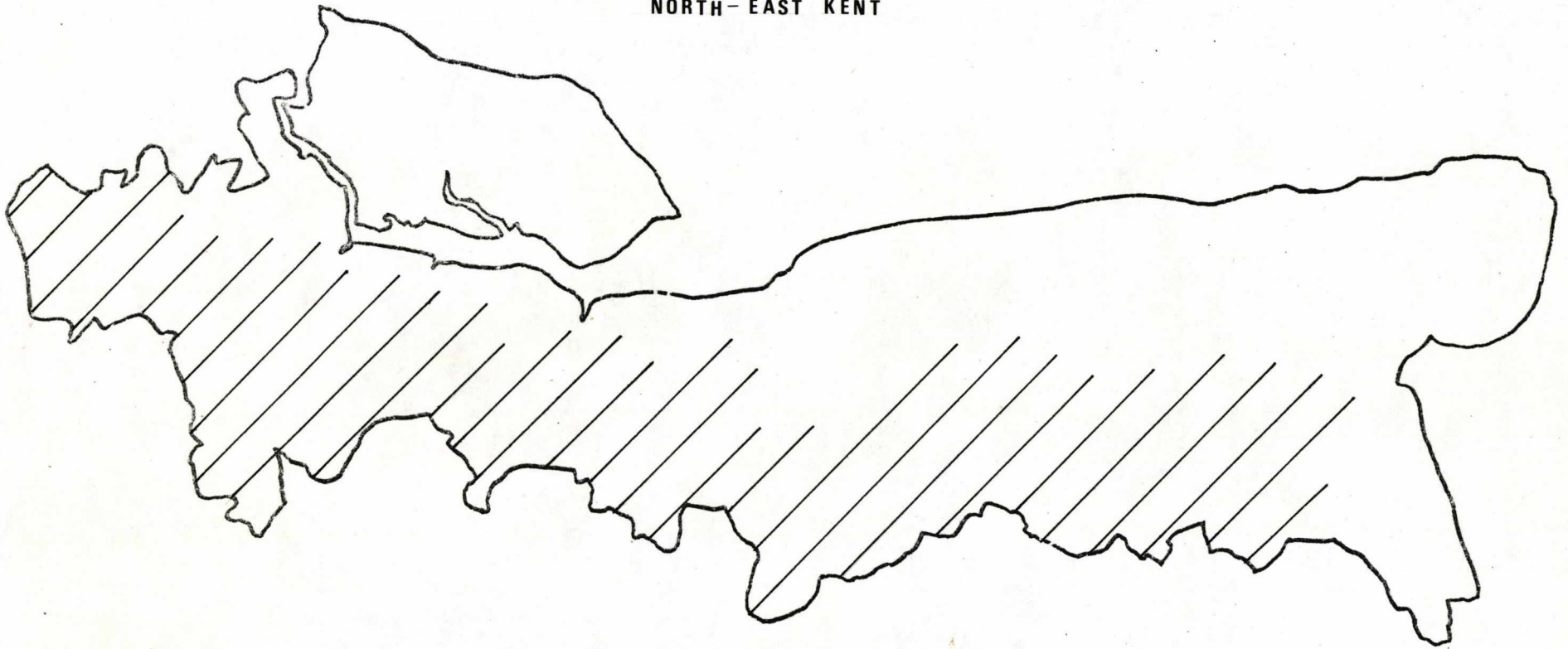
¹For a detailed discussion of the hop picking season see infra, 548-56.

²Parl. Papers, 1821, XVII, 343-69, which show the hop acreage for each Kent parish, 1807-20.

³L. Dudley Stamp, Land Utilization Survey of Britain, part 85, 599, 602-3.

⁴A.D. Hall and E.J. Russell, A Report on the Agriculture and Soils of Kent, Surrey and Sussex (1911), 29.

NORTH - EAST KENT



MAP 6

Hop Growing Zone 1700 - 60

xp

This large expanse of first-class soil extending along both sides of the main road from Rainham to Canterbury is some of the best farmland in the country. As one moves away from the main road, northwards or southwards, the quality of the land gradually diminishes. An area of low rainfall (about 22"), "the soils are mainly medium loams, well-drained, friable and easy-working, frequently covered by superficial deposits of brick earth and alluvium"¹ - in fact, ideal for hops.²

The Western Fringe

Rainham, Upchurch, Hartlip and Newington are parishes which lie at the westernmost extremity of the region, spanning Watling Street. From the tower of Rainham's fine ragstone church, small hop gardens and orchards interspersed between sizeable fields of grain, at once delighted the eye. One such garden was the "half an acre of hopground and poles" belonging to Edward Eley in 1715. John Spice, a well-to-do Rainham yeoman, cultivated a 2-acre garden until his death in 1718. John Gaskin, his contemporary, had "poles in the hopp ground" in 1723. The 3 acres of hops belonging to William Dadman were valued at £36 in 1725; his poles worth £30 may have been cut from the "shaw" on his farm; hop ground work was probably carried out by two farm servants who "lived in" the house and slept on flock beds in "the men's garrett". Rather later, in 1742, the aptly-named Thomas Hop possessed a garden of around 2 acres. He also had an oast in which hops were dried over a charcoal fire.³ William Punnet, a Rodmersham gentleman, farmed extensively in several parishes. He cultivated hops in Rainham until he died in 1726. His enterprise was quite exceptional:

¹G.H. Garrad, A Survey of the Agriculture of Kent (1954), 49.

²Clinch, op. cit., 24.

³KAO PRC 27/40/24, 11/74/67, 11/80/232, 11/78/79, 27/43/104.

Att the Farm at Raynham	£	s.	d.
27 bags of hops at 54s. a hundred $\sqrt{\text{weight}}$, scales	182	5.	0.
$\sqrt{\text{hop}}$ dogs, 6 hop bins, poles on $16\frac{1}{2}$ acres hopground	165	0.	0.

The hop sector of Punnet's economy accounted for one-eighth of his total personal wealth of £2,741 2s. 8d.¹ Adjoining Rainham on its eastern flank, Upchurch too was a hop-growing parish by at least the 1730's when William Young's "new planted hops", valued at £7 10s., covered 3 acres of his dairy farm. William Pell, an Upchurch butcher, also possessed a mixed farm on which hops were growing in 1748, the year he died. That winter, "hoppols of all sorts" were to be seen "set up in stacks" in his yard. Three bags of hops were stored in the oast, waiting for the right market.² Twenty-three farming inventories survive for the parishes of Newington and Hartlip in this period. Of these, ten (43.5 per cent) show evidence of hop growing. The Picknall family of Newington grew hops as early as the 1690's and continued to cultivate them on a small scale in the eighteenth century. Richard Picknall possessed 2 acres, valued at £100, in August 1711. His hops, poles and bins were estimated to be worth nearly a quarter of his total personal wealth. Nathaniel Brenchley farmed extensively in Newington, renting additional grazing on Ridham marshes. With 5 acres of hops he was one of the largest growers in the parish. In 1724 his hops remaining in store were valued at £175.³

Henry Milner of Hartlip possessed "one yard $\sqrt{\frac{1}{4}}$ acre $\sqrt{\text{ of hopground dug \& dress}^d, \text{ w}^{\text{th}} \text{ y}^e \text{ poles}}$ " in the spring of 1743; there was no mention of this neat little plot when his widow died two years later, although the "parcel of hoppoles" in store that winter were probably intended for

¹Ibid., 27/42/117. 11/80/277.

²Ibid., 11/80/277, 11/82/238.

³Ibid., 11/61/119, 11/70/181, 11/77/164.

"poleing" the following spring.¹

There were no hops in evidence at Hartlip Place in 1719, although the plant was introduced within ten years by the new tenant Valentine Ruck, whose brother Adam extended the enterprise before he died in 1749. In that year 5 acres of well-poled hops were growing on Hartlip Place farm. In store, ready for the fast-approaching picking season, were 4 hop baskets, 4 bins complete with cloths, 10 "fine pocketts", and 3 "coarse bags". There were ample drying facilities on the premises:

In the Oast

One large shovel, two hair cloaths, one rib shovel,
a parcel of charcoal, and one hoe²

Sittingbourne District

The core of the North Kent Fruit Belt is a group of parishes around Sittingbourne where "as far as the soil goes, it is impossible to see a finer country".³ There is plenty of inventory and other evidence of widespread hop growing in this area. In the overall regional sample of 45 inventories for 1740-60, there are 9 instances of hop farms - one-fifth of the sample - in this small group of parishes. Random samples for earlier years reinforce the impression of numerous hop farms.

The northern part of Borden parish consists of level, fertile brick earth; to the south the parish is hillier, clay-with-flints overlying chalk. We know that hops were grown on both types in our period, although very few hops are found today in the higher, less fertile situa-

¹Ibid., 11/82/99, 11/82/179.

²Ibid., 11/75/123, 11/79/64, 11/83/63.

³W. Cobbett, Rural Rides (2 Vols. 1853), I, 44. The hop parishes are Bapchild, Borden, Bredgar, Iwade, Linsted, Milstead, Milton, Murston, Rodmersham, Sittingbourne, Teynham, Tonge and Tunstall.

tion.¹ In 1704, "the workmanship & poles in a small hopgarden" on the farm of George Curd of Borden were valued at £5. William Bond, a maltster of this parish - and also a farmer - possessed 3,000 hop poles, suggesting an acre of ground in 1721. The enterprise of John Napleton, a gentleman-farmer, was twice this size: "6,000 hop poles with hops on them" in the summer of 1725. His neighbour, Thomas Grant, possessed a ground of similar size.²

In the bustling parishes of Milton and Sittingbourne, farmers, maltsters, basket makers and other tradesmen were involved in the hop industry in one way or another. John Staples of Sittingbourne had been engaged in a hop-growing consortium before he died in 1704; his "halfe part of the hop poles and hopp bins in copartnership with Mr George Jones & Mr Stephen Chapman" was estimated to be worth £25. This, at least, was one way to safeguard against the notorious uncertainty and risks involved in growing hops. John Chapman, a prosperous grocer of the same town, possessed 15,000 hop poles on his hop ground of, perhaps, 5 acres in 1710. At least part of the crop was retailed "in the shop" where "two hundred [weight] of hoppes" were stored. // Thomas Lee, a Milton victualler, had stacked 2,000 hop poles "in the orchard" before he died in 1713, and a neighbouring miller - Thomas Jeffery - possessed 3,000 "old hop poles", 1,700 "new hop poles", together with a quantity of hop bins when he died in 1717. / Yet another tradesman involved in hop growing was Edward Langford, a carpenter of Milton, who had "3,000 hop poles in the hop ground" in 1748. / John Williams farmed on a very small scale. Despite little wealth - a total personal estate of only £21 10s. - he was able to invest in "a hop garn" in the 1740's. / The inventories of Sittingbourne and Milton serve as a timely reminder that not only general

¹ KAO U593 A1, A2, A3, passim; Garrad, op. cit., 97.

² KAO PRC 11/65/23, 11/76/149, 11/77/247, 11/78/221.

farmers, great and small, invested in hops but, in a semi-urban situation, non-farming personnel were joining the ranks of hop growers as they launched into dual - even triple - economies.^{1/}

South of Sittingbourne, Bredgar, Tunstall, Rodmersham and Milstead were participant parishes in the local hop farming scene. The small garden of John Ferris, a fruit and hop farmer in Bredgar, was well-poled in June 1731; a hundredweight of hops worth £3 remained in store from the previous season. Robert Raysell, "Publycan" of this parish in the 1730's, was almost certainly landlord of The Sun, an ancient inn which still stands today - restored - in the village street. Raysell also farmed in a small way: alongside a small field of oats he had planted "one acre of hopground redy pold" before 1740. The largest leasehold farmers in this parish were probably the Stanleys who lived at Swanton Court on the southern fringe of the village. When Thomas Stanley died in 1742, his son - also Thomas - took over the farm. He later acquired the lease of Gore Court farm in the adjacent parish of Tunstall. It was on this farm, where the soil was more fertile, that he planted 2 acres of hops and dried the crop in his own oast until he died in 1758.²

Ironically, none of the inventories for Milstead include hops, yet we now have more details of their cultivation in this parish over a long period than for any other single area of Kent. The main grower in this tiny "closed" parish was Richard Tylden, lord of the manor, who first planted hops in 1708 and continued to grow them until his death in 1763. He also encouraged other farmers to venture into small-scale undertakings.³

Murston, Tonge, Linsted and Teynham are the easternmost parishes in this district. Many a wealthy yeoman lived within their bounds. The

¹Ibid., 11/65/85, 11/70/2, 11/71/130, 11/74/50, 11/82/227, 11/82/85. HOPS. ✓

²Ibid., 11/79/221, 11/81/236, 11/82/109, 17/92, 11/84/61.

³See infra, 536-70.

largest fruit and hop growers farmed in Linsted and Teynham, on the deep, fertile brickearths. The Delaunes of Sharsted Court grew hops from the early years of the century. Christopher Ellis farmed nearly 200 acres in the 1720's, of which $4\frac{1}{2}$ acres were set aside for growing hops. Justinian Cooper, whose extensive farming operations were spread over several parishes, farmed more than 100 acres in Linsted. In August 1753 seven acres of well-poled hops approached maturity. He possessed ample drying facilities in three charcoal-fired oasts, where, the following month, hops would be spread on "oast hairs" cut from a new piece of "hair cloth being 96 yards" in length.¹

James Ward, a yeoman of comparable wealth, occupied farms "at Butleris and Edwards in the parish of Linsted". His goods were appraised towards the end of September 1742; the hops were already picked, dried and in store and the oast was once more silent:

Upon the Top [upper storey] of the Oust	£	s.	d.
Two oast hairs	1	10	0
Thirteen fine pockets of hops, three carrying bags, three bincloths, part of an old bedstead, one rib shovel, one hop pitcher, two forms, and a small parcel of charcoal	48	7	6

Some 3 or 4 acres of hop ground had been cleared, poles stripped of old bines and stacked in readiness for another season:

about eight thousand and an half of hoppers, now in stacks in the hopground

In addition, almost a quarter of the poles - 3,000 altogether - had been culled, since they were considered "old poles not fit to be set up".

The appraisers did an excellent job. One of them, Thomas Anders, who

¹KAO U145 A7; PRC 11/77/26, 11/83/150.

died ten years later, was himself a Linsted hop farmer.¹

Isaac Kemp of Newgardens in Teynham - the wealthiest farmer in our overall sample of 45 inventories 1740-60 - was almost certainly the largest hop grower in the parish before his death in September 1750. The new season's yield of "hops in bags" from "all the gardens" was valued at £170. He possessed two oast houses, one in Greenstreet, the other at Teynham Court Lodge. A large range of appurtenances included 21 hop baskets. Altogether, a sizeable undertaking is suggested, probably not less than 8 acres.²

Faversham District

This part of north-east Kent is "a fine extended level with large inclosures and a fertile soil highly cultivated, being part of the fruitful vale extending almost from Sittingbourne to Boughton under Blean". Edward Jacob commended "the excellent husbandry of our neighbouring farmers ... equalled only by few in the whole kingdom". Cobbett believed the land of the district was "equal to that of the Isle of Thanet".³

The general farmers of the district, as well as some of the local tradesmen, were growing hops in the early eighteenth century in Faversham and adjoining parishes: Boughton under Blean, Davington, Goodnestone, Hernehill, Ospringe, Preston and Selling. The crops were conveniently marketed to Faversham brewers, or exported to London from the town quayside. The inventories of Faversham itself best illustrate the involvement of non-farming personnel in hops and strengthen our impression of a phenomenon already observed in Sittingbourne and Milton: a dual-economy combining hop growing with a local craft or trade itself related in some

¹Ibid., 11/82/115, 11/83/152.

²Ibid., 11/83/68.

³S. Bagshaw, History, Gazeteer, and Directory of the County of Kent (2 Vols. 1847), II, 562; E. Jacob, The History of Faversham (1774), 97; Cobbett, op. cit., I, 250.

way to farming. George Wildish, a Faversham butcher, kept bees and poultry, and owned "a slip of hop ground at Ospringe ... containing 200 hills". In 1732 he possessed 8 "old oust hair cloaths" suggesting drying facilities for his own small crop, and possibly for the hops of others. Five years later John Berry, a local cooper, cultivated 2 acres; the plants and poles were said to be worth £24, while 4 bags of hops from the previous season were valued at £30. At least one hop grower in Faversham was known as a "gardiner": James Carter's plants and hop poles "in the garden" were valued at £15 in 1738.¹ The best documented instance of hops in Faversham concerns the 7-acre garden of Mrs Mary Everard which was managed in the late 1740's and early 1750's by Robert Mein, a local shopkeeper and hop specialist.²

A few hops were grown in the small parish of Davington, north-west of Faversham, from at least the 1720's when John Bennett owned a ground of some 3 acres (9,000 poles) and had in store the familiar hop baskets and hop dogs. But hops were probably an unimportant part of the parish economy: a survey of Davington in 1793 shows only three hop gardens. One of these was owned by Lady Twisden (4a. Or. 33p.), one by Sir John Filmer (3a. lr. 6p.), and the third was Glebe land (3a. 3r. 12p.). The acreage of hops in Davington at this time was less than the area given over to fruit and only a small fraction (2 per cent) of the total farmed area of 528 acres.³ Davington is a good example of a parish in the "twilight zone" between the well-drained loams and the low-lying marshy grounds to the north.

Ospringe, straddling Watling Street south-west of Faversham, and Selling - on somewhat higher ground to the south-east - were both hop-

¹KAO PRC 11/80/78, 11/81/71, 11/81/127.

²PRO C103/185, C12 2310/16. For a full discussion see infra, 571-87.

³KAO PRC 11/78/6, U390 P4.

growing parishes, although individual hop acreages were quite small. Simon Aikens of Ospringe possessed only 1,400 poles in "the hop garden" in 1719, with two bags of hops in store. This suggests a small enterprise of less than an acre. His main interest was corn growing: he sowed 113 acres of wheat alone during the winter 1718-19. In Selling, John Bigger's "twenty pearches of hop growne & pooles" were valued at only £3 in 1741. Thomas Fox of the same parish possessed a somewhat larger, though still small, ground of $1\frac{1}{2}$ acres when he died in 1740. He nevertheless considered it worthwhile to erect an oast and dry his own crop. Charles Dodd, the blacksmith of Selling until 1720, possessed an established hop garden with poles stacked, worth altogether £30.¹

One of the largest growers in the district was John Blaxland of Goodnestone Court. He possessed, in 1751, many of the appurtenances of hop growing such as dogs, peelers, baskets, carrying bags, even "hop tyes". But the most significant item - and one of the largest in this long detailed inventory - suggests an area of around 10 acres:

All the hoppoles of & belonging to both
hopgrounds £125²

Below the yet-extensive Blean forest, and wedged between Faversham and Selling, lay Boughton-under-Blean straddling the main London to Canterbury road. Hernehill, its elevated neighbour to the north-east has recently been described as "almost as pretty as Kent can offer".³ In this rich, undulating countryside hops flourished, as inventories quickly testify. The goods of Henry Scott were appraised shortly after he died in 1707 when "a parcel of hopps" remained "unpickt" on his farm

¹KAO PRC 11/74/172, 11/82/2, 11/81/215, 11/78/20.

²Ibid., 11/83/182.

³M. Crouch, Cream of Kent (Sheerness 1973), 76.

in Boughton. In the same parish a few years later Henry Underdown was content to grow hops on 2 acres, while his wealthier neighbour, Thomas Mawer, possessed a ground in Boughton, another in Hernehill:

for the hop pouls one Fright Hoad land	£55
for the hop pouls in Hearnhill	£35

These grounds - 7 or 8 acres in all - produced, in 1720, at least 16 bags of hops dried in Mawer's oast; they were said to be worth £95 14s. 8d., besides those already sold locally to Thomas Cole for £2 5s. 9d.

Boughton and Hernehill inventories suggest, in some instances, a heavy commitment to hop growing. Thus, the value of "hops in the bags and unbagged" on John Jennings' farm in Boughton during the picking season of 1733 were valued at £160, half his total personal wealth; the poles lying in the hop ground were worth another £60. The following year John Gateman of Hernehill died before he had time to sell the crop. Eight bags of hops stored in the oast were valued at £61, the largest single item in the inventory. Taken together with the hop poles standing in 4 acres - £35 worth - Gateman's investment in hops was not far short of half his total personal estate. William Ayers farmed a small mixed holding in Hernehill where he grew hops. He also helped his neighbour with their picking. Almost certainly the "three years growth of a parcel of alders" on the farm in 1739 were intended as hop pole replacements.¹

Finally, in Boughton we find yet another example of a dual-economy involving hops. Andrew Snoulton, a well-to-do "tile-maker", leased a messuage and tile kiln from the Earl of Rockingham in the 1740's and early 1750's. His inventory provides interesting details of tiles "burnt" and "unburnt", stored "att the tile kell". But Snoulton was also engaged in commercial hop production as his inventory dated 29th October 1753 admir-

¹KAO PRC 27/37/210, 27/40/162, 27/41/27, 27/42/191, 27/42/208, 27/43/63.

ably demonstrates:

	£	s.	d.
On the Hopground			
Stock of poles on 7a. lr. Op. hop ground	60	0	0
96 load of ordermy [ordinary] moul and dung laid on, and 5 load of chalk & 100 load of dung & moule in maxelle	10	1	0
In the Oast			
Hops unsold a part wareof beeing att London in all is 52 hundred[weight]0 qr. 27 lb. at 65 shillings per hundred	169	16	3

Miscellaneous items stored in the oast and related to the hop business are mentioned: 12 hop baskets, a "hop shoule", an "empty corse bag", hop dogs, peeler, "clams" and "bagging curbs", "poolley, blocks & rope", and a stock of "sea-cole", worth in all £3 15s. Taken together, the value of Snoulton's hop growing business amounted to more than a quarter of his total personal wealth, a considerable diversification on the part of a professional tilemaker.¹

Chartham

An extensive parish of 4,500 acres, Chartham is "pleasantly situated on low ground near the banks of the River Stour south-west of Canterbury."² The soils are variable, ranging from light stony loams and sands to medium loams, mostly well-drained. Hops flourished in this locality, especially on slopes of good arable land beyond the river banks, as for example in Chartham Hatch. Although the hop grounds of some farms were small - Robert Godfrey possessed only an acre in 1721 for instance³ - the general impression is one of well-to-do gentlemen and yeomen cultivating gardens of above-average size, often possessing additional grounds in nearby

¹KAO U471 A1, A2, PRC 11/83/107.

²Bagshaw, op. cit., II, 605.

³KAO PRC 11/76/46.

parishes, and self-sufficient in hop poles.

Charles Fagge, esquire, lived in lavish style in Chartham and possessed hop grounds valued at £94 in Chartham and Chilham in the spring of 1715. His largest ground, however - worth £86 - stood a few miles away in Wincheap, Canterbury. As a selection of entries from his inventory demonstrates,¹ he owned ample supplies of hop poles in local woods:

	£	s.	d.
In Sparrows Dane wood for hoppoles and underwood	30	0	0
In the Willows wood for poles and underwood	15	0	0
In Purard wood for poles and underwood	63	0	0
In Joyners wood for poles and underwood	6	0	0

These woodlands also supplied his important Canterbury ground:

Hoppoles laid in Wincheap £40 0 0.

Thomas Gill of Chartham was described as a "hop planter" by the appraisers of his goods in 1752. In his Will, made shortly before he died, he described himself as a "hop dealer". In fact during his lifetime he was one of the most prominent businessmen in Canterbury.² Gill lived just outside the City in a well-furnished, 13-room house. He possessed four large hop grounds - three of them in Chartham - as well as oasts in Chartham and in St. Mildred's parish, Canterbury. Two groups of appraisers were employed, one to value the domestic goods amounting to £97 4s. 1d., the other to assess the farming stock, valued at £721 13s. The second group were fellow hop planters, John Reynolds and John Westall. We can have confidence in the reliability of such a professional appraise-

¹Ibid., 27/39/207.

²Ibid., 11/83/85, 32/63.

ment. Indeed, it frequently happened that "specialists" were called upon to act as valuers where the deceased had been engaged substantially in one skilled occupation. The Chartham property was held on lease from the Dean and Chapter of Canterbury. The hop gardens, including a newly-planted acre, are clearly set out:

	£	s.	d.
On the Hopgrounds at Chartham			
On the ground called Raddington the whole stock of hoppoles valued at	14	0	0
On the ground called Stone Field the whole stock of hoppoles valued at	35	0	0
On the Cinquefoil Field the whole stock of hoppoles and the charge of planting one acre this last spring valued at	9	0	0

Some farmers in the parish produced hops on a more modest scale.

Edmund Fairbrace was a typical mixed farmer who possessed 3 acres in two grounds, together with his own drying facilities:

	£	s.	d.
for the poalls of two akers of hopground	60	0	0
for the poalls of wanaker young hop ground	6	0	0

Fairbrace's crop in 1744 had weighed over 2 tons when dried. Over half of these had been sold by January 1745 when 19 hundredweight remained in store and were valued at £4 a hundredweight, £76 in all.¹

Matthew Back also possessed 3 acres of hops. Those remaining in store were worth £60, the poles in the hop ground £36. Together with such miscellaneous items as hop pockets and a "hop cart", the hop growing side of his farming activities accounted for about two-fifths of his total personal wealth in 1760.²

Non-farmers engaged in hop growing in Chartham are also in evidence:

¹Ibid., 11/82/199.

²Ibid., 11/84/113.

John Pack, a local miller cultivated 4 acres. His hops were sold after his death in February 1743 and fetched £60. Thomas Swain, a victualler, farmed on a modest scale. He grew hops in two grounds - one of them described as a "young ground" in 1749. That he was amply supplied with hop growing gear during his lifetime is fully demonstrated by the hoes and rakes, a "spade for hop stumps", "hop ladder", "hop stooles" and 79 lb. of "hop bagging" listed in his inventory. A well-stocked alehouse and a small farm which included hops, fruit and bees, provided a well-knit dual-economy for the Swain family in these years.¹

East of Canterbury

The rise of the Canterbury hop grounds in and around the City from c. 1680 provides an outstanding case-study of intensive suburban farming in England which is discussed separately.²

Between Canterbury and Sandwich, south of the Stour, lie several parishes of our region which today would be considered typical of the Arable Fruit Belt of East Kent and, in the early eighteenth century, were hop growing areas: Ash, Ickham, Littlebourne, Wickhambreux and Wingham. This extensive tract of land is "an excellent medium loam, deep, warm, early, well drained and yet containing plenty of moisture". This arable country is comparatively flat, in places undulating.³ In general the holdings were smaller than those discussed already, with larger farms here and there. Nicholas Gibbs of Littlebourne had only 43 sown acres in the spring of 1718; his tiny hop garden required only 600 poles. On Jane Mills' smallholding the poles were said to be worth only £5, the hops a mere £3. Until his death in 1744, John Taylor occupied Higham Farm in Littlebourne. Concentrating on dairy and arable, he nevertheless found

¹Ibid., 11/82/164, 11/83/29.

²See infra, 587-616.

³Garrad, op. cit., 50-1.

time to grow more than an acre of hops. He possessed a wide range of farm vehicles and implements, including a "hop cart", a "hop shim", and "hop dogs". 13 cattle provided ample dung which, together with mould had been stacked in his "macksell" for spreading later on the ploughed fields and hop grounds.¹

John Evenden farmed in Wickhambreux on a much larger scale and was said to be worth nearly £1,400 when he died in 1717. That summer there were 250 acres of sown crops on his land, together with hay cut from 27 acres. A sizeable dairy herd, "fattening beasts", and numerous sheep, pigs and horses convey an impression of a balanced and prosperous enterprise. He was also a hop farmer: $5\frac{1}{2}$ acres of "hops with the poles" were valued at £182 10s., the second largest item recorded. The farm of Francis Larkin, although much smaller, displayed a similar balance of crops and livestock. The recording of "3,000 hop poles" in 1726 suggests a one-acre ground; no doubt the poles were cut from 5 acres of alders growing on the farm. John Schooler was known as a "carpenter" although he also occupied a mixed farm which included "the hop garden" of $2\frac{1}{4}$ acres at the time of his death in 1753.²

In the parish of Ickham, it was common for general farmers to grow a few acres of hops, as the inventories of yeomen illustrate. In the 1720's Henry Minter grew about 4 acres, Stephen Holman $3\frac{1}{2}$ acres. Henry Minter's "hop poles in the hop ground" were worth £48 and the recently picked crop of 35 hundredweight £105, representing a third of his total personal wealth. William Oldfield of Wingham was a limeburner, a small farmer, and a hop grower with a garden of some 2 acres; his 6,000 hop poles, said to be worth £24, were the most valuable single item of his

¹KAO PRC 11/74/222, 11/73/209, 11/82/153.

²Ibid., 11/74/207, 11/78/48, 11/83/120.

inventory in 1720.¹

Beyond the Hop Parishes

Some parts of Kent are totally unsuited to hop growing: the Isle of Sheppey, the Blean, the coastal marshes and the Isle of Thanet. Not a single instance was found of hops growing in Sheppey or Thanet, and scant references to hops in the Blean, and in the marshy coastal parishes where occasionally a farmer would discover a plot on which the plants might survive, but hardly flourish. The greater part of the Isle of Sheppey is stiff London clay, well suited to wheat and beans but certainly not hops. The wettest and most intractable area of London clay, known as the Blean, was still covered with dense woodland. The entire Thanet area is open, almost flat and treeless. Superb for grain crops and pasture, the open aspect inveighed against the hop plant and wise Thanet farmers never considered its cultivation worth while. The parishes of Iwade, Luddenham, Oare, Graveney, Seasalter, Whitstable, Swalecliffe, Herne, Reculver and Chislet possessed vast tracts of coastal marshes, salt and fresh, as well as riparian grazings which, altogether, made an inestimable contribution to the pastoral economy of north-east Kent. But, not surprisingly, very few men attempted to grow hops in these forbidding regions.

¹Ibid., 27/42/141, 27/42/161, 27/42/230, 11/75/98.

CHAPTER 10

THE PRODUCTION OF HOPS ON THE GENERAL FARM II: CASE STUDIES

A Hop Growing in Ash 1743-62

Hops were a conspicuous part of the farming scene in Ash. Unique evidence makes it possible to analyse the progress of hop farming in this parish over a period of 20 years.¹ It is hardly necessary to stress that this does not mean hop growing was more important in Ash than elsewhere: it is simply a matter of chance survival of documents. Nevertheless, this extensive parish, especially the higher more fertile land in the southern half, is typical of the Arable-Fruit Belt of East Kent where hops thrived. The conclusions are almost certainly representative of the structure and development of the industry in the "hop parishes" of north-east Kent during the first half of the eighteenth century.

In the seventeenth century, hop growing in Ash was probably an activity confined to the wealthy few. Thomas St. Nicholas, esquire, possessed an acre of poled hops in July 1668, the year of his death. His "engine to pull up hoppoles" was probably no more than an iron hop dog!² The inventories tell us nothing more about hops until 1710, the year Robert Peirson died. The largest item recorded in his modest inventory is $1\frac{1}{2}$ cwt. of "green hops" said to be worth £8.³ This valuation is almost certainly not exaggerated, for hops sold in London that year fetched over £9 a hundredweight, prices not seen since the "abnormal" years 1697-8.⁴ Shortly after the picking season 1715, Stephen Solly had

¹KAO U151 E3: 'Parsonage of Gilton Town in Ash'.

²KAO PRC 27/20/95.

³Ibid., 27/38/96.

⁴Sir William Beveridge, Prices and Wages in England (1939), I, 567.

"1700 hops" [17 cwt.] in store worth £70, as well as hop dogs, peelers and six hop baskets. Solly had occupied a farm in Ash for at least ten years. Stephen Bax was described as a "fruiterer" in 1705. When he died, 14 years later, he had poles "in the hop garden" as well as "hops ready bagg'd" which were expected to sell for £8 5s.¹

John Bing was farming in Ash, where he lived with his wife and three children, as early as 1705. When he died in 1721 he possessed a small hop garden of about twenty perches. In his younger days John Thompson had "lived in" as a farm servant. Later he farmed on his own account and when he died in 1732, possessed a hop ground of two acres. Bing and Thompson were each described as "yeoman" and certainly, in most cases, hop gardens were small entities within sizeable mixed farming enterprises.²

The progress of hop farming in Ash during the 1740's and 1750's can be followed in Table 30 and Figure 9. In 1743 there were still only 17 growers cultivating grounds as small as thirty perches, the largest $4\frac{1}{4}$ acres: the average size of garden at this time was less than 2 acres. By 1750 the number of grounds had nearly doubled; individual grounds averaged almost 3 acres apiece. In 1760 the average size of a hop ground in Ash was 3.43 acres, the highest recorded in the series. Total acreage more than trebled in the ten years before 1753 when a record 102.8 acres of hops were grown. It is worth noting that the acreage of hops on the Camer estate at Meopham also doubled between 1743 and 1752, from $3\frac{1}{2}$ acres to 7 acres.³ High prices in several years, notably 1744-6 and 1749, with very few years of low prices, undoubtedly encouraged this

¹KAO PRC 27/39/223, 27/40/149.

²KAO QTz 2, PRC 27/41/6, 27/42/175.

³M. Roake, The Camer Estate, 1716-1852: the development of the Camer Estate at Meopham in Kent, particularly from 1716 to 1852, University of Kent M.A. Thesis (1969), 130.

TABLE 30

HOP GROUNDS IN ASH 1743-62

Year	Number of Hop grounds	Total Acreage	Average Acreage
1743	17	32.85	1.93
1744	-- no information --		
1745	18	44.55	2.48
1746	23	54.65	2.38
1747	25	63.45	2.54
1748	28	70.55	2.52
1749	27	78.15	2.89
1750	32	95.60	2.99
1751	29	92.00	3.17
1752	32	96.00	3.00
1753	32	102.80	3.21
1754	31	98.80	3.19
1755	29	89.55	3.08
1756	29	81.45	2.80
1757	28	82.95	2.96
1758	27	85.85	3.18
1759	27	87.90	3.26
1760	28	95.90	3.43
1761	29	95.90	3.31
1762	29	94.90	3.27
<hr/>			
Average			
1743-62	27	81.25	2.93

Source: KAO U151 E3.



FIGURE 9 Ash: Acreage under Hops 1745 - 62

expansion. Although some of the hop acreage in Ash was later relinquished - a reduction of one-fifth by 1756 - subsequent planting of new grounds ensured that by the end of our period, almost 100 acres of hops were once again growing in the parish. The early 1750's appear to have been unusually difficult years in Kent, when poor quality hops and low prices meant that many growers suffered losses.¹ It is not difficult to understand why, at this time, farmers reduced their investment in hop growing or abandoned it altogether. The assumption that "once in three years they bring money enough" was probably a useful working guide for the hop grower:² one good year in three may have been his normal expectation. However, if three consecutive years brought him the gains of scarcity (e.g. 1744-6) or, alternatively, if a run of low prices resulted in small returns, or perhaps losses (e.g. 1753-5), the hop farmer would possess sufficient "evidence" for a change in cropping plans. It certainly begins to look as though a critical three year period could have had a decisive effect in precipitating expansion or contraction in hop growing.³ Better times after 1756 brought renewed confidence and encouraged new plantings. The largest growers appear to have responded most sharply to the fluctuating fortunes of hop growing in the 1750's. Some of them never returned to the earlier high level of production, i.e. some of the lost acreages were never replanted. One can well imagine that in the "boom" period during the 1740's, hops had been planted in less than optimal situations which led to diminishing returns, especially in the difficult 1750's. This precipitated a policy of rationalization

¹PRO C103/185, C12 2310/16; E.C. Lodge, The Account Book of a Kentish Estate 1616-1704, Records of the Social and Economic History of England and Wales (1927), VI, 493.

²W. Blith, The English Improver Improved (1653), 247.

³See Table 32 and Figure 10 showing hop prices in these years.

TABLE 31

LARGE HOP GROWERS IN ASH 1745-60: ACREAGES

	1745	1746	1747	1748	1749	1750	1751	1752
William Beale	2.35	4.35	5.00	5.50	6.00	7.50	7.50	7.50
Henry Minter	4.50	4.50	6.00	7.00	8.50	10.50	12.50	12.50
Thomas Minter	7.00	7.00	8.00	8.25	8.50	9.00	9.00	9.00
John Pordage	4.50	5.00 ³	5.50	6.00	7.00	8.00	10.00	12.00
Francis Tomlin	-	1.00	1.00	1.00	2.00	3.50	3.50 ⁵	3.00
	1753	1754	1755	1756	1757	1758	1759	1760
William Beale	7.50	7.00	6.00	4.00	4.00	5.50	5.50 ¹	5.50
Henry Minter	14.00	14.00	9.00	9.00	9.00	12.00	12.00	12.00
Thomas Minter	7.50	6.50	4.50	3.50	3.50	4.50 ²	4.00	4.00
John Pordage	12.00	12.00	10.00	8.00	7.50	6.50 ⁴	4.00	4.00
Francis Tomlin	4.50	4.50	4.50	4.00	4.00	2.00	2.00	2.00

¹Mary Beale²Robert Minter³John Bax⁴Benjamin Fisher⁵Thomas Hollingbery

Source: KAO U151 E3.

aimed at maximising productivity and profitability per acre.¹

Unfortunately - for reasons that are not clear - there are hardly any inventories for Ash after 1730. It is possible to relate inventories to the main body of evidence in only two instances. The Minters were substantial farmers in Ash: several branches of the family lived in the parish. Henry Minter, senior, died in 1721. The possession of 1,700 hop poles suggests a ground of less than an acre even allowing for old, discarded poles not included in this figure. His son, also Henry, took over the farm; by 1743 he had planted 4 acres of hops. This area was increased progressively to the unusually high level of 14 acres in 1753, making Henry Minter the largest grower in the parish. In the mid 1750's he reduced his grounds to 9 acres. Subsequently, a new cropping programme resulted in an optimal area of 12 acres.²

Francis Tomlin, a wealthy yeoman farming over 300 acres, cultivated a single acre of hops in the parish until 1749 when he doubled his acreage. This was increased further to 3.5 acres in 1750. Thomas Hollingberry assumed the lease of this land the following year when Tomlin died. The appraisers of Tomlin's goods recorded:

For all the hoppoles that are in
both the hopgrounds £67 0. 0.³

Where names of hop growers in the 1740's and 1750's can be related to family names in the Ash Return for 1705 the connection is, in the majority of cases, a farming one.⁴ This is hardly surprising since over

¹See Table 31.

²KAO PRC 27/41/36, U151 E3.

³KAO PRC 11/83/77, U151 E3.

⁴KAO Q/CTz 2: List of inhabitants for tax on births, marriages, burials and bachelors.

80 per cent of the families in the parish looked to the land for their livelihoods - as farmers, farmers-cum-labourers or, in a minority of cases, as landless labourers wholly dependant on wages.¹ Carr, Foat, Kebble, Minter, Pettley, Philpot, Sanders and White, for instance, are all old-established farming families who appear in both sets of documents. Some of the farms in the area were quite large: Grove Farm, for example, comprised 184 acres of arable and pasture with 2 acres of "very good hop ground" in 1761.² More numerous were modest holdings of less than 100 acres:

A Farm ... now in the occupation of Mr Ralph Philpott, consisting of a messuage, barn, stables and other very convenient out-houses, with a well accustomed malthouse and 56 acres of land, 4 acres of which is a very good hop ground, and $1\frac{1}{2}$ acres orchard.³

The evidence suggests that a few tradesmen's families were involved in hop growing by the middle years of the century, if not earlier. In 1705 the families of Horne, Joy and Wood were maltsters, another Horne was a victualler, William Curling a carpenter. There is no evidence to link them with farming at this time. However, by the 1740's these same families were growing hops: "widow Horne" had half an acre in 1743; Charles Horne grew $3\frac{1}{2}$ acres, "widow Joy" about an acre; Thomas Wood 2-3 acres until 1762; William Curling 6 acres in 1750.

Undoubtedly these tradespeople were a small minority of growers. The cultivation of hops in Ash remained overwhelmingly in the hands of the general farmers of the parish.

¹KAO Probate Inventories, Ash passim.

²Kentish Post 29 August 1761.

³Ibid., 29 July 1749.

B Hogshaw Farm, Milstead: Hop Growing 1708-61

Milstead is a parish of mixed soils - in the north fertile loams good for tillage, in the southern part, poorer and heavier soils, mostly clay-with-flints overlying the chalk. Hogshaw Farm, situated in the more fertile northern part of the parish on rising ground, was less exposed than the higher reaches of the dip slope to the south. No doubt Richard Tylden, the owner, had considered these essential matters of soil and aspect before planting his first hop garden in 1708, the year he took over the farm. William, his late father, had been content to buy hops for his own use from a farmer-maltster in Sittingbourne.

The first recorded entries of young Richard after he inherited the Tylden estate are dated 11 October 1708; one of them relates to his new hop venture:

for ploughing, harrowing, roulling
and sowing y^e hopground 9s. Od.¹

A reference to "y^e hopground hedge" in a record of the same year shows that suitable precaution had been taken to protect the young plants in this rather blustery parish. Tylden's accounts later that year, as well as during 1709, show that his hops were in two gardens, one of them the "upper hopground". Richard Tylden continued to grow hops on his farm until 1763, the year of his death. Analysis of his farm record books widens and intensifies our knowledge of hop growing in north-east Kent over an uninterrupted period lasting more than half a century.

Records of hop growing at Hogshaws,² and of other farming activities,

¹KAO U593 A1.

²Locally it was usual to refer to the farm as "Hogshaws", more elegantly "Milstead Manór".

are distributed throughout three volumes of accounts in the Tylden MSS.¹ A3 contains the most voluminous and valuable evidence, especially for the years 1722-52; A1 relates to hop growing 1711-14, albeit sparsely; A2, used by Tylden as a book of receipts, is the most useful for prices. Altogether, we have information on hops covering the period 1708-61, with extremely detailed evidence for the years 1722-52.

Prices

Account book A2 includes receipts for sales of hops in London from October 1715 until May 1762, as well as some - but by no means all - of the receipts for local sales; the entries are distributed throughout the volume. Prices for the years 1711-14 can be gleaned from A1, while A3 provides further information concerning small local sales. The Milstead Series of Price-Statistics for Hops (Table 32 and Figure 10) summarises this material for the whole period 1711-61; in two years - 1754 and 1757 - it has been necessary to take prices from another Kent farm.²

As in the case of most commercial hop growers in north-east Kent, the bulk of the annual crop was marketed in London. Local sales at Milstead were normally under 5 per cent of total income from hops, sometimes as low as 1 per cent. Hogshaw hops were conveyed by road to Crown Key, Milton (3 miles) from whence they were taken by coastal hoy to the Southwark Hop Market near London Bridge. Here they were sold, by hop factors, to city hop merchants and brewers. The proceeds of sales (less costs of freight and factorage) were remitted to Tylden by the local hoy-men. Until 1733 Mr Tappenden transported Hogshaw hops to London, subsequently Mr John Page, another hoyman of Milton. The net sums returned

¹KAO U593 A1, A2, A3.

²For convenience and consistency I continue to use the concept of a "Harvest Year". Thus, "1711" means the time from about Michaelmas (more accurately September) 1711 to about Michaelmas (in practice, August) 1712. For a fuller discussion on this point see Beveridge, op. cit., xliii, 539-40.

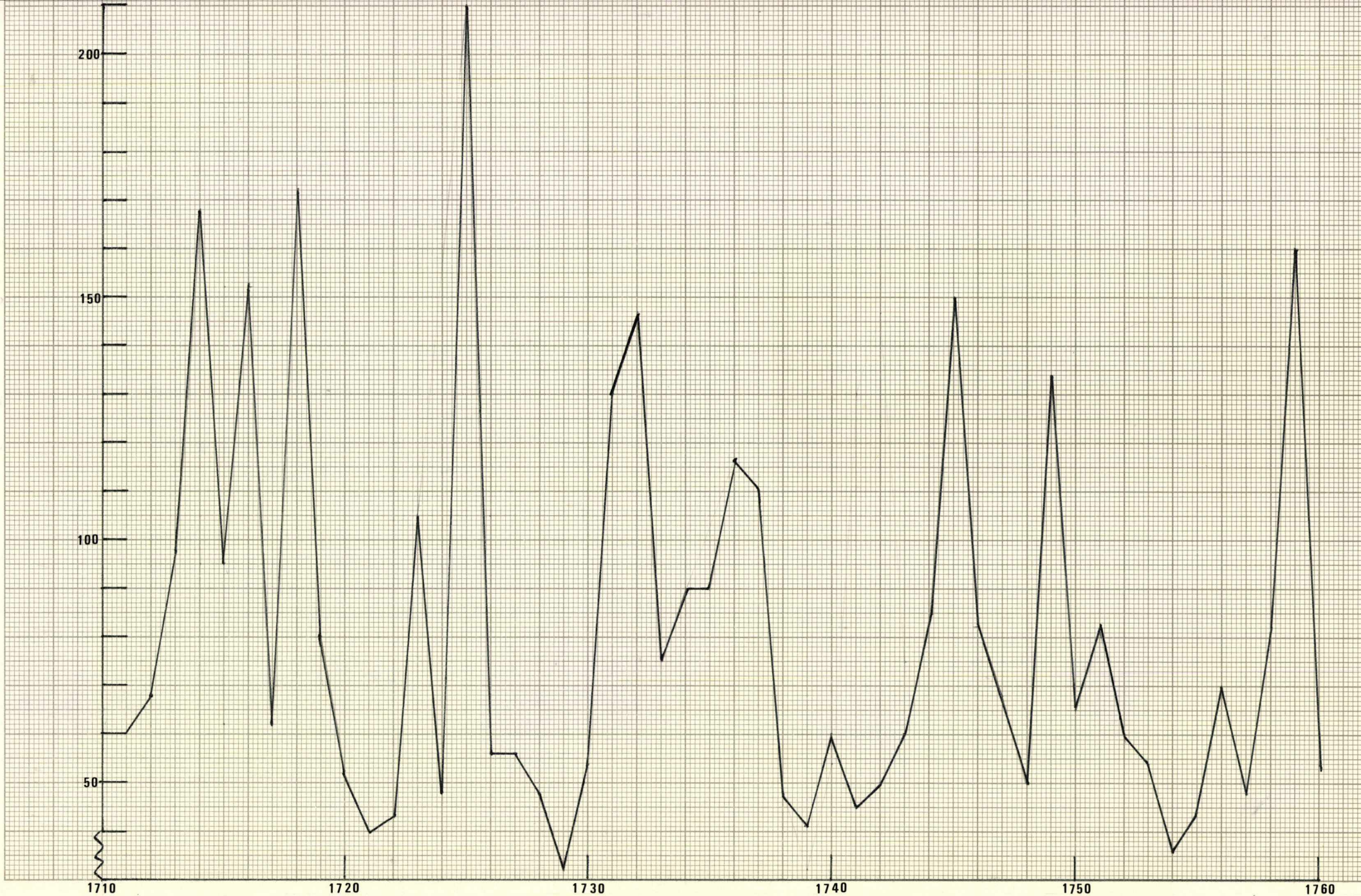


FIGURE 10 Milstead (Kent) hop prices 1711-60 (in shillings per cwt.)

to Milstead, together with the weight of hop consignments and the selling prices, provide the basis of the Milstead Series and other tabulated material.

The following entries are typical:

	£	s.	d.
13 October 1722 Reced of Mr T/appenden for 8c. 3qr. 26 lb. of hops at 45s. per C. and for 12c. 1qr. 1 lb. at 41s. per C. all charges outset comes to	42	19	9
14 October 1738 Reced of Mr Gillow /Southwark factor/ by y ^e hands of Page for 4 fine pockets sold for 52s. per C. charges paid for y ^e carriage and selling paid came to	12	16	10

A marginal note on this occasion reads:

these fine pockets weighed 5C. 1qr. 6 lb.

The extreme uncertainty of the hop harvest meant wildly fluctuating prices from year to year. In the long term, prices may have fallen slightly as more farmers entered the business. However, the long term trend of prices was relatively stable and therefore unimportant as a cause of individual farm responses. In hop growing it was the short-term situation, say over 2 to 4 years, which farmers studied and on which they based their business calculations.

From the point of view of prices there were three types of season. First there was the year of general plenty, in which Milstead fully shared, a year of low market prices: 1726 and 1738 were two such seasons. In 1726 for instance, over two tons of dried hops were produced at Hogshaws, a record harvest. But hops were generally plentiful that year and Tylden's crop fetched only 55s. and 57s. a hundredweight in the Southwark market. Secondly, a season might produce a disastrously poor crop everywhere, resulting in "famine" prices. 1725 was notorious. Wide-spread heavy rain and strong gales, especially from 13 July to 4 September,

almost wiped out the national crop. The vicar of Seasalter was moved to record that 1725 was:

... the most dreadful for continual rains, cold and tempests that ever any history mentions. Not a day from May to October without rain. The fruits of the earth spoiled and, according to their different religions, some grumbled, some swore and some few prayed.¹

The steward of Earl Sondes' estate at Faversham, writing to a friend in mid-September opined:

Hopps are like to be prodigious deare £10 or £12 per C. We have not above half a bag an acre ... small and mouldy in most places.²

How right he was! Tylden received ten guineas a hundredweight for his hops that year. But, unfortunately, he had only $4\frac{1}{2}$ cwt. to sell at that incredible price.

The third kind of season was one in which Tylden's hops yielded differently from those in most other places, due to local weather variations. Thus in 1741 Milstead hops were "exceedingly blasted" and it was a bad year for local hop pickers: it took less than a day to pick the total crop of 16 bushels! However, prices generally were on the low side as Tylden himself recorded:

4 September 1741. The price of hops is in general from 40s. to 50s. per C.³

Finally, happenings in 1746 illustrate one of the finer complexities of the hop market. Tylden had "a tollerable crop" that season, but other farmers fared even better for "there was the greatest crop in general in

¹Quoted R.M. Filmer, A Chronicle of Kent 1250-1760 (private publication n.d.), 179.

²KAO U791 E79.

³KAO U593 A3 f.198 verso.

all places in the Kingdom" in 1746. Yet prices were above average: Milstead hops sold for 90s. and 76s. respectively. Why? Quite simply "the old stock being entirely gon" Tylden was well aware that there were no hops in store from previous years to "spoil the market". Undoubtedly farmers had put all their hops, both old and new, on the market the previous year to reap the gains of high prices in a bad season.¹

Acreage

From 1722 until 1734, Tylden's hops were grown in two grounds, the "upper hopground" (2a. 3r. $\frac{1}{2}$ p.) and the "meadow hopground" (1a.), $3\frac{3}{4}$ acres in all. From 1744 until at least 1752 he grew 3a. 1 yard (rood) 16p., virtually $3\frac{1}{4}$ acres. The intervening years are, at first sight, baffling: some hops are grubbed out, others planted, old ground discarded, new acres brought into use. Throughout the period 1735-43 one can never be quite sure of the precise acreage of hops in full bearing. In truth, these are years which witnessed a policy of experiment and rationalization at Hogshaws. In the first instance Tylden's aim was to increase his total acreage by progressively planting fresh grounds until, by the autumn of 1737, he achieved a much increased record acreage:²

Hops	a.	r.	p.
The upper ground, old and young	3.	0.	0.
The young, 3 years old, in y ^e new ground in perfection	1.	2.	218 hills
In y ^e new ground young planted this year	1.	0.	387 hills
	ac.	6.	0. 105 hills

¹Ibid., f. 216v; Kentish Gentleman, 758-9.

²KAO U593 A3 f.162v.

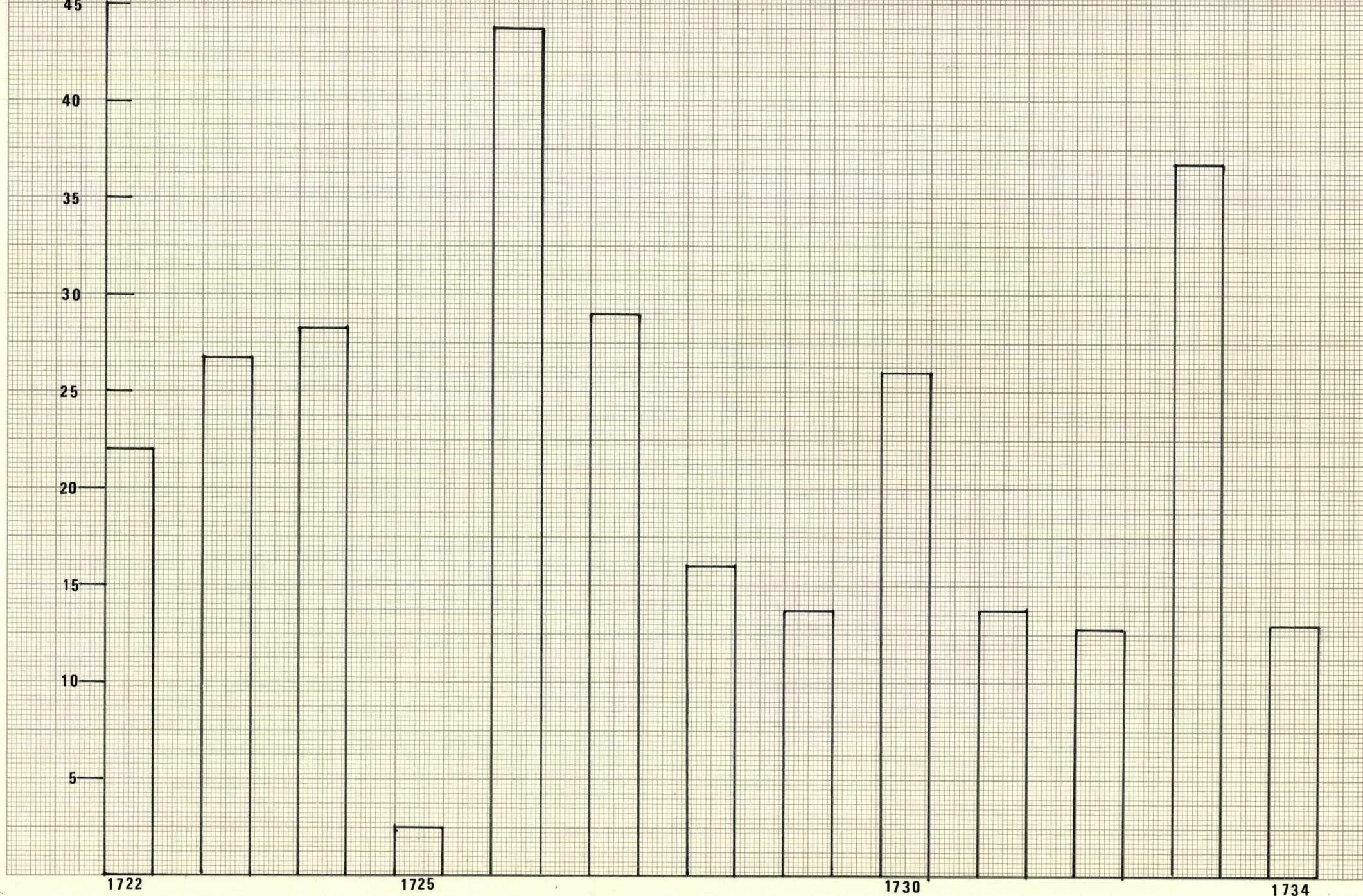


FIGURE 11 Hogshaw Farm Milstead: hop production (in cwt) from 3.75 acres

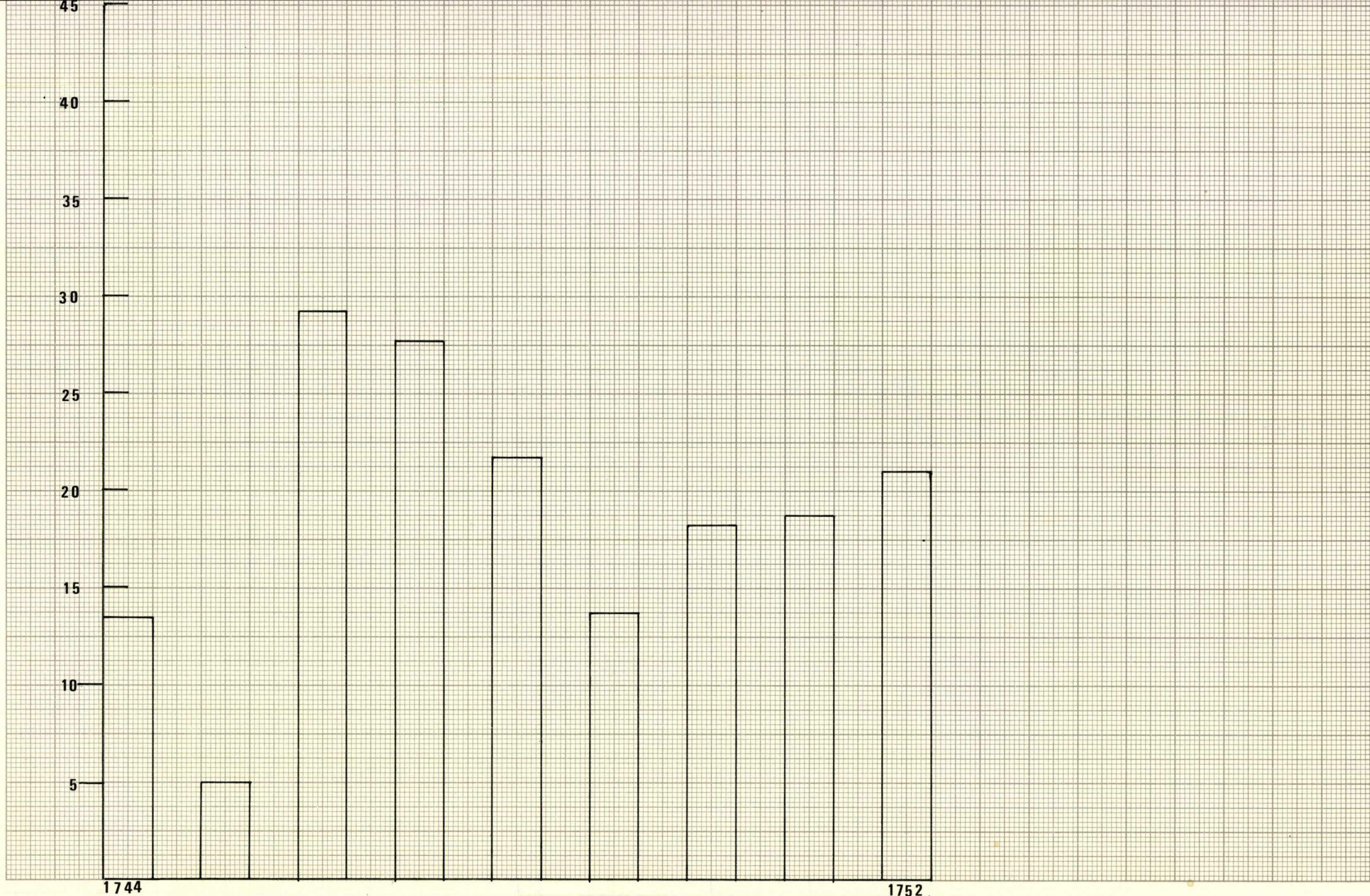


FIGURE 12 Hogshaw Farm Milstead: hop production (in cwt) from 3.25 acres

Tylden was expanding his hop acreage at a time when it was well-known that "everybody is now in the humor of planting hops".¹ However, by the following winter he had grubbed plants on the older exhausted grounds reducing the area under hops to 5 acres. The discarded hop land subsequently bore crops of beans and "woold" [weld].² The reduction in acreage continued and it becomes clear that some of the land planted with hops in the 1730's had proved unsuitable. In the autumn 1740 Tylden noted:

Work to be done this winter 1740.
 To grub up about 2300 of hop hills in y^e cherryground
 hopground that was, the ground not being kindly for 'em.
 [My italics]
 To plant about 1½ ac. of hops in Great Seedcops [field name].³

Clearly, hops had not thrived in the old cherry orchard, and now part of a 10-acre arable field was tried instead. An adjoining shaw was cleared to allow light and air to penetrate "y^e new hopground in Seedcops". There are several references to dung, mould, pond mud and lime spread over this new hop garden.⁴

By the winter 1743-4 the acreage under hops had reached an optimal level for this farm:

Hops

There is planted with hops 3ac. 1yd. 16p. wherein there
 is 3488 hills whereof 1444 four years old
 1050 three years old
 988 two years old
 3482⁵

¹Sussex Arch. Soc. MSS RF 15/25, letter of John Fuller of Rosehill to Sir John Lade, 30 June 1736. I owe this reference to the kindness of Dr Joan Thirsk.

²KAO U593 A3 ff. 166v, 169.

³Ibid., f. 196.

⁴Ibid., f. 196v.

⁵Ibid., f. 208v.

Why did Tylden make these adjustments in factor allocation? Was there a rationale? It is often assumed that farmers' responses are determined by price changes for their products and, indeed, there is much truth in this. A run of good prices in the years 1731-7 made hop growing much more attractive than it had been in the 1720's. It has already been suggested that perhaps the "character" of the market over a period of three years was decisive in effecting changes in production schedules. But it is money in the farmer's pocket which carries greatest weight in the final analysis. Tylden's annual income from hop sales had risen to almost £90 in 1731, and this was exceeded in the following two years. It was these sums of hard cash in his pocket - literally in a leather bag he kept for the purpose - that swayed him in the end. Prices tell only part of the story. A farm's profitability depends on the quantities that can be put on the market at ruling prices and the total net income which results from their sales. By 1734 the evidence was strong, and Tylden was motivated to increase his acreage beyond prudent limits for his particular situation: he ventured to grow hops where they failed to flourish. Higher costs of production and diminishing returns persuaded him to retract as soon as the mistake became apparent. The error of his ways was well and truly brought home when he counted his cash returns from hop sales in the years 1739-46. After 1746, despite the usual annual price fluctuations, income from the hop enterprise once again rose to a satisfactory level. A scrutiny of price-movements alone is insufficient to explain an individual farmer's response in a given situation; the influence of prices on a particular farming system is only partial: there are other important variables in the equation and total net income is the most crucial of these. Tylden was an intelligent, literate farmer who kept careful - almost obsessively meticulous - records of his payments and receipts. He was thoroughly market-oriented. Furthermore, without realizing it, he was very much aware of opportunity costs and

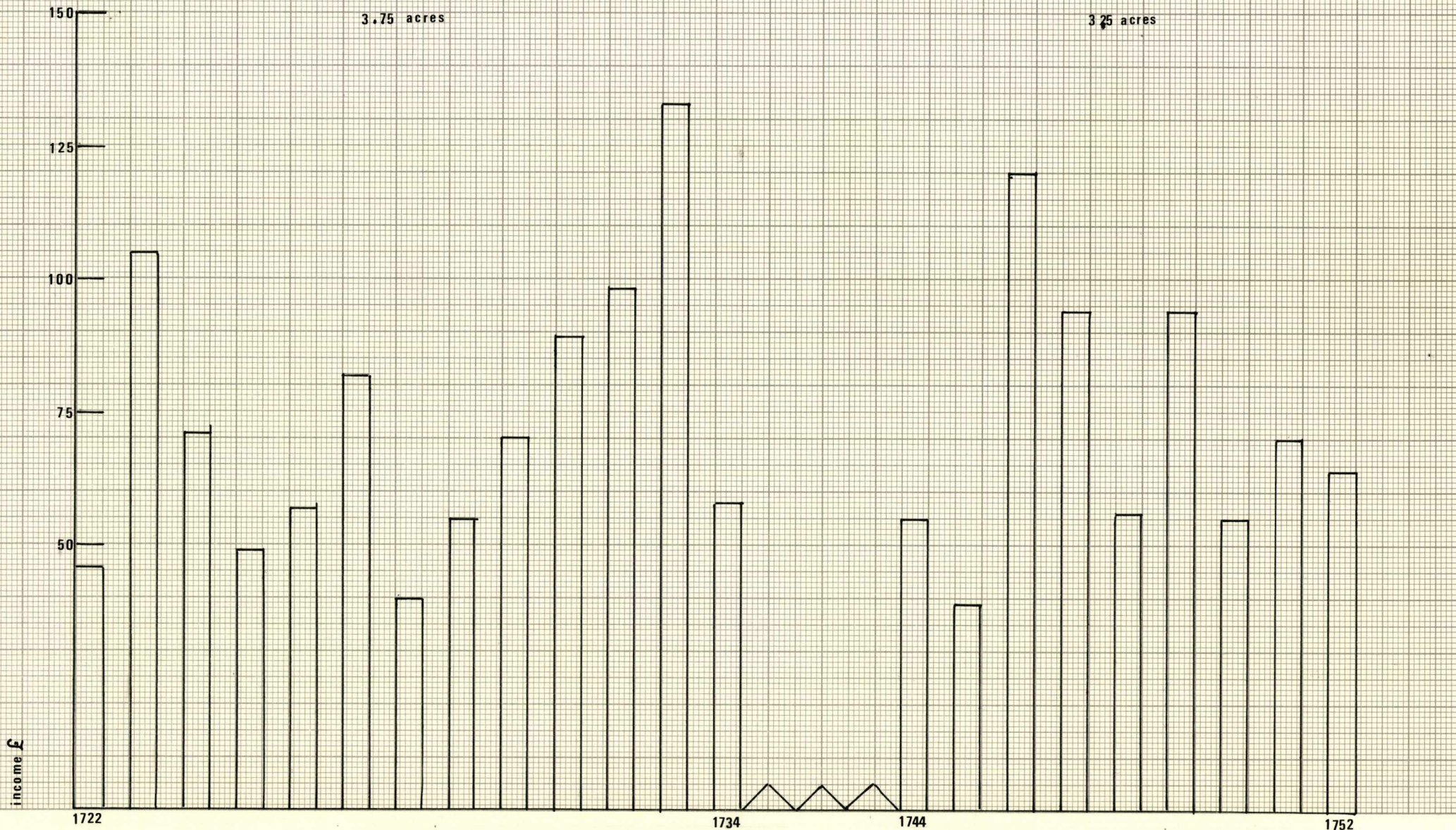


FIGURE 13 Hogshaw Farm Milstead: Income from Hop Sales

marginal analysis. The use of these concepts was implied every time he asked the question "Will it pay?" - rather like the man who talked prose all his life without knowing it.¹

The Hop Picking Season

The first detailed record of hop picking at Hogshaw Farm, in 1722, commences: "The Names of My Hoppers" and goes on to record the bins at which they picked, their earnings, the names of binmen and dryer together with the sums paid to them, the yield in bags of dried hops, and sales of hops. Finally, there is an assessment of pole replacements required for the following year. This record continued, with slight modifications, until 1752. But first the relevant pages have to be sought!²

The following extract is a full transcription for 1734, typical of this uninterrupted series covering 31 years:

1734. Began to Pick hops the 30 of August it being a Fryday - the 3 first days the wind was exceeding high insomuch that the Hops were very much batterd and turnd very Brown; two days were pretty showery and wet, the remainder pretty good weather. y Picking lasted 8 days & a piece.

		£	s.	d.
1 Bin	the two maids	00	5	0
	Hannah)	00	10	0
	Betsey)	00	5	0
	Polly	00	5	0
	Philly by y ^e Bush/ell/	00	2	6
	Becky by y ^e Bush/ell/	00	2	0
2 Bin	Goody Martin)	00	11	8
	Her Kinswoman)			
	Pat			
	Goody Croyden	00	8	2

¹M. Capstick, The Economics of Agriculture (1970), 20.

²The details for each season are located as follows in KAO U593 A3:
 1722: ff. 100v, 101v; 1723: 103v; 1724: 105, 105v, 106; 1725: 108v;
 1726: 110, 110v; 1727: 113v, 114; 1728: 116v, 117; 1729: 119v;
 1730: 122; 1731: 125; 1732: 142, 142v; 1733: 145, 145v; 1734:
 148v, 149; 1735: 152, 152v; 1736: 158v, 159; 1737: 161, 161v, 162;
 1738: 164v; 1739: 168, 168v; 1740: 195v, 196; 1741: 198v; 1742:
 201; 1743: 207, 207v; 1744: 210, 210v; 1745: 213v; 1746: 216v;
 1747: 226v, 227; 1748: 229v, 230; 1749: 231v, 232; 1750: 234v,
 235; 1751: 236v, 237; 1752: 239v, 240, 240v; 1753: 275v (incomplete).

		£	s.	d.
3 Bin	Goody Dowl) Goody Boycut)	00	7	1
	G ^{oody} Reeve &) Her Daughter)	00	9	11
4 Bin	Goody Dutnal) Her two Daughters)	00	8	3
	Goody Court) Her Daughter)	00	8	2
1 Basket	Goody Goslyn) Alice Goslyn)	00	8	9
2 Basket	G ^{oody} Fryd) Beck fryd)	00	8	9
3 Basket	Goody Buckman) & two boys)	00	6	5
4 Basket	G ^{oody} Baldock	00	4	1
28	<u>pickers</u> In all			
	John Middleton Measurer and Binman 8 days and $\frac{1}{2}$	00	12	9
	Ned Dutnal Binman 8 days and a piece	00	12	0
	Robert Costin 6 days Binman	00	9	0
	Goodman Dutnal Dryer 8 days $\frac{1}{2}$	00	17	0
	Goodman Dutnal Bagging 5 Bags of Hops at 6 ^d per Bag	00	2	6
	Will Croyden putting in one day	00	1	6
	G. Baldock putting in $\frac{1}{2}$ a day	00	0	9
	Gave the Hoppers towards their Binmens Neckcloth when they had done Hopping	00	2	0
	Gave y ^e Hoppers when they begun to pick	00	2	0
	My <u>Ty</u> ¹	00	1	6
		<hr/>		
		tot.	08	7 9

[lbs.]

1 Bag 287 Pretty Brown
2 Bag 232 Brown
3 Bag 330 } pretty good
4 Bag 288 }
5 Bag 302

1439 Net

¹"My wife": Tylden frequently used this odd symbol for his wife when she was entered in the accounts!

C q. li.
As they sell 13. 0. 5
li. s. d.

The duty comes to about 5. 10. 11

Mr Batchellor: Bag of best Hops weighs
10 li. beside y^e Bag.

Dutnals bag 7 li. brown.

John Middletons bag 5 li. brown.

September 20th 1734

left at y^e Oust 5 Coarse Bags and
three Bincloths

at Home in the clock loft
2 coarse and 8 fine Bags and
3 little ones

Wants in y^e Meadow Hopground 750 Poles.
In the Great Hopground 1500 Poles.

Towards the end of August, or in the early days of September "when the hops look brownish, feel hard, are easily rubbed in pieces, and smell fragrant, they discover a full ripeness" and are ready to pick.¹ At Hogshaw Farm local families - mostly the wives and children of farm workers - picked the crop. Richard Tylden's wife and daughters - the house servants too when they were free from domestic duties - took their turn at the bins. On the Camer estate at Meopham, domestic servants joined local pickers to supplement their earnings with a few days hop picking; itinerant Irish and Welsh workers joined in too.² Even though a farmer might find it possible to grow a large acreage of hops, there was often no certainty that he could find enough work people to gather the hops during the short picking season:

If a man were to plant 100 acres in our parish, where it would be impossible to get pickers, he must be content to

¹W. Ellis, The Modern Husbandman (8 Vols. 1750), V, 142.

²Roake, op. cit., 155.

lose his hops because of this want of pickers.¹

At Hogshaw Farm, two of the senior labourers acted as binmen: they cut the bines (2 or 3 feet above soil level), lifted the poles with an iron hop dog, and carried the hop-laden poles to the bins and baskets around which the pickers worked. This method changed little during the seventeenth and eighteenth centuries:

Then begin & cut the stalks close by the tops of the hils, & cut then asunder that grows one into another with a long sharp hook, & with a fork take them down ... But I have seen of late they carry pole & all to the place and pick them off the pole: strait fine poles is best for this way, but cut no more stalks than you can carry away in the space of one hour aforehand; for either sun or rain will offend when they are off the pole; you must all stand round the floor, and speedily strip them in baskets.¹

The binmen also measured the fresh hops, by bushels, after they were picked. The measurer issued tokens to the pickers for the hops that were tallied - these were later exchanged for cash. There is a record in the hop accounts for 1733, of "counters" purchased for 3s. 8d. Another entry of that year refers to "5 dozen counters". These are probably the earliest references to Kentish hop tokens.

In 1740 John Middleton was "Measurer and pole-puller", assisted by "Will Croyden, my man, y^e other pole-puller". Their payment for that year was, as always, carefully recorded:

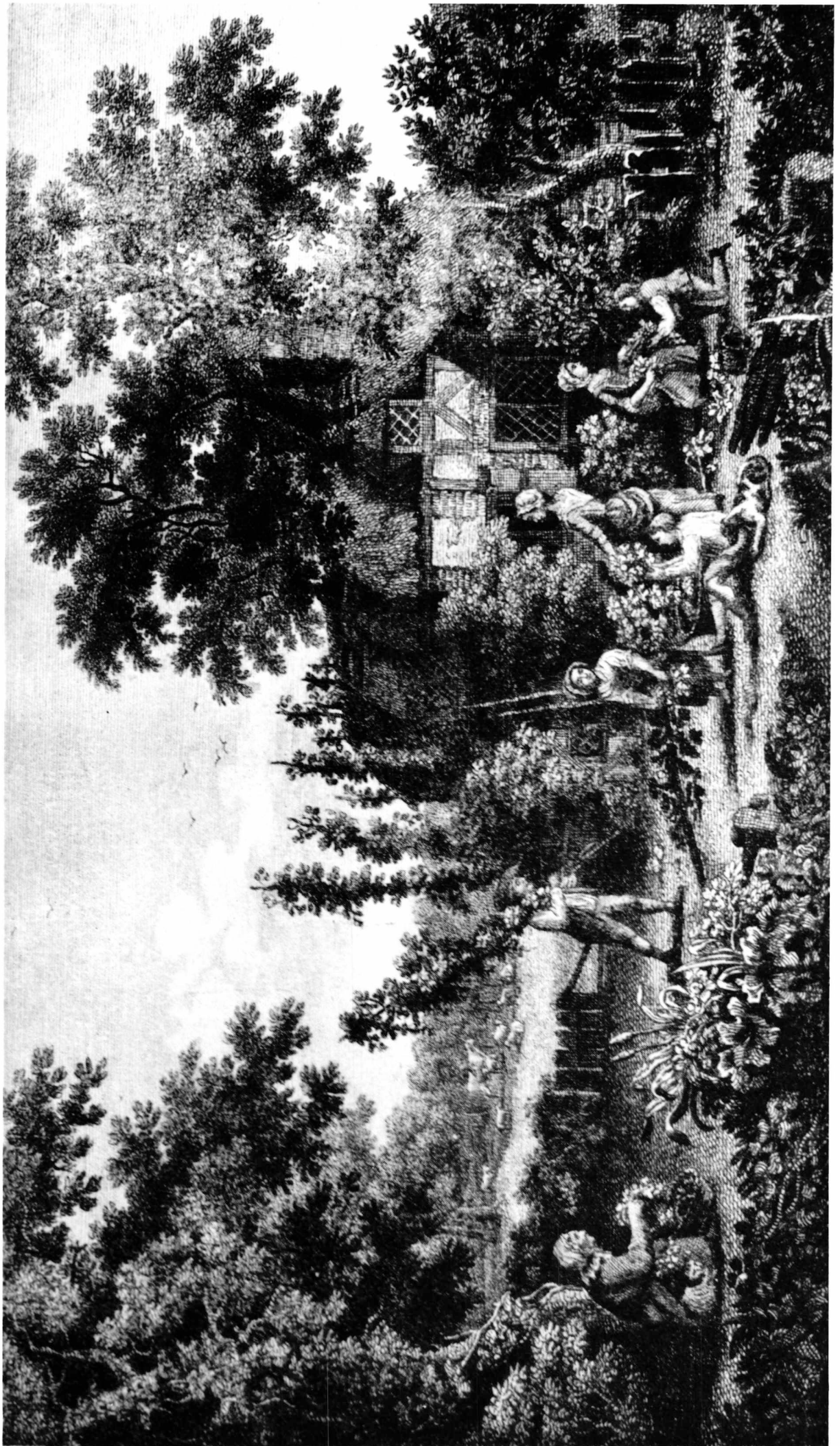
two binmen 6 days each at 2s. per day	
it being in wheat harvest	£1 4s. Od. ²

¹Blith, op. cit., 245-6; see also Kentish Gentleman, 754-5.

²The normal rate, a shilling a day in the early 1720's, was now 1s. 6d. Help with the grain harvest - presumably in the evenings - merited the high rate of two shillings. By the later 1740's the normal daily rate for binmen had risen to 1s. 8d.

Plate 10

The small hop grower in the eighteenth
century from G. Clinch, English Hops (1919).



In 1740 there was a short crop, and the pickers were paid at the rate of $1\frac{1}{2}$ d. a bushel. In a normal year they received 1d. a bushel until 1746, when a new higher rate of a shilling for ten bushels became the norm. Even then, if it was a difficult year, a higher rate prevailed. In 1750, for instance "I gave $1\frac{1}{4}$ d. per bushell for picking my hops this year, they being small". The pickers were seldom paid by the day at Milstead, except in a disastrous season like 1725 when hops were so thinly spaced on the bines that piece-rates would have been unfair; that year a rate of 8d. a day was substituted. This latter method seems to have been used occasionally on the Camer estate, where the going-rate was 8d. a day in 1721, although it was usual to make payment by piece-rates which varied between 1d. and $1\frac{1}{2}$ d. a bushel.¹ There is no doubt that the labour rates for picking were subject to fine seasonal adjustments which would have been understood and appreciated by everyone concerned. It is equally certain that, in the long term, the rate for picking hops rose during these years by some 20 per cent.

The great importance of careful and sufficient drying of hops has been known from the days of Scot. The fundamental principle of drying remains the same today - the moisture of the hop must be driven off by a rapid current of hot air within a specially constructed building or oast. The art of drying is so to spread and turn the hop flowers and control the heat of the fire as to dry them out evenly and steadily, without waste of time, for as the hops are picked they must all be dried without delay, but without hasty uneven drying, which spoils the crop. (Blith put the matter succinctly:

... the drying of them may be done upon any ordinary kiln, with any wood that is dry, but not too old, or else good sweet Rie straw will do wel, but charcoal best of all. They must be laid about 9 or 10 inches thick, and dried a

¹Roake, loc. cit.

good while on that side, & then turned upside down, & dried as much on the other side. About 12 hours will dry a kiln full.¹

The "greatest difficulty and art in the management of hops" lay in the drying process. Houghton, wisely, considered drying "the most hazardous piece of work that belongs to them [i.e. hops]"² // x

The same expert dryer undertook the work year after year: he was the highest paid worker in the hop business. At Sharsted Court in Doddington, during the early years of the century, Goodman Gurr was the local drying expert.³ At Hogshaw Farm Goodman Andrew Fryd dried the hops until 1727; he died the following year. Fryd had live in Milstead all his life and was employed by Tylden throughout the year as a day labourer. He had a thorough-going knowledge of hops and spent much of his working life on "hop ground work". Over the years he acquired a special knowledge of drying and was acclaimed locally as a specialist. Fryd lived in a small 4-room cottage in the village and when he died his personal wealth amounted to only £14 10s. There is no evidence that he farmed on his own account although the possession of "one heiffer" valued at £2 5s., and "two brin tubbs" in which to store salt pork, indicates a measure of self-sufficiency in this humble household.⁴

From 1728 Tom Dutnall⁵ was responsible each year for drying the hops until he was too senile to continue. Alas, in 1747:

¹Blith, op. cit., 247; see also Kentish Gentleman, 756.

²Anon., Instructions for Planting and Managing Hops and for Raising Hop-Poles (Dublin Society, 1733), 51; J. Houghton, A Collection for the Improvement of Husbandry and Trade (1691-1703), Essay 27 October 1699.

³KAO U145 A7.

⁴KAO PRC 11/79/100.

⁵To this day there are Dutnalls living in the village of Milstead.

Old Goodman Dutnal was my Dryer for about two days and then could not hold it any longer. So then I got John Sellen to Dry and he did his work very well. I gave 20s. per week and Sundays dinner and a Pottle bottle $\frac{1}{2}$ gallon¹ of mild beer every night.

Later that year old Tom Dutnall died. In 1748 John Sellen, obviously Dutnall's "understudy", was accepted as a fully "qualified" dryer. He was paid at the new current Hogshaw rate of 3s. 4d. a day. In the 1720's the dryer had been paid 2s. 6d. a day but, like other farm rates, this had progressively risen. Each year Goodman Sellen assumed his new seasonal role working twenty-four hours "round the clock", snatching brief periods of rest when work permitted. The dryer also bagged the hops: thus, in 1751 "John Sellen was Dryer and Bagger". He was paid an additional sum of 8d. a bag² for this work while "his boy" was paid 2d. for helping to fill the bags - "putting in". 1751 was a short picking season lasting only $7\frac{1}{2}$ days. John Sellen and his young son received between them £1 10s., more than a fifth of the money expended by Tylden that year for picking and processing hops.

When the last poles of the season had been pulled, and the few green hops remaining in the bins trundled to the oast, it was time for celebration. Hop picking in any case was more than an economic necessity: it was as much a social occasion in which the entire village took part in one way or another - when even the children "picked around the bins". The hop growing business in Kent is steeped in tradition, and perks or "hop ground treats" are part of that heritage. Frequently free drink - or even food - was supplied: the pottle of mild beer and a free Sunday dinner for the dryer, for instance. Each season, too, the binmen received a "neckcloth", paid for by Richard Tylden and, apparently, presented to them by the house maids. It can be surmised that this annual

¹KAO U593 A3 f. 226v.

²The rate in the 1730's was 6d. a bag.

"treat" was a good-luck symbol to "seal" the season:

1724		
	gave towards the neckcloth for y ^e maids	1s.
1725		
	gave towards the neckcloth	1s.
1729		
	towards y ^e binmens neckcloth	4d.
1731		
	gave y ^e maids to give to the binmen	1s.

Each year 2s. 6d. was given to the pickers, presumably to buy victuals and drinks. The thirsty work of hop-drying was also suitably rewarded:

1723		
	Gave the bins my wife & self	4s.
	Paid for drink at y ^e oust	1s.
1727		
	gave to y ^e bins my wife & I	2s. 6d.
1728		
	My wife and I gave to y ^e Bins when they begun to pick	2s. 6d.
1752		
	Paid for Gin for y ^e Hoppers	2s.
	Paid more for Gin	2s.

After picking came the Hop Supper with all its gaiety, music and dancing, the counterpart of "Hollering Pot" which customarily marked the end of the grain harvest. The current revival in country folk music has deep roots which reach much further back than to the nineteenth century village labourer:

1723		
	Gave the Musick	1s.
1728		
	Gave the fiddler at the hop supper	2s.
1731		
	Gave Hannah and Bet to <u>give to</u> the fiddler	2s.

William Ellis, describing a hop garden scene in Kent in 1750, said "a feast when the hop work is all done, makes their hearts glad". This, he declared, was an annual event often accompanied by the roasting of a fat ox and the provision of plenty of strong beer. Ellis found much to recommend the traditional hop ground hospitality of Kent.¹

Seasonal Variations and Markets

Growing hops was fraught with uncertainty and anxiety. "The hopp is very much used in England", reported John Houghton at the end of the seventeenth century. But he went on to warn that the plant is "very subject to damage by change of weather".² Gilbert White recorded in his Journal on 14 July 1787:

No other growth cultivated by man, has such frequent & general failures as hops.³

Wind, rain and hail during the final phase of ripening in August, or during the picking season in September, could bring devastation in the hop gardens and financial loss to the farmer. No-one understood this better than Tylden, whose astute comments on the seasons from 1728 are at times quite remarkable, and add a new dimension to our knowledge of local climatic conditions before 1750.⁴

Tylden's commentaries on the weather, its effect on the hop harvest, and the state of the market hardly require an apologia, but it is perhaps worth recalling some remarks made by T.S. Ashton a few years ago:

The prodigality or niggardliness of the landlord mattered less than the prodigality or niggardliness of nature;

¹Ellis, op. cit., IV, 129.

²Houghton, op. cit., Essay 8 September 1699.

³Gilbert White, Gilbert White's Journals, ed. W. Johnson (1931), 294.

⁴KAO U593 A3, passim.

what was happening at Westminster or in the City was of small account compared with what was happening in the heavens. These are things that, somehow or other, seem to have evaded the notice of social historians.¹

Much of what we know about past weather conditions comes from assertions which are deplorably general. Dr Jones qualified his recent historical survey of the English weather by saying that such a summary "could never be exhaustive" and that "further search for farm diaries and agriculturists' letters" would widen the scope of our present knowledge.² Rarely have comments been related to particular types of farming, other than in isolated years. The effects of inclement weather on hop production in north-east Kent, 1728-52, are illustrated in the commentaries which follow.³ They should be read in conjunction with the tabulated statistics relating to Hogshaw hops.

1728

August 28 begun hopping, the wind being very high. Made an end of hopping 12 September.

1729

August 28 begun hopping: a very fine day. Made an end of hopping in $8\frac{1}{2}$ days.

1730

My hoppers begun August 26. Fine weather for the first 9 days and then came wind and rain until the end, which spoilt the hops that were unpicked, and made them very brown and of little worth. Made an end of hopping in 15 days.

1731

Begun [to] pick hops August 25. Made an end of hopping this year 3 September at noon, so was $8\frac{1}{2}$ days a hopping. Sold 13 C. O q. 23 li. of hops, all my crop this year except the small bags, for 6 li. 10s. per C. to Mr Parker

¹Quoted E.L. Jones, Seasons and Prices (1964), 13.

²Ibid., 135.

³Punctuation has been modernised, ampersands extended.

at Milton. They came to 85 li. 16s. 8d. paid.¹/

1732

Begun hopping August 31. Made an end of hopping 6 September. Hopping lasted but 7 days. Sold my hops to Mr Parker of Milton for seven pounds seven shillings per hundred to be delivered at Crown Key 11 December next or before if called for. Received one shilling in earnest.

1733

Begun to pick hops this year 22 August. Made an end of hopping 14 September. It proved a very windy time with some wet. September 14 sent to London by Page 7 fine bags and 4 coarse bags. The fine bags was sold at ²4 li. 10s. The coarse bags was sold at 3 li. 3s. per C.

1734

Began to pick hops the 30 August being a Fryday. The 3 first days the wind was exceeding high insomuch that the hops were very much battered and turned very brown. Two days were pretty showery and wet, the remainder pretty good weather. The picking lasted 8 days and a piece.

1735

Begun to pick hops 3 September. Gave three halfpence per bushell for picking this yeare. About 10 days before I began to pick there was a prodigious high wind which exceedingly damaged the hops and made them very troublesom to pick, and spoilt about one third or more of the crop in generall, and well nigh half mine because they were not ripe before the wind came. We had a pretty good time to pick them in.

1736

Began to pick hops 26 August and made an end in 3 days. My hops this year were exceedingly blighted which was the case of most country grounds. The town grounds were better. Hops in the midst of picking sold for 4 li. to 6 li. 10s. or 7 li.

1737

Begun to pick hops this year 5 September and the hoping lasted about 7 days. Had about $3\frac{1}{2}$ acres of old ground and about 1 acre and 1 yard of young ground, in all 4 acres 3 yards. It was an exceeding kindly year for hops till they were in full bloom but then came a prodigious high wind which spoilt them to that degree that people thought there would be but very few. However, there turned out a middling crop at last in general, but mine together with the other hillish hops were very small. Sold in hoping time this year from 3 li. to five pound 10s.

¹Hops were sold to Mr Parker in 1731 and 1732 only. In every other year they were taken to London by John Page, a Milton hoyman.

²This is the first year Tylden marketed his hops in two distinct kinds of package: coarse bags and fine bags (pockets) according to quality.

and thereabout.

1738

Began to pick hops this year 24 August and the hoping lasted picking $12\frac{1}{2}$ days. Had about 4 acres 3 yards of old ground and 1 acre 1 yard the first year of planting. My hops look very well in both grounds till full bloom. Then the mould began to appear in the old part of the new growne and still encreased till hopping time so that about 1 acre was exceeding mouldy and scarce worth picking. Much the greatest part was left upon the poles and those that were picked were very bad. My upper old ground the hops were very good and had about 6 C. per acre. My 1 acre and 1 yard of the first year of planting were exceeding fine. Had about $3\frac{1}{2}$ C. of very good hops from it. Hops this year sell in hoping time from about 1 li. 15s. to about 54s. in coarse cloth and about from 50s. to 60s. in fine cloth ... Gave Goody Goslyn for the use of her kitchen for the hoppers to go in when it rained 1 shilling.

1739

Began hoping the 29 August in the afternoon. Had about 4 acres of hops to pick besides 3 yards 3 perches of hops planted this spring. My hops in my cherry ground hop-ground were pretty good this year and there was pretty near half a load¹ per acre, but my old hopground was but ordinary about $5\frac{1}{2}$ C. per acre. Hops sold in hoping time from 35s. per C. to 4 li. there being great differences in hops this year - a vast quantity of middling and ordinary hops and but few very fine. But about a fortnight after Michaelmas hops were got to be very dull and bad price, there being a great glut at market they having sold very badly at Sturbridge /Stourbridge/ and Weyhill fairs, from whence there was a great many returned to London. Not a large crop this year but the exceeding large plantation makes a great quantity in the whole so that I'm thought they will continue very cheap this year.

1740

September 8 began hoping and it lasted picking about 6 days but there was about one day's hindrance in the time by wet weather. My hops were mouldy and bad this year. Hops sold this year the latter end of September from 2 li. 10s. to 6 li. per C.

1741

September 2 began hoping. Had about 800 hills that was 3 years old and about 1 acre 2 yards that was 2 years old. They were exceedingly blasted and had but 16 bushel and picked them in about $\frac{3}{4}$ of a day.

1742

September 3 began hopping and it lasted about $4\frac{1}{2}$ days. A pretty good time to pick in and my hops pretty good in quality but few in quantity, being young planted grounds and weak.

¹10 cwt.

1743

August 29 began hoping and it lasted 8 days. It was fine weather to pick them in. My hops were very fine this year, and a pretty good crop. Made an end of hopping 6 September.

1744

September 3 I begun to pick hops. My hoping lasted 6 days. It was pretty good weather to pick them in but we had a great deal of windy weather before we began to pick. That with what was blown away and spoilt and the rest checked in their growth there was as near as I could conjecture one ninth less than there would have been, and all the crop pretty brown. Hops sold at London sometime before and about Michaelmas from 3 li. to 5 li. in coarse cloth, in fine cloth from about 5 li. 5s. to 5 li. 15s. Some superfine 6 li. at Wayhil fair sold from 6 li. to upward of 9 li. The reason of hops selling so well was the badness of the crop in most parts of England, except the county of Kent and there it proved as good a crop in general as has been before in many years.

1745

September 13 I begun to pick my hops. My hoping lasted but 4 days. It was very good weather to pick in. My hops were very slight run in bind¹ this year and abundance of dead hills in the ground, and a little part of the ground blighted so that in the whole there was but a poor crop and there was but a very poor crop of hops in general. Hops sell now from 6 li. to 8 li. 10s. or more per C.

1746

August 29 I begun to pick hops it being a Friday and beginning about 1 o'clock and made an end the Friday noon fortnight following. It was pretty good weather in the time. I had a tollerable good crop. There was the greatest crop in general in all places in the kingdom that has been for many years, but the old stock being entirely gon. Hops this year sell from 2 li. 10s. to 3 li. 14s. per C. In fine cloth 3 li. 5s. to 4 li. Some very fine 4 li. 4s. to 4 li. 7s.

1747

August 28 I began to pick hops it being on a Friday morning. It was exceeding hot weather. The greatest part of the hoping time the season was so excessive hot that it made the hops brown before they were ripe. Hops this year were mouldy, little or much almost everywhere and abundance were very bad. Middling crops in the greatest part of Kent, but they were very poor in Worcestershire and the cold clays in Nottinghamshire. Hops sell now from 2 li. to 4 li. 10s. in coarse cloth and from 3 li. 5s. to 6 li. in fine cloth. Hops this year in general are bad in quality so that the few fine hops that there are fetch a good price. There are a pretty many old hops in hand or else they would have sold better.

¹stunted

1748

August 30 began to pick hops ... Tom Ellet helped pull poles part of the time, some of the hops being pretty slight ... I gave one shilling for picking 10 bushell.

1749

Begun to pick hops August 31. It was good weather almost all the hoping time. Hops this year were blighted and bad in most parts of the kingdom, some few places excepted. And where they mist the blast they were pretty good hops. At hopping time sold for upwards of 8 li. per C.

1750

Begun to pick hops this year August 30. It was fine weather all the hopping time. Hops in general were a middling crop but pretty mouldy in abundance of grounds. Sold this year in hoping time from 3 li. to 4 li. 15s.

1751

September 4 I began to pick hops. Gave a shilling for 11 bushels for the bright hops and 1d. per pound for the brown. Had but indifferent weather this picking time. My hops were good in quality and a middling crop considering there were so many dead and weak hills, I believe a thousand at least. They sold at the beginning of hoping for 6 li. the best price in fine cloth.

1752

August 29 I began to pick hops ... The hoping this year proved but indifferent. A day or two before most people had begun, there was a prodigious high wind and about 2 or 3 days after, another as high as the first but lasted not quite so long. The crop, which was very good before the wind, was very much spoild besides what was quite blown away and lost. It was moderately computed to be a full third part. After the wind there was a pretty deal of rain which made hoping troublesom. There was a great difference in price. The best in fine cloth sold at about 3 li. 16s., the best in coarse cloth sold at 3 li. 5s. Brown very dull market and cheap. 6 of my bags are good, the other 2 but ordinary.

Expenses, Income and Profitability

The present writer analysed and discussed the accounts of a Wealden hop farm and, at that time, expressed the hope that a detailed comparison might later be possible.¹ The Milstead accounts are presented in similar, though somewhat improved format: Table 33 One Acre of Milstead Hops 1722-52: Estimated Annual Expenditure and Income.

¹D. Baker, 'Tatlingbury: an Eighteenth Century Wealden Hop Farm', Cantium, 3, no. 1 (1971), 3-14.

TABLE 33

TYLDEN 593

ONE ACRE OF MILSTEAD HOPS 1722-52: ESTIMATED ANNUAL EXPENDITURE AND INCOME

<u>Expenditure</u>	£	s.	d.	<u>Income</u> ¹	£	s.	d.
Hop ground work				(being the average of 22 years: 1722-34, 1744-52)			
Winter digging	1	0	0		20	14	0
Dressing	0	5	0				
Poleing	0	10	0				
Rounding	0	3	0				
Stripping and tying	0	8	0				
Hoeing twice at 5s.	0	10	0				
Hilling	0	5	0				
Stripping, stacking and burning the bines	<u>0</u>	<u>6</u>	<u>0</u>				
Manure	1	0	6				
Poles	2	9	3				
Labour costs: picking and drying	2	12	2				
Fuel: charcoal for drying	0	18	0				
Hop duty	2	7	10				
Tithe	0	10	0				
Rent	1	0	0				
<u>Surplus of Income over Expenditure</u>	<u>6</u>	<u>9</u>	<u>3</u>	<i>Profit</i>			
	<u>20</u>	<u>14</u>	<u>0</u>		<u>20</u>	<u>14</u>	<u>0</u>

¹net of freightage and selling commission

The components of "hop ground work" are each costed on a recognised "rate for the job" current in the period under review. It is impossible, in Tylden's accounts, to isolate all payments relating specifically to hops. Examples illustrate this difficulty:¹

My Reckoning with Goodman Cheapman for Worke:

Jan 28 1722 owe him for 6 days worke in sharpening
hoppoles mending gates & making a stile & things
for husbandry use 10s. Od.

April y^e 1, 2, 3, 4. for 4 days work 6s. 8d.

My Reckoning with Ned Hickmot April 23 1723.

Paid him for 9½ days work in helping poleing
my hops and howing Frydds plot 14s. 3d.

Nevertheless, a study of farm accounts for Milstead, Faversham, and the Godinton estate in Great Chart enables us to establish the common rates of payment for various tasks in the hopgrounds.² There is precise agreement in the records in all but two instances: winter digging in north-east Kent was paid at the rate of 20s. an acre, at Godinton 18s.; 10s. was paid for poleing an acre of hops in north-east Kent, at Godinton 12s. For the present purpose the rates for north-east Kent have been used but, in any case, these small differences would cancel each other out in the composite entry.

The cost of dung for 10¾ acres of hops in 1748-9 was stated to be £10 14s. 6d. and "spreading dung" 7s. 9d.³ This represents a rate of £1 0s. 6d. an acre. Estimates varying from 16s. 8d. to £2 10s. have been found for this item.⁴

Each autumn Tylden estimated the number of poles his grounds would

¹KAO U593 A3 ff. 123, 171.

²Ibid., A3 passim; PRO C103/185; Lodge, op. cit., 491-2.

³Ibid., 491.

⁴Baker, op. cit., 8, 10.

TABLE 34

MILSTEAD HOPS 1722-52: LABOUR COSTS FOR PICKING AND DRYING

	3.75 acres				(6 acres)	3.25 acres					Average			
	Year	£	s.	d.		Year	£	s.	d.		Year	£	s.	d.
	1722	8	3	0		1735	7	8	9		1744	5	17	8½
	1723	10	18	7		1736	3	8	8		1745	3	4	8
	1724	10	11	2		1737	8	5	5		1746	13	13	10¾
	1725	5	17	2		1738	16	1	9¾		1747	11	18	2¾
	1726	4	2	5¼		1739	13	2	8		1748	11	12	4½
	1727	12	5	5		1740	5	5	3		1749	6	18	4
	1728	9	1	11		1741		----			1750	7	8	11¾
	1729	5	18	2		1742	2	18	6½		1751	7	19	8¾
	1730	8	8	2		1743	7	6	9½		1752	9	12	6¾
	1731	6	5	0										
	1732	5	19	1¾										
	1733	7	13	0										
	1734	8	7	9										
	Average per acre					Average per acre					Average per acre			
	1722-34	2	10	9							1744-52	2	13	7

require the following spring. He used, on average, 2201 new poles each year for 3.75 acres during the period 1722-34. This represents a pole replacement rate of 587 per acre costed at 8s. 6d. a hundred (£2 9s. 3d.). Since, at Milstead, each acre carried 3,200 poles, the rate of replacement in these years was 18.3 per cent. This figure corroborates the contemporary view that a pole would last about six years.

The labour costs for picking and drying are derived entirely from the Milstead accounts. The sums were stated clearly each year and are shown in Table 34.

In 1749 three loads of charcoal were used at Godinton to dry the hops from $10\frac{3}{4}$ acres. The cost of this charcoal was £9, a fuel-rate of 16s. 9d. an acre. The cost of drying hops at Tatlingbury Farm in 1755 worked out at 18s. an acre, the figure used in Table 33.¹ Tylden's accounts, rather surprisingly, do not record quantities and prices of charcoal used for drying hops. There is only an occasional reference to fuel for the oast: for instance, in 1727, when it was noted "there is coal enough for another year".

An excise duty of 1d. on each pound of hops had been imposed on all home-grown hops in 1711, at a time when production was beginning to expand.² The duty on Hogshaw hops was recorded carefully each year; it would have been paid to the local collector in Milton. ✓ W⁴⁰.

Growers generally agreed with the local clergy to settle the tithe by composition, at the rate of ten shillings an acre, although the question of tithe on hops had given rise to endless disputes, many of the early ones reaching the Court of Exchequer. The rent-charge for one acre of hop land was frequently taken as £1 - at least in the country

¹Lodge, op. cit., 492; Baker, loc. cit.

²9 Anne c.12.

districts - and this appears reasonable in the present calculations.¹

The income shown in the calculations is derived from hops sold - mainly in the Hop Market at Southwark - and carefully noted by Tylden each year.² The sums recorded are for cash received after freightage and selling commission had been deducted. The average income shown in Table 33 is therefore a similar net figure, based on true "farm-gate" prices.

There is no doubt that total income derived from the hop business at Hogshaw Farm has been slightly understated. Occasionally Tylden sold a few hop sets to growers who wished to plant or replenish grounds:

30 May 1735

My cousin Aldersey for
his hopsets

£1 5 0

22 October 1751

Henry Hinsey ... 1000
nursery hopsets

10s. 0d.

Tylden also dried in his oast the hops of one or two small local growers; he charged 7s. a hundredweight for this service:

3 October 1728

John Gatland for drying his hops

8 li. 0s. 6d.

13 September 1743

John Dutnal for drying $6\frac{1}{2}$ C. of
Hops for him at 7s. per C.

£2 5s. 6d.

3 August 1750

Goodwife Costen for drying her
hops viz. $1\frac{1}{2}$ C.

10s. 6d.

These items appear spasmodically in the records and there is no reliable way of estimating the average additional income from these sources each

¹J. Banister, Synopsis of Husbandry (1799), 232, 240; Instructions for Planting ... Hops, op. cit., 64.

²KA0 U593 A2 passim; Figure 13.

year. But it was quite a small amount.¹

Hop growing at Hogshaw Farm was twice as profitable as growing the crop at Tatlingbury Farm near Tonbridge before 1760. Or so it would appear from the accounts of expenditure and income produced for both farms and which cover a comparable period. The calculations for Tatlingbury are based on accounts covering fourteen years: 1744-57.² For Hogshaw Farm two periods are used: 1722-34 and 1744-52, in which the known acreages were 3.75 and 3.25 respectively. Hogshaw accounts cover a period of twenty-two years altogether.

The average net profit per acre at Tatlingbury was calculated to be £3 10s. 2d., for the Milstead Farm £6 9s. 3d.³ Assuming constant costs, the net profit at Milstead in the period 1744-52 was even greater - £7 12s. 1d. - since income per acre from hops in these years was higher than in the earlier period.

Income per acre (less freightage and selling commission) is strikingly similar for both farms: £21 4s. for Tatlingbury; £20 14s. returned to Milstead. In the years 1744-52 Milstead income rose to £21 16s. 10d. an acre on average. In each case the calculation is based on known recorded sales.

The greater profitability of Milstead hops was undoubtedly due to lower costs of production. The average cost of producing an acre of hops at Tatlingbury was £18 14s., at Milstead £14 14s. 9d. In 1712 the

¹KAO U593 A2 passim.

²Baker, op. cit., 8.

³"Surplus of Income over Expenditure" in Table 33 (Milstead) was derived in the same way as "net profit" in the Tatlingbury calculations and - for practical purposes - can also be regarded as net profit. The change in nomenclature is solely in order to conform more closely to modern accounting practice.

annual "charge of one acre of hop ground" in Kent was put at £15.¹ It seems therefore that my earlier guarded opinion that "costs of growing hops at Tatlingbury do not appear to have been seriously out of step with those experienced elsewhere" needs to be looked at afresh in the light of this new evidence.² Tatlingbury costs may indeed not appear excessive when we have only a printed contemporary estimate with which to make a comparison and are unable to test its accuracy. But now we have a Kent farm known to have produced hops at somewhat less than £15 an acre. Also it is clear that the more expensive inputs on the Wealden farm in order to produce the same cash returns as at Milstead made the decisive difference in profitability. Hop growing in the Weald, more costly, was half as profitable as hop growing in north-east Kent. Altogether it begins to look as though costs of production operated along a much finer scale than hitherto imagined: a few pounds an acre could make all the difference. There seems no doubt that the very different situations of the two farms account for the difference in costs. There were drainage problems on the Tonbridge farm. The drift deposits on which hops were grown tended to be shallow: the impervious Weald clay or Grinstead Clay were never far below the surface. Now hops show a marked preference for deep, well-drained soils. Despite the rather windy aspect at Milstead the soil situation was undoubtedly more favourable to hop cultivation. High traction costs and a curtailed working season - familiar problems on the heavy clays - were unknown to the farmers on the well-drained loams. Examination of individual farm accounts substantiates a familiar generalisation.

Furthermore, analysis of hop production on individual farms over

¹Kentish Gentleman, 758. For my discussion of costs at Tatlingbury I quoted the figure of £15 printed in 1733 in Instructions for Planting ... Hops, op. cit., 64. I have since discovered the original statement in the Kent tract.

²Baker, op. cit., 12.

many years shows that hop growing was far less lucrative than publicists asserted. Breathtaking claims were put forward on behalf of hop growing, by contemporary propagandists. "One acre of ground, cultivated for hops", stated Bradley, "shall bring to the owner clear profit about £30 yearly ... I have known hop grounds that have cleared about £50 yearly per acre".¹ He produced no statistics to support this assertion, merely a vague reference to "curious observations", and we can regard his statement as typical of the worthless exaggeration beloved by every eighteenth-century journalist. Another writer, addressing Irish farmers, claimed: "We have instances of some among us, who have got £130 for the hops of one acre in a year, though but indifferently managed".² This was propaganda par excellence! Violently fluctuating hop prices and the impossibility of determining what represented a "normal" price, created a situation in which it was possible to make these exaggerated claims which, if they bore any resemblance to reality, belonged to exceptional bonanza years. Realized average profits per acre - £3 or more in the Weald, £6 or £7 in north-east Kent - were in a very different order.

Nevertheless hops were profitable, otherwise farmers would not have taken the trouble to grow them. As we have seen, Tylden's average profit from hop growing was £6 9s. 3d. an acre over a period of 22 years, rising to as much as £7 12s. 1d. during the later 1740's. This return was far greater it seems than anything he could reasonably expect from his arable crops.

Statistics published in 1739 purported to show "The Annual Expence" and "The Whole Produce" of a 180-acre arable farm.³ From the figures given it is a simple matter to calculate the profitability of common

¹R. Bradley, The Riches of a Hop Garden Explain'd (1731), 24.

²Instructions for Planting ... Hops, op. cit., 78.

³Samuel Trowell, A New Treatise of Husbandry (1739), 156-7.

arable crops:

<u>Crop</u>	<u>Net Profit per Acre</u>		
	£	s.	d.
Wheat	6	0	9
Peas	3	15	0
Beans	3	6	0
Barley	2	7	0
Oats	1	18	0

If these modest figures are anywhere near the truth then clearly hop growing, in the long run, could be more profitable than growing arable crops, including wheat.

Of course the demands of the hop plant were excessive and complex. But given an optimal site and "constant labour and attendance throughout the whole year" Tylden and his fellow hop farmers knew well that "an acre of hop ground well-managed, yields more profit than many acres of any other kind of husbandry or plantation in this county, fruit excepted".¹

¹Kentish Gentleman, 758.

CHAPTER 11

THE PRODUCTION OF HOPS IN AN URBAN ENVIRONMENT

A A Faversham Hop Ground: Management or Mis-management?

Farmers were not the only hop producers in Kent. Outside the farming fraternity were numerous townsmen and tradesmen who swelled the ranks of hop growers. Some of them - those who, besides operating a grocery or limeburner's business, already farmed on a small scale - probably had a modicum of knowledge. Others knew precious little about hops, and employed local "experts" to look after their enterprises. Dual-occupations involving hop growing have already been observed in several urban and suburban situations, notably in Newington, Milton, Sittingbourne and Faversham.

In 1731 the following advertisement appeared in the local press:

To be sold.

Three fourth parts of a piece of land called Gallows Field, lying near Faversham Town, containing in the whole 12 acres, part whereof is planted with hops, and the rest arable, now in the possession of Henry Best.

Inquire Mr Walker Jones, Attorney at Law in Faversham or of John Pising of the same, fisherman.¹

Henry Best was landlord of The Swan inn, Faversham.² The land was, apparently, purchased by another Faversham resident, Mrs Mary Everard, who continued to grow hops in the Gallows' Hole ground until 1757. She employed Robert Mein to manage the ground in the years 1752-6. Losses were incurred on the 7-acre hop enterprise in three successive seasons, 1753-5. After Mrs Everard's death in December 1757, the property passed to Thomazin and James Lawson, her daughter and son-in-law, who prosecuted Mein for inefficiency and, possibly, corruption. The suit was pursued

¹Kentish Post 7 April 1731.

²KAO Fa. JQr2/30.

to the Court of Chancery where evidence was heard in 1760.¹

Robert Mein, a well-known Faversham shopkeeper, was admitted to the Mercers' Company of the town, a freedom which he retained until at least 1765.² His business was probably in books and stationery since, in 1751, he was the vendor of a newly-published work: The Practical Mathematician & Mechanick's Sure Guide.³ But Mein was also said to have "as much skill and judgement in cultivating and manuring a hopground as any person in the neighbourhood". When he came into Mrs Everard's employment, Mein had had some eight years' experience in the management of hop gardens. In 1760 he was said to have managed Mrs Everard's ground in "a skilful and proper manner". So considered William Gilbert, a well-to-do Faversham tanner who had himself participated in a hop growing venture in partnership with Mein. He thought Mrs Everard's 7 acres of hop ground had benefited from "manuring, cultivating and good management". Thomas Swiffenton of Ospringe, another local "expert" on hops, gave his opinion of Mein's abilities. Although Swiffenton was described as a "husbandman", his credentials show that he was "long skilled in the nature of planting and gathering, drying and selling of hops, and in the business of managing hopgrounds". Since he was then 78 years of age no-one doubted his long experience as a hop ground agent. He thought Mein had "dressed and managed the said hopground according to the common and usual course of cultivating and managing hopgrounds in and about the neighbourhood of Faversham". Mein had employed local men "to dig chalk in the road adjoining to the hopground of the said Mary Everard ... to be laid on the said hopground"; they dug a chalk-hole "near and under the hopground".

¹The following discussion is based on the evidence in Chancery Depositions: PRO C12 2310/16; and Chancery Masters' Exhibits: PRO C103/185.

²KAO Fa. GF/1.

³Kentish Post 13 February 1751.

It was rather unfortunate that this excavation in Hangman's Lane undermined the hop garden so that part of it collapsed into the road! However, Swiffenton thought the damage was slight and could not possibly have exceeded half a crown. And in any case, whatever else it may have done, the chalk certainly "improved" the ground! The end, however, does not seem to have justified the means. An examination of Mein's accounts shows that in 1753 the hop venture made a loss of £13 15s. 7 $\frac{1}{4}$ d., and in 1754 a further loss of £40 ls. The following year was somewhat better - the loss was only £3 6s. 3 $\frac{1}{2}$ d. Furthermore, Mein was reckoned to possess the largest oast house in Faversham; there was suspicion that some of Mrs Everard's hops which entered this oast were never seen again in her bags. Naturally, like many another good Englishman, Mein blamed the weather for his troubles; he said these years were "unkindly for hops".

In 1753 Mein arranged for 11 bags of Mrs Everard's hops to be shipped to Ireland. Catherine Mein said her father had "expectation of getting a better price for them there than could be gotten for the same at home". But he later received a report that "none of the said hops were sold in Ireland because there was no market for them". So they were brought back to London. However, Stephen Jones, the Faversham hoyman who was unfortunate enough to be handling this business, believed that the hops were of such poor quality that they could not be sold in England and the Irish market looked a better proposition. Eventually, on their return from Ireland, the hops were sold for 7s. a hundredweight to Mr William Baldwin, a Southwark factor, who no doubt off-loaded them on to some unsuspecting brewer in the City.

Mein varied his cropping plan in 1755, by intercropping the rows of hops with a sowing of French beans, in expectation of greater profit. The experiment was disastrous. The beans were hastily gathered in wet weather just before the hop pickers moved into the garden, for fear the crop would be trampled underfoot. It was said that the beans, threshed

but unripe, "could not be made markettable and fit for sale". Notwithstanding, however, Mein "used his endeavours to make the said beans markettable by having the same picked and culled over". The two and a half quarters which survived this treatment were carted to the quayside at Faversham, loaded into Stephen Jones' hoy, and shipped to London. No sale was found for them "on account of their being so bad". Jones brought the beans back to Faversham and advised Mein to sort them over and try again. Thereupon, they were carted from quayside to farm, "picked and culled", returned to the hoy and sent to London a second time. Once again the beans remained unsold and were shipped back to Faversham. Jones then suggested he keep them aboard the hoy and try his luck a little later on. In a last desperate bid, the beans made their third voyage to London but Jones had to report failure once again for he could not sell them "at any rate". The unfortunate cargo was off-loaded from the hoy and carted to Mein's brewhouse where it stayed for three months. At the end of this period it was said the beans "by reason of the bad harvest ... stuck together and stunk". Mein finally agreed that they were "good for nothing" and he committed them "to the dunghill". It seems hardly surprising that Mrs Everard's relatives saw fit to lay an action against Mein which they pursued into Chancery.

There certainly appears to be an a priori judgement against Mein for gross mismanagement, but a closer examination of the facts shows the case to be not so clear cut and straightforward as it appears at first sight.

It was too easy to blame those in charge of growing hops when things went badly. Sir More Molineux of Losely Park in Surrey consigned 5,000 hop sets to the Duke of Chandos in 1736. These were purchased at Farnham and despatched at the Duke's request to his house in Cavendish Square, London. A letter from Chandos to Molineux shows that the Duke was far from satisfied, and not a little irate:

I return you my very humble thanks for the trouble you have been so good to give yourself about the hop vines, but am sorry to acquaint you that the person of whom you had them has very grosly imposed upon you, for of the 5 hampers you send, 4 were good for nothing, not one of them being rooted but only cuttings of last year, just put into the ground & taken out again before the roots were struck.¹

It was not the best time of year to buy rooted hop sets for planting out; the more propitious period was the beginning of the growing season in March.² The Duke's verdict, undoubtedly based on his bailiff's opinion, was near the truth. Molineux probably persuaded him to go ahead and plant, with the assurance that all would be well in the end. As things turned out the bailiff managed, with some difficulty, to root the sets successfully. Nevertheless he was blamed for giving a misleading opinion in the first instance as a further letter from Chandos illustrates:

I ought in justice to the person you bought the hop vines of to acquaint you that I have good reason to believe the account I sent you of their badness proceeded from the ignorance of my own bailiff & not from their having deserved the character he gave me of them; for on receipt of your last favour I showed him the contents of it & he still insisting that most of them were dead and that he was sure they would come to nothing, I made him take several of those he thought so, out of the mold (in which they were laid, till ye hop ground is prepared to receive them) & bring them up to me, which he did & then I showed him & convinced him that so far from being dead they had struck every one of them fresh roots, so that I am in great hope & indeed don't much question but that they will do very well.

Pray give me leave to ask you how many hop roots you generally put into one lump for my bailiff tells me in Herefordshire they generally put in 4 or 5.³

In Kent it was regarded as sound practice to plant five sets to a "hill"; the bailiff was correct although Chandos was unwilling to accept his word.

¹Guildford Museum and Muniment Room, L.M. Correspondence, Chandos to Sir More Molineux, 26 November 1736.

²Kentish Gentleman, 750.

³Guildford Museum and Muniment Room, op. cit., 5 January 1736/7.

Whether the sets did "very well" we shall never know but it is certain that rooted sets purchased in the spring would have been the best purchase. A month or so later the optimistic Duke was still blaming his "ignorant" bailiff:

... I hope & make no question but they will do very well for I am more confirmed in my belief, that the ill-opinion we at first had of them here, was owing to the ignorance of my bailiff.¹

Presumably if the hop sets failed the bailiff shouldered the blame!

Mein was the obvious person to blame when hop garden affairs went awry at Gallows' Hole in Faversham. Yet experienced witnesses attested to his knowledge and skill in hop cultivation. His accounts show that he was diligent in keeping precise records of expenditure and income. Why, then, were the years 1753-5 so disastrous? There is no doubt that these years were most unfavourable for hops. Before condemning Mein out of hand it is worth noting that a 10-acre hop ground on the Godinton estate in Great Chart fared no better in the early 1750's, showing losses of £25 12s. 3d., £89 10s. 10d., and 13s. 7d. in 1752, 1753 and 1754 respectively; in the five-year period 1750-4 the net profit of this large ground was only £17 12s. 1d.²

William Gilbert asserted that 1753 "was very unfavourable in and about Faversham for the growing and produce of hops". In Kent yields were low, although elsewhere the crop was probably fairly normal resulting in mediocre prices, only 54 shillings in the Milstead Series for instance.

In 1754 there was "a pretty good crop of hops" in the area and, although Mrs Everard's hops were apparently "not so good that year as

¹Ibid., 19 February 1736/7.

²E.C. Lodge, The Account Book of a Kentish Estate, 1616-1704, Records of the Social and Economic History of England and Wales (1927), VI, 493.

some other hops in and about the neighbourhood of Faversham", the general problem was one of very low prices. Mrs Everard's crop of 73 cwt. was sold at 40s. per cwt. The yield at Gallows' Hole was, in fact, good - 10.4 cwt. per acre;¹ the price was as high as could be expected in the circumstances. At Milstead the second lowest price in the whole series, 36s., was recorded for 1754.

In 1755 there was "a middling crop of hops" in the Faversham district, but prices were once again low due to abundant crops elsewhere. Gilbert and Mein sold hops from their Preston ground for only 42s. to 50s. a hundredweight which corresponds closely to the recorded Milstead price of 44s. Two-thirds of Mrs Everard's hops were sold for 40s. per cwt., the remainder 28s. In the years 1753-5 "the planters or occupiers of hop-grounds in the neighbourhood were reputed to gain very little if anything upon an average".

However, despite a run of seasonal problems and low prices in the early 1750's, healthy sums were returned to Faversham for Mrs Everard's hops:

<u>Year</u>	<u>Hops: total income from 7 acres</u>		
	£	s.	d.
1753	131	6	6
1754	146	1	0
1755	196	14	6½

The average return per acre in these years works out at £22 11s. 8d., comparable with the returns calculated for another farm in north-east Kent, and for a Wealden farm.²

When we consider expenditure, however, we find a rather different picture:

¹An average yield was, in general, about 6 cwt. per acre.

²The comparable figures are: Hogshaw Farm, Milstead £21 16s. 10d. (1744-52); Tatlingbury Farm, Capel near Tonbridge £22 5s. (1744-57).

<u>Year</u>	<u>Hops: total expenditure on 7 acres</u>		
	£	s.	d.
1753	145	2	1 $\frac{1}{4}$
1754	187	0	0
1755	199	0	10

Average annual expenditure over this period was £177 Os. 11 $\frac{3}{4}$ d. which works out at £25 5s. 10 $\frac{1}{4}$ d. an acre. This was excessive, even when compared with Wealden costs of more than £18 an acre.¹ A more appropriate comparison is with Milstead where annual expenditure was rather less than the popular estimate of £15 an acre.² Fortunately, we can examine this matter more closely.

In the autumn of 1756, shortly after his stewardship was terminated, Mein wrote to Mrs Everard:

Madam Everard

Faversham

23 Oct. 1756

As the care of your hopgrownd is now putt into other hands I would beg the favour of an early oppertunity of passing my accounts. If it is agreable to you next Munday sevensnight the 2nd November will sute me, as I shall then be at home. But if any day in that week will be more agreable to you I'll stay at home on purpose. I hope Madam it will not be taken amiss that I choose to settle with you and you Madam best know the terms on which you committed the care of your grownd to me. I have no objection but rather choose to settle in the presence of an intelligent judge of a hopground that these misrepresentations which the town now abownds with may in some measure be wip'd off.

I can appeal to Him who knows the heart, that your interest was ever uppermost with me, and till lately I had no reason to think you dislik'd my management. Sincerely wishing your case happyness and recovery I am dear Madam

Your much oblig'd and very humble servant

Rob^t. Mein

I shall esteem it a favour if you'll please send me word when you choose I should attend you.

¹D. Baker, 'Tatlingbury: an Eighteenth Century Wealden Hop Farm', Cantium, 3, no. 1 (1971), 8.

²See supra, 561-70.

Mein produced four sets of detailed hop accounts relating to the seasons 1752-6.¹ It seems he eventually presented these to James Lawson after Mrs Everard's death. Abigail Clark, Mein's sister-in-law, said that on this occasion Lawson demanded money from Mein which he did not owe. At the end of this stormy meeting Mein left the accounts with Lawson and "came away in a passion". These accounts are interesting and highly revealing; the record for 1753 is reproduced here:

The Charge of Mrs Everards Hop Ground from 1st October
1752 to 1st January 1754

		£	s.	d.
<u>1752</u>				
Nov. 28	Paid for limming 7 acres at 10s. each.	3	10	0
	allowed them to drink as usual 6 ^d per Acre		3	6
	for diging mould and making the Lane Hedge	1	6	6
	For a man filling y ^e Dung Cart 12 days		3	0
	For 1000 Setts to mend the Ground		5	0
Dec. 2	For 6 Loads of Limme at 15s. each	4	10	0
<u>1753</u>				
Jan. 5	For diging 7 Acres at 20s. each	7	0	0
	For 6 Days worke diging up the carted Way along the Lane Hedge		9	0
	For 6 Days worke mending the Ground		9	0
	For spreading one hundred Loads of Dung		3	0
	For sharpening the old Poles on 7 Acres at 4s. 6d. per Acre	1	11	6
	For sharpening & carying 500 Poles		5	0
	For diging Mould & chalk in the Lane 4 days		6	0

¹PRO C103/185. The accounts were set out in four small books which eventually became exhibits A, B, C, D in the Court of Chancery. They are each drawn up in similar form and detail although no receipts are shown for 1756 since, presumably, the hops for that year had not been sold by Mein. The account for 1753 is the most detailed with regard to hop picking: pickers' names and earnings of individual "baskets" are recorded in a separate account.

		£	s.	d.
[1753]				
March 19	For dressing 7 Acres at 5s. each	1	15	0
	Gave the men as usual one shilling to drink when dressing		2	0
	Paid for 400 Ash Poles at 28s.	5	12	0
	For 6 allowances for bringing Poles		6	0
	For sharpening & carrying out 900 Ash Poles at one shilling the Hundred		9	0
	For 6 Days Worke clearing the Ground of old Poles and Chips		9	0
May 14	For poling 7 Acres at 10s. each Acre	3	10	0
	For rounding 7 Acres at 3s. each Acre	1	1	0
	To M ^r Brown of Queenboro' for Oysters as by Rec ^t	2	4	10
May 26	For howing 7 Acres at 5s. each Acre	1	15	0
June 30	For earthing 7 Acres at 3s. each Acre	1	1	0
	For 24 Days worke moving Poles & Leather tying at 18d. each Day	1	16	0
July 18	For hilling 7 Acres at 5s. each Acre	1	15	0
	For howing 7 Acres at 5s. each Acre	1	15	0
	For 44 Days worke with a Cart carrying Mould & Chalk at 15s. per Day	11	0	0
	For 106 Loads of Dung from M ^r Brown at 2s. as by Rec ^t	10	12	0
	For 25 Loads of Dung from R. Mein at 2s.	2	10	0
	For Allowance given the men while delivering the Dung	1	5	0
July 21	For turning the 2 Dung Hills	1	1	0
	For two hundred and three quarters of Ash standards at 40s. the hundred	5	10	0
	For carrying them in		3	0
	For tying Stuff		17	6
July 28	For howing 7 Acres at 5s. each Acre	1	15	0
Aug. 14	For setting up the Poles blown down by the wind 6 Days at 2s. being Hervast		12	0
	Gave each Man a Mug of Bear as usual		1	6
	For carrying in 3 Chalders of Coalls		1	6
	Gave M ^r Rigdens Men when they brought in the Iron Plate			6

		£	s.	d.
1753				
Aug. 14	For tying 7 Acres at 8s. the Acre	2	16	0
	Gave the Tyers each a Shilling		2	0
Aug. 21	For howing 7 Acres at 5s. each Acre	1	15	0
	For 3 Chalderns of Coalls at 24s. for	3	11	0
Sep ^r 22	For Hop picking & allowances as by Account	25	16	11 $\frac{1}{4}$
	For Drying as by Account	3	17	10 $\frac{1}{2}$
	Paid for a man & Horse carying Hops Seven Days at 3s. each Day	1	1	0
	For a Cart one Day carying the Baskets out and bringing them home		5	0
	For laying the Plate, putting a Lock on the Door of House in the Ground and drawing 2 Peellers to M ^r Climment		12	2
Oct. 16	For turning the 2 Dung Hills	1	4	0
	For striping staking & burning the Binds on 3 acres at 6s. each Acre		18	0
	For sharpening the old Poles on 3 Acres		6	0
	For 2 cwt. 0 qr. 14 li. of Baging at 21s.	2	4	7 $\frac{1}{2}$
	For 2 li. brown Rolls 7 $\frac{1}{2}$		1	3
	For 2 Pounds of Pack thread & cord of Marsh at 10 ^d each Pound		1	8
	For drying 5 cwt. 0 qr. 14 li. of Hops as by Account at 6s. each hundred	1	10	9
	For making 9 Bags at 2 ^d each		1	6
Oct. 26	For 81 Loads of Dung at 2s. each	8	2	0
Nov. 19	For Tythe as by Rec ^t	3	10	0
Nov. 24	For an Oust Plate as by Rec ^t	7	0	0
	For 7 Loads of Dung at 2s.		14	0
	For 7 Days worke grubing the Hedge		10	6
	Total disburstment	145	2	1 $\frac{1}{4}$
1752		£	s.	d.
Nov. 27	Received Cash	36	0	0
1753				
July 23	Ditto	64	4	0
Sept. 21	Ditto	30	0	0

1753		£	s.	d.
Sept. 21	Rec ^d for 1 End of Hops 45 li. at 6 ^d the Pound	1	2	6
	Total Received	131	6	6
	Remains	13	15	7 $\frac{1}{4}$
	Errors excepted Rob ^t Mein			

An Account of Hoppicking for Mrs Everard
by R. Mein 1753

Page 1	The Pickers Names	How many days each	Price	£	s.	d.
	Ann Sladen & Partner	6 $\frac{3}{4}$	12 ^d		13	6
	Ann Sprat & Partner	"			13	6
	Mrs Clarke & Mrs Coleman	"			13	6
	Mrs Nicholson & Partner	"			13	6
	Mrs Rye & Mary Carter	"			13	6
	Mrs Mitchel & Mrs Dale	6			12	0
	Mrs Plane & Daughter	6 $\frac{3}{4}$			13	6
	Ann Hills & Jane Bradley	"			13	6
	Mrs Lewsby & Mrs Ferry	"			13	6
	Mrs Wild & Sister	"			13	6
	Mrs Salmon & Mrs Butler	"			13	6
	Mrs Whatman	5 $\frac{3}{4}$			5	9
	Her 2 Daughters	6 $\frac{3}{4}$			13	6
	Old Mrs Wild	2			2	0
	Mrs Lad & Mrs Iden	6 $\frac{3}{4}$			13	6
	Mrs Scott & Mrs Matson	"			13	6
	Mrs Keem Son & Daughter	"		1	0	3
	Mrs Gratnel & Her Son	"			13	6
	Mrs Green & Rachel Denman	"			13	6
	Mrs Down	3 $\frac{3}{4}$			3	9
	Mrs Fright & Mrs Kingsland	6 $\frac{3}{4}$			13	6
	Mrs Kemp & Daughter	"			13	6
	Mr & Mrs Lott	"			13	6
	Mrs Brooke & Daughter	"			13	6
	Mrs Blaxland	2 $\frac{1}{2}$			2	6
	G. Clarke, T. Upton, S. Whatman	6 $\frac{3}{4}$		9 ^d	15	2 $\frac{1}{4}$
	Mrs Dales 2 Children	6 $\frac{3}{4}$		6 ^d	6	9
	Jack Salmon & L. Lade	"			6	9
	Mrs Scotts 3 Children	"			10	1 $\frac{1}{2}$
	Mrs Gratnels 2 Children	"			6	9
	Mrs Blaxlands Girle	"			3	4 $\frac{1}{2}$
	Allowed 44 Pickers 7 ^d each over and one Picker 6 ^d for a Treat				1	6 2
	Allowed the 3 Boys 6 ^d each over				1	6
	Allowed the 12 Children 4 ^d each over				4	0
	Carried over				19	10 1 $\frac{1}{4}$

[Page 2]	The Binmens Names	How many days	Price	£	s.	d.
	John Salmon	6 $\frac{3}{4}$	20 ^d	11	3	
	John Hern	"		11	3	
	Mr Scott	"		11	3	
	Robert Minster	"		11	3	
	Thomas Rye	"		11	3	
	Edward Brunger	"		11	3	
	Thomas Godfrey			11	3	
	allowed each one mug of bear each day			12	3	
	gave each Bin toward a Handkerchief 7 ^d & each Bin for the Rider 4d			5	6	
	gave them 4 Dram Allowances at 3s. 1d. each			12	4	
	gave them 2 Bread & Bear Allowances at 9s. each Allowance			18	0	
	Total Charge for Binmen & Allowances			6	6	10
	Brought over			19	10	1 $\frac{1}{4}$
	TOTAL CHARGE OF PICKING			25	16	11 $\frac{1}{4}$

A number of observations can be made and conclusions educed.

There seems no doubt that the accounts are meticulous and comprehensive; all the normal tasks of "hop ground work" are included and the rates of payment accord with those paid elsewhere in Kent. However, excessive quantities of dung, mould and chalk were used, adding considerably to costs of cultivation. This suggests that, either the ground was poor and unsuitable for hops, or perhaps it had been neglected previously. Or possibly Mein was trying to improve the soil beyond the point where the Law of Diminishing Returns began to operate. Mein himself had certain misgivings on this score: he thought Mrs Everard might consider him "an expensive steward" in view of the high cost of manure he had incurred. But according to Mein's sister-in-law, when he voiced his fears, "Mrs Everard bid him hold his tongue for she well knew the expence of an hopground and had paid 'ere then as much money for dung which had not been laid on the said hopground". His friends, at any rate, accepted

Mein's costly efforts as "an improvement of the land". William Plane, a farmer and limeburner in Preston, was sure that the heavy applications of chalk, lime, dung and mould had brought the ground to "a good and thriving state and condition".

Some items appear in the accounts which should not strictly have been charged as expenses against one year's hop production. Mein had to replace an iron oast plate, an expensive item costing £7. But this item and the work (and perks!) related to it was really capital expenditure and should not have been included with "running expenses". The cost of the oast plate alone represents more than half the "loss" showing for that year. Standard ash trees, involving considerable outlay, were presumably intended as "lews" or windbreaks and, as such, represent a long-term capital improvement.

Mein attempted to grow other crops in the hop ground - an acre of French beans in 1755, for instance, "in order to make the most of the land". This was normal practice at the time; today it would be condemned. The costly episode of the beans has already been related. But other growers, usually with more success, did the same kind of thing. Richard Tylden, for example, paid a local worker for carting beans from his young hop ground in Milstead in 1708.¹ Mein's experiment involved an outlay of three or four pounds including:

10 Beer Treatts to the 7 Men pulling up turning and carying in the French Beans	13s.
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In Flanders, and in England too, it was common for turnips to be grown in hop gardens under the hops, although Banister condemned it as "the practice of covetous persons".²

¹ KAO U593 A1.

² E. Kerridge, The Farmers of Old England (1973), 118; J. Banister, Synopsis of Husbandry (1799), 224.

In the same year Mein was busy planting young fruit trees in the hop ground. Besides the cost of the trees it cost £3 10s. for "stuff to frame the young trees". He also paid men for "watering the trees" during dry weather in the spring. Once again, this was in accord with common practice. The method used by Sir James Collett in Boughton under Blean at the end of the seventeenth century was to plant young fruit trees in his hop garden; when the trees were mature the hops were "displanted". Meanwhile other young hop grounds cum orchards were planted in succession. This procedure became standard practice in Kent especially for apples and cherries.¹ But it represents long-term capital investment, not a current charge against the hop ground.

Whether Mein's hop ground "treats" throughout the year were customary or extravagant it is difficult to say. "Perks" were common enough, although the provision of oysters as well as beer (and gin and brandy in later years!) seems to suggest that Mein dispensed largesse on a fairly liberal scale at Mrs Everard's expense. An entry in the hop accounts for 1755 shows a well-established tradition at Gallows' Hole:

To Thomas Brown at Queenboro' for 2 Firkins East Rock
Oysters 16s.

Mein appears to have paid a very high price for poles. Normally under 10s. a hundred, he paid 28s. in 1753 and receipts show that he paid 22s. a hundred to Mr James Woolley for 750 "best hoppoles" in 1754. With so many hop growers in the district this may indicate a local shortage of poles.

On the marketing side, Mein followed accepted procedure and sent the hops by hoy to Southwark. Even his attempt to sell hops in Ireland shows an awareness of current marketing practice:

¹PRO E134 2 Anne/East. 17; see also Kentish Gentleman, 759.

Tuesday upwards of thirty waggons from Kent, loaded with new hops, besides what came by water carriage, were brought into the Borough of Southwark; they were presently bought up, a great part of them, for exportation to Ireland, where that commodity has been much wanted these four years.¹

Was Robert Mein guilty of mis-management? Probably not, at least in the sense that he followed the best Kent practices. And he kept better records than many hop ground managers even though he included capital expenditure with his working costs. He was possibly rather extravagant, an ever-present danger when spending someone else's money! He was also, at times, imprudent; for instance, when he undermined the hop ground in his strenuous efforts to obtain chalk. He was certainly unlucky: the site for hops may have been ill-chosen in the first place; the seasons 1753-5, when many hops were "blasted and mouldy", inveighed against profitability and many growers were said to be "losers"; a better ripening season for beans instead of "wet and cold weather" would have ensured some return for that crop; temporary shortages of poles and manure involved a heavy outlay for these items.

Was Mein dishonest? There is, unfortunately, no means of telling. Some of Mrs Everard's hops were dried in her own small oast, the remainder in Mein's larger drying establishment for which he charged the acceptable rate of 6s. a hundredweight.² There is no evidence to suggest that Mein pocketed the proceeds arising from the sale of hops. In fact Mrs Everard was reputed to have said that Mein was "a very honest man". His accounts conclude on an optimistic note:

To 4 years attendance on Mrs Everard's hopground and other affairs for which Mrs Everard allways told me I should be well satisfied. [no sum stated]

¹Kentish Post 13 September 1760.

²Richard Tylden of Milstead charged 7s. a hundredweight for this service.

The Faversham saga highlights a novel feature in Kent hop growing - the emergence of the professional hop ground steward. Mein was representative of a new-style entrepreneur. Several witnesses had served in this role, although they were not all farmers per se. Old Thomas Swiffenton had managed a hop ground for Mrs Grueber in Ospringe for twelve years for which he was paid a salary of 10s. a week all the year round besides "expences in going about to buy hop poles". Mein was paid 9s. a week as Mrs Everard's agent which Swiffenton considered reasonable.

To Swiffenton we owe one piece of useful information, difficult to come by. He mentioned that Faversham hop baskets held 6 bushels of green hops,¹ and went on to add:

... eleven baskets or thereabouts of good green hops of the size most commonly used in the said neighbourhood of Faversham, when gathered in good order and condition ... will produce one hundred weight of dried hops ...

Many hop ground agents possessed insufficient capital to finance their own hop grounds. Yet the availability of their knowledge and managerial skills enabled capital from outside farming to be attracted to the Kentish hop industry. A functional division between capital and entrepreneurship is immediately apparent. The role of the professional hop garden steward was vital to the maintenance of "town grounds" in Kent; the system reached its apogee in the "city grounds" of Canterbury.

B The Rise of the Canterbury Hop Grounds: a locational study

Defoe visited Maidstone in 1722 or 1723, probably around midsummer. He was impressed by the hop grounds of the locality, "the first place in England where hops were planted in any quantity and long before any were

¹Canterbury baskets held 5 bushels. See W. Marshall, Rural Economy of the Southern Counties (2 Vols. 1798), I, 407.

planted in Canterbury". But the pre-eminence of the Maidstone district was, by this time, under challenge from east Kent, particularly the Canterbury area which, wrote Defoe, "be now supposed to be the chief place in England" for hops.¹ His instant appreciation of the locational pattern of Kentish hop cultivation is commendable: the old-established grounds of Maidstone, and the more recent gardens of Canterbury, were the central cores of production.

When Defoe eventually reached Canterbury any lingering doubts he might have had about that city's leadership in the hop world were finally dispersed:

... the great wealth and encrease of the city of Canterbury, is from the surprising encrease of the hop-grounds all round the place; it is within the memory of many of the inhabitants now living, and that none of the oldest neither, that there was not an acre of ground planted with hops in the whole neighbourhood, or so few as not to be worth naming; whereas I was assured that there are at this time near six thousand acres of ground so planted, within a very few miles of the city; I do not vouch the number, and I confess it seems incredible, but I deliver it as I receiv'd it.²

Now Defoe frequently quoted numbers from hearsay or they were just guessed. Often they were wrong: 6,000 acres, in fact, represented almost the total area of land under hops in Kent at this time. However, in characteristic style his description was thereby reinforced. And when Defoe described "what seemed to him really living and important" (G.D.H. Cole) he rarely put a foot wrong.³ It is best to regard Defoe's numerical estimates as adjectives rather than statistics! His final remarks about Canterbury were couched in seemingly extravagant terms:

¹D. Defoe, A Tour Through the Whole Island of Great Britain (2 Vols. 1962) I, 113.

²Ibid., 118.

³Ibid., ix.

It is observ'd that the ground round this city proves more particularly fruitful for the growth of hops than of any other production, which was not at first known; but which, upon its being discover'd, set all the world speaking in the language of a neighbourhood, a digging up their grounds and planting; so that now they may say without boasting there is at Canterbury the greatest plantation of hops in the whole island.¹

Can this rather staggering claim be substantiated? And if so, how is this suburban development to be explained?

Economic and social aspects of Canterbury's history have received surprisingly scant attention beyond, perhaps, immigrant silk weavers and worsted makers. The fossilized image of Canterbury which has most readily reflected itself across the years, portrays a city of noble lineage, ancient churches and equally venerable clerics. The rough and tumble of economic life seems somehow out of place. Canterbury's unique role in western Christendom has tended to overshadow, indeed almost obliterate, its more earthly function as a conspicuous centre of production and exchange. Antiquarians, rather than economic historians, have taken the best pickings - and hops have no place in their dreary harvest. The purpose of this study is to show that, numbers aside, Defoe did not overstate his case: it was substantially accurate. Moreover, when he observed Canterbury hop grounds in the early 1720's he was witnessing but the beginnings of a half century or more of intensive activity in hop planting.

At Bourne Place in the parish of Bridge, south-east of Canterbury, there is a plot of ground reputed to have been a hop garden in 1558.² There is, however, no evidence of hops in the Canterbury parishes at this early date. Indeed, very little hop cultivation was being undertaken in and around Canterbury a hundred years later. The 1649 Survey of the

¹Ibid., 118.

²J. Arnold Fleming, Flemish Influence in Britain (2 Vols. 1930), I, 302.

Dean and Chapter lands, in the parishes of St. Mildred, St. Mary Castle, Thanington, St. Paul, St. Martin and St. Mary Bredin includes only one reference to hops: 60 perches "now planted with hops" had been granted on a 21 year lease to John Dunkin in 1636. Cherry orchards are more numerous in the survey, and valuable parcels of meadow and pasture are noted, but no hops beyond the 60 perch plot.¹ Documentation of crops grown on 500 acres of land in St. Martin's parish between 1662 and 1666, includes sizeable acreages of wheat, oats and barley; smaller areas of yellow and grey peas, beans, tares and rye; even parcels of hemp and flax; but no hops.² It is nigh impossible to find hops in Canterbury before the later seventeenth century. The fields whose destiny after 1680 was hop growing were, in the middle years of the century, still engaged in cereal, fruit and livestock production. In the southerly parishes of St. Mildred and Thanington, for example, small cherry orchards and - in those places near the River Stour - rich meadows and lush grazings were considered the most profitable uses for the land. However, at least two small hop grounds were established in St. Mildred's during the 1660's; by 1670 these were occupied by Thomas Elwyn, a Canterbury gentleman, who also possessed a malthouse and brewery: he paid an annual rent of £6 for a ground of $1\frac{1}{4}$ acres "lying near the postern gate", and cultivated another hop garden of 2 acres in the same parish.³ In the more extensive parishes to the east, a mixed arable pattern obtained with special emphasis on wheat and barley. In the parishes of St. Martin and St. Paul even the so-called "parke lands" were being "ploughed

¹Cathedral Archives and Library, Canterbury. Parliamentary Survey 22 (1649).

²PRO E134 19 Chas.2/Mich. 24.

³Ibid., 22 Chas.2/East. 39.

up and converted into tillage" by 1663.¹ But within thirty years the landscape of the Canterbury district was undergoing transformation as hop sets were rooted, hop poles mushroomed in the suburbs, and oast houses appeared in the old city centre.

Seventeenth-century hop cultivation required techniques more akin to gardening than farming. It also called for the intensive care and close attention to detail familiar already to those who cultivated fruit, vegetables and flowers for the market. Not surprising, therefore, that the first intensive cultivators of hop grounds in Canterbury, who creep into the documents unheralded - and almost unnoticed - from around 1680, were often known locally as "gardners". Some were still regarded as belonging to altogether different occupations. An examination of inventories for the 1680's and 1690's reveals hop growing in seven peripheral parishes of Canterbury: St. Dunstan's and Harbledown to the west; Thanington, St. Mildred, St. Mary Bredin and St. Paul in a broad south-westerly arc around the City, and St. Mary Northgate to the north-east.

John Brickenden of St. Dunstan's was probably a saddler by trade, but almost two-fifths of his personal property was invested in hop growing. The "hop pools and y^e Crop upon y^e Ground" were said to be worth £40 when Brickenden died in 1700. Stephen Lee was a poor woolcomber of the same parish, who left personal property worth little more than £5 when he died in the winter of 1690. Nevertheless, among his few possessions were almost 1,000 hop poles and a couple of hop baskets suggesting a mini-undertaking.²

John Giles, who conducted a grocery business in the Northgate suburb, was involved in hop growing on the western fringe of the City in 1680:

¹Ibid., 19 Chas.2/Mich. 24.

²KAO PRC 11/62/86, 11/54/140.

for the pooles and supposed cropp of a hopp garden, at Harbledown & y^e lease of y^e sd garden att £34 10s.¹

Hop cultivation in Thanington seems to have held attractions for divergent occupational groups, including a grocer, a flaxman, a carpenter, and a widow, all of modest means. Ann Penn, a maltster's widow, was the most substantial grower: when she died in 1690 her personal estate was said to be worth £175; the hops, hop poles, baskets, and an oast hair were valued altogether at almost £58 or one-third of her personal estate. The value of the hop poles, £38 6s., suggests a garden of about 4 acres, perhaps twice the average size. This undertaking stands in contrast to the enterprise of John Terry, a Thanington carpenter, who grew hops on a three-quarter acre plot leased, as it appears, from Lady Frazer. When Bartholomew Hart, a flax dresser, died in 1688, the poles in his hop garden were said to be worth £7; he probably worked less than an acre. Shortly after his hops were picked in 1687, the crop of ten hundredweight was sold to Mr Thomas Harris, a local dealer, for £28.² William Coleman, a Thanington husbandman of modest means, cultivated four hop grounds; his total investment in hops amounted to two-thirds of his personal estate in 1690:

	£	s.	d.
on M ^r Harris land seaven hundred & three quarters of an hundred of hoppers at 7 ^s per hundred	2	14	3
three thousand of hoppers on one acre of land in millfield at 7 ^s per hundred	10	10	0
three thousand more on one other acre of land	9	0	0
419 hoppers on M ^r Tokers land at 9s. 6d. per hundred	1	19	10 ³

¹Ibid., 11/44/9.

²Ibid., 11/54/121, 11/55/79, 11/52/42.

³Ibid., 11/55/19.

A parish within the city walls, St. Mildred's was closely involved in hop cultivation. However, hop growing interests appear to have been combined with related activities, sometimes beyond the parish boundary. Philip Warrener's occupation is given as "Hop Marchant" and, although he grew a few hops in St. Mildred's - probably about 2 acres - his main business lay in the marketing sector. John Rigden, a member of the brewing family, left personal estate worth £758 17s. 1d. when he died in 1699. But, like many another well-do-do Canterbury citizen, he was engaged in money-lending activities, and the bonds he held at the time of his death were said to be worth six times the value of the hop enterprise. Susanna Foster, a widow occupying a small piece of hop land in St. Mildred's, also possessed farm property in the parish of Littlebourne, four miles away, where she grew and malted barley. Thomas Younge was stated to be a "gardner" and there is evidence that he possessed apple orchards. He also, however, occupied several hop grounds before he died in 1701, and his hops in store - 45 hundredweight of them - were valued at £131 4s., representing more than half his total personal wealth.¹

In contrast to the tightly circumscribed situation in St. Mildred's, the hop grounds which in the 1680's and 1690's were beginning to appear in the more extensive Canterbury parishes of St. Mary Bredin and St. Paul, just beyond the city walls, were usually an extension of mixed farming activities. Ann Bateman was growing over 100 acres of wheat, barley, beans and peas in St. Mary Bredin's parish before she died in the summer of 1695. There was even a 5-acre piece of "gardening land". But she laid down only a single acre to hops, a cautious experiment. Robert Minter of the same parish, growing 98 acres of arable crops in 1696, gives no indication that he was at all interested in hops, an unthinkable state of affairs in this parish a quarter of a century later. Far

¹Ibid., 11/52/176, 11/52/125, 11/51/115, 11/62/207.

greater enterprise had been shown by his neighbour John Holms who died in October 1697. In addition to wheat, beans and barley, Holms had cultivated $3\frac{1}{2}$ acres of "hopland" which, that year, had yielded 12 bags of dried hops valued at £240, over half his personal estate. A feature of some interest, he was also growing "Turnupps upon 2 acres of land" at the same time.¹

A maltster or brewer was likely to invest in hops more heavily than the general farmer at this time, even in the extensive parishes outside the walls. Arthur Middleton of St. Paul's was described in 1690 as a "Gardner" in his otherwise detailed and informative inventory. He was actually in business as a maltster - 25 per cent of his wealth was in malt. He had also put large sums of money out at interest (4 per cent of his wealth). But beside this, he worked three hop grounds covering $6\frac{1}{2}$ acres between them, together with a fourth ground of unknown size near his house. The former grounds were held on leases from local landowners; for example, a valuation of £35 was placed on "one Acker and half of Hopp Ground Hiered of M^r John Barber on Cockerdowne", for the "Polls and Cropp on y^e s^d Acker and half". Altogether, his hop growing interests accounted for a third of his considerable wealth of £814.²

Broadly speaking, there were two kinds of hop grower in Kent. The largest group, viewing the county as a whole, were the mixed or arable farmers who laid down a small area of hops "on the side", experimentally at first, on a somewhat more ambitious scale later on. In the Canterbury parishes a few such farmers can be seen from the later seventeenth century, particularly in the more extensive parishes of St. Mary Bredin, St. Paul and St. Martin. As we have seen, a so-called hop farm might grow many other crops besides hops. Indeed, the hops might form only a

¹Ibid., 11/59/229, 11/60/80, 27/34/284.

²Ibid., 11/54/122.

tiny fraction of the total enterprise. But the second type of entrepreneur was the grower who buttressed his hops, not with farming per se, but against malting, a grocery business, a saddler's shop, or simply a well-endowed widowhood. Such were the majority of Canterbury planters with their small $\frac{1}{2}$ -acre and $\frac{3}{4}$ -acre plots, or perhaps on a somewhat more ambitious scale ranging between 2 and 6 acres. At the apex of the group were a few "giants" like Sir Peter Gleane, public notary, and Mr Anthony Farrar, gentleman, citizens of Canterbury and hop planters to the extent of 20 acres apiece.¹

Celia Fiennes approached Canterbury through Harbledown and St. Dunstan's just before the hop picking season of 1697. She observed "great hop yards on both sides of the road" and noted happily that "... this year was great quantetyes of that fruit here in Kent".² Yet these were only small beginnings. By the time George of Hanover sailed for England, hop cultivation in the Canterbury district was beginning to expand; a few more years and the activity was at fever-pitch.

The entrepreneurial structure which characterised the early hop-growing industry was, therefore, a network of small-scale enterprises, each an adjunct of some other more substantial business undertaking. This might be a farm, a brewery, a malting concern, a blacksmith's shop, or a retail business, with the occasional widow investing her inheritance in a hop project. Only rarely was the growing of hops their chief source of livelihood. And where this was the case they might be tempted to over-reach themselves, plunge into debt and, like Sir Peter Gleane, commit suicide!

Intensity and uncertainty are the two dominating characteristics of the hop industry. The matter was put succinctly by a seventeenth-century

¹Ibid., 11/79/223, 11/44/37.

²Celia Fiennes, Through England on a Side-Saddle, in the time of William and Mary (1888), 100.

pamphleteer: "Hops are a great certain charge and a most uncertain commodity and gain".¹ His sentiments were echoed by every subsequent writer on the subject. Intensity implies a heavy financial outlay per acre for inputs of capital and labour necessary to ensure a wholly efficient and productive enterprise. The cost of all inputs (plants, manure, poles, labour, bagging material, drying facilities, transport and selling costs, hop duty, tithe and rent) was £15 or £20 an acre, in some cases rather more.² Variable costs - picking, processing and selling - related each year to the nature of the season and weight of hops. But the most onerous burdens sustained by growers were the fixed costs, considerable compared with other crops. This was due, firstly to the high cost of materials, especially poles; secondly, to the high labour cost for hop ground cultivation throughout the year. The cost of pole replacements varied between 12 and 20 per cent of total costs; difficulty in getting suitable poles at the right price deterred many growers. A succession of manual operations throughout the year involved high fixed costs for labour; this varied between £3 and £5 an acre and could amount to more than a fifth of total costs, the largest single item of expenditure.³ Sometimes day labourers were employed and paid at piece rates for digging, spreading dung, weeding, hilling, and poleing the grounds, and tying and dressing the plants. In other cases hop planters contracted this work out on an annual basis. The difficulty was often one of securing the right quality of labour. John Banister stressed the importance of selecting competent men for work with hops:

¹William Prynne, A Declaration and Protestation against the Illegal, Detestable, oft-condemned, New Tax and Extortion of Excise in general and for Hops (a native uncertain commodity) in particular (1654), 27.

²Anon., Instructions for Planting and Managing Hops and for Raising Hop-Poles., (Dublin Society, 1733), 7; W. Ellis, The Modern Husbandman (8 Vols. 1750), V, 126.

³See Table 33.

Hence the necessity of employing careful labourers for this work, as countrymen in general are too prone to undertake jobs which are likely to be profitable, how unacquainted so ever they may be with the proper method of conducting them ...¹ a crop of hops may be ruined through unskilfulness.

In addition to high standing charges for poles and labour, the rent of a hop ground, particularly in Canterbury, was pitched at a high level. An annual rent charge of £3 an acre was usual in the Canterbury district by the early eighteenth century, four guineas by the 1760's.² This was three or four times the rent charged for hop land in many other areas, and eight times the rent for holdings of ordinary arable. Total average fixed costs cannot have been much less than £15 an acre in the Canterbury district in the early eighteenth century. And, of course, a hop garden yielded little or no return for the first two years, at a time when the actual fixed costs of establishing the ground would have been even higher.

The second condition governing hop growing is uncertainty: "the hop is throughout its whole progress the most precarious of any other vegetable".³ The hop plant is extremely vulnerable to adverse weather conditions, insect pests, and fungus diseases which, altogether, create a highly volatile supply and price situation. William Ellis was at pains to point out the penalties and rewards of hop growing:

Happy are they whose large plantations have escaped the damage of flies, lice, bugs, blight, fen or mould, storms and other pernicious incidents, and who at last enjoy a dry mild time for gathering or picking them ... for it is the notion of some concerned in hop plantations that they are liable to fifty accidents in a year.⁴

¹J. Banister, Synopsis of Husbandry (1799), 209.

²PRO C111/55; P.J. Grosley, A Tour to London, or new observations on England and its inhabitants (2 Vols. 1772), II, 124.

³Banister, op. cit., 205.

⁴Ellis, loc. cit.

Another Kentish writer saw the hop aphid as the "barometer of poverty".¹

In productive years a high yield involved heavy expenses for picking and drying, but the market prices would be ruinously low because there were more hops than the brewers needed. A prudent grower might hold back his processed crop in order to off-load it on the market another year - provided he could afford to do this. Violent fluctuations from year to year, both in the yield of the crop and the price it realized, therefore characterised the hop industry. Hop growing was a highly speculative undertaking, bringing windfall gains in some years but spelling ruin for the ambitious grower who had over-stretched his resources, planted a large acreage and found himself with insufficient capital resources to "tide-over" the bad years. Those who joined the eighteenth-century hop gamble played for high stakes. There was plenty of well-meaning advice on the subject, urging growers to stay the course. A writer in 1733 advised:

... in failing years, if your quantity be small, they are sure to sell at a high price; it may be your good fortune, that when other hop-grounds generally fail, yours may prosper ... if this should happen, you may gain more by such a crop in one year, than others may in three.²

But the same writer knew only too well that hop growing was an expensive gamble which ought not to be undertaken by the man without means - capital - to expend on production, as well as reserve funds to "cushion" him in bad years:

'tis necessary here to give this further caution, that it is not proper for poor farmers, or men of small fortunes, to engage far in this improvement, for it requires a considerable stock at first to cultivate a large plantation, to furnish poles, and do every other requisite; the expences will be great and the undertaker must expect to lyve out of his money for 2 or 3 years, before he can have

¹E.J. Lance, The Hop Farmer, or A Complete Account of Hop Culture (1838), 76.

²Instructions for Planting ... Hops, op. cit., 12.

any return of profit and even when his hops come to their bearing state, and he is in hopes of making good the charges he has been at, he may be disappointed by a bad season; these are risks and expences which a man that has not a good fund, ought not in prudence to venture upon ... A large plantation is an undertaking fit for gentlemen, who live upon their estates or for rich substantial farmers.

However, he had no wish to deter any man from growing hops:

Not that it is hereby intended to discourage any one from planting small parcels of hops suitable to his abilities, for the poorest farmer may easily spare time and labour to plant a few hops in a corner of his garden.¹

It is clear that hop cultivation, expensive and risky, was an exciting pastime for the gambler. In the long run it was a reasonably safe undertaking, where it was subordinate to a more stable and solvent enterprise. It was classed as an "improvement" and a pursuit of gentlemen. The hop planters of early Georgian Canterbury seem to meet these criteria particularly well. Numerically, the most important investors in the City grounds were successful non-farming businessmen - maltsters, brewers, retail traders and builders, and a host of others. The few, larger investors who plunged in more deeply were men of property and substance, sometimes of rank - Sir William Hardres, Sir John Hales, Sir William Boyce, William Hatcher, Richard and William Waddell, Sir Peter Gleane, Anthony Farrar. Some, but by no means all, of these larger investors were gentlemen by birth, with a secure stake in the Kentish countryside. Others aspired to the class of gentry by virtue of their leisured style of living and levels of urban wealth with rural undertones. They belonged to that class which Professor Everitt has so aptly labelled the "pseudo-gentry", families which aspired to gentility after the Restoration but which lacked a true landed estate in the countryside to support their

¹Ibid., 8-9.

aspirations.¹ Nevertheless, if they could lay claim to property with genteel associations - a hop ground, for instance - their rise into the pseudo-gentry was assured. And in Canterbury, at any rate, we can see poised anxiously on the outer edge of the pseudo-gentry a largish group of brewers, maltsters and traders whose claim to social status and prestige lay, at least in part, in their possession of a City hop ground. They could never be sure that a hop garden in Canterbury would be their passport to prosperity, but they could reckon with fair certainty that it would bring them within the compass of the pseudo-gentry.

But the question remains: why Canterbury? Why did this City experience such a rapid rate of growth and concentration of hops from 1680, and more especially after 1715? Several conditions operated at Canterbury, especially from the second decade of the eighteenth century, which encouraged a high rate of growth and concentration in hop planting and production, a rapidity of change and expansion perhaps unique in English agrarian developments.

It seems appropriate to consider first the land. Many soils are unsuitable for successful hop cultivation because they are either too wet and cold, too dry, too exposed, or simply impoverished, or a combination of these. The hop plant can exist in many soils, but will thrive and bear well for many years in only a few. A spectrum of soil groups viewed in relation to hops would range from completely negative soils for hop cultivation to soils highly favourable. Naturally, most types lie somewhere between these extremes. Soils developed on open chalk, where drainage was far too rapid, or on soils where drainage was impeded, would be negative areas. At the other extreme, there are certain soil groups

¹A. Everitt, 'Social Mobility in England, 1500-1700', Past and Present, 33 (April 1966), 70-2: "By the term 'pseudo-gentry' I refer to that class of leisured and predominantly urban families who, by their manner of life, were commonly regarded as gentry, though they were not supported by a landed estate".

of limited distribution ideally suited to hop cultivation. The well-drained loams developed over the Hythe Beds are particularly favourable, especially those series derived from ragstone which are deep, loamy and well-drained. They predominate in the Maidstone district creating in mid-Kent a highly favourable core area of hop cultivation. In east Kent the mixture of deep, mellow, extremely fertile and evenly drained brick-earths and Thanet sands in the vicinity of Canterbury, form almost ideal soils for hops. Furthermore, even today hop gardens are found mainly on the alluvial loams and down-wash which occupies the bottoms and lower slopes of the valleys.¹ The gentle slopes leading down to Canterbury and the Stour offered optimum site conditions for the demanding hop plant, particularly the local variety known as the White Bine or simply, the Canterbury hop. "The Hop District of East Kent may be said to reach from Sittingbourne to Sandwich" said Marshall, looking at the region's extremities. But, he considered "the environs of Canterbury ... the center and heart of the District ... The culture in this part, extends on every side of the town, to the feet of the hills that overlook it".²

The hop plant requires heavy feeding: hop cultivation demanded such enormous quantities of manure that on the ordinary farms the requirements of the hop garden frequently starved the rest of the farm. This consideration alone placed a ceiling on the size of productive unit. Even in the nineteenth century rarely more than 15 per cent of a farm's acreage was given over to hops. A list of bulky, organic manures suitable for hops would include: dung, woollen rags, shoddy or wool waste, cloth clippings, hair waste, rabbit waste, sheep's and pigs' trotters, quill and feather waste, star fish ("five fingers"), sprats, and other waste

¹D.W. Harvey, 'Locational Change in the Kentish Hop Industry and the Analysis of Land Use Patterns', Transactions and Papers of The Institute of British Geographers, 33 (Dec. 1963), 126-7; G.H. Garrad, A Survey of the Agriculture of Kent (1954), 97.

²Marshall, op. cit., I, 397.

fish. Many of these soil dressings would have been available to Canterbury hop growers. We know, for instance, that sprats were widely esteemed in north-east Kent as a soil dressing.¹ During July, William Ellis observed a practice which may have been a speciality of the Canterbury district:

Near Canterbury I saw, in this month, a composition of coal-dust, or ashes mixed with mud, to be turned afterwards, and incorporated well together, as a preparation, to enrich that ground which is to be made a hop plantation. Two thousand loads of such, or other mixture, were² here laid on seven acres of land for this very purpose.

But Canterbury had something else to offer. The City was a highly esteemed centre of the Hanoverian tourist industry and also an overnight halting stage for coaches on their way to Dover, which meant horses galore, and horse manure in abundance. As early as 1686, the stable capacity of Canterbury inns approached 500. During inquiries in 1755 and 1756 innkeepers were somewhat reluctant to furnish full details of the capacities of their establishments. By this time, however, there were 62 inns situated in the City parishes of Canterbury, more than in any other Kent town of the period, including Maidstone. In the adjacent parishes of St. Paul, St. Dunstan, St. Mildred, Harbledown, Thanington, Northgate, Staplegate and Westgate, a further 36 inns stood within stepping distance of the city centre. Almost 100 inns were thus concentrated in and around Georgian Canterbury, their stables producing hundreds of tons of horse manure, and their kitchens, no doubt, pouring out waste by the cartload.³ The evidence is sufficient to indicate a direct relationship between the vast quantities of manure and other organic waste in

¹G. Buckland, 'On the Farming of Kent', Journal of the Royal Agricultural Society, VI (1845), 273; KAO S/MN A21.

²Ellis, op. cit., IV, 57.

³PRO WO30/48-9; KAO Q/SB 1756.

Canterbury and high levels of hop cultivation. In 1691 Dame Jane Rook, one of the more substantial residents of St. Paul's parish, in the Borough of Longport, Canterbury, expressed her belief that "the hopp grounds lyinge in Longporte" were far superior to the hops grown in Bridge, a few miles away. This, she stated, was "because the hopp grounds lyinge in Longporte lye neere the Citty of Canterbury and are much more convenient for the layinge of dung thereon then the hopp grounds in Bridge doe lye".¹ It was observed that "they dung very much at Canterbury".²

In 1826 J.H. von Thünen published Der Isolierte Staat (The Isolated State), the pioneer work on the location of agricultural production. Von Thünen showed that around a market centre zones of production would develop, the inner zone being devoted to intensive crops of high value per acre. His method of approach, strikingly appropriate for studying the growth of the Canterbury grounds, is implicit in the present discussion. Some years earlier in 1803, von Thünen wrote a paper in which he was already putting forward the idea which is the germ of The Isolated State. In his Description of Agriculture in the Village of Gross-Flottbeck he laid down that only farms relatively near the town could make use of town dung to increase their yields.³ It may well be considered that, for this reason alone, the circle enclosing the City hop grounds of Canterbury bears a striking resemblance to the innermost "intensity ring" of von Thünen's Isolated State. Studies have shown that in non-mechanical agriculture the most intensively farmed land lies proximal to ample supplies of manure: in western Ireland, for instance, the amount of manure that will be put on the arable plots is determined by the distance

¹PRO E134 3 Wm. & Mary/East. 9.

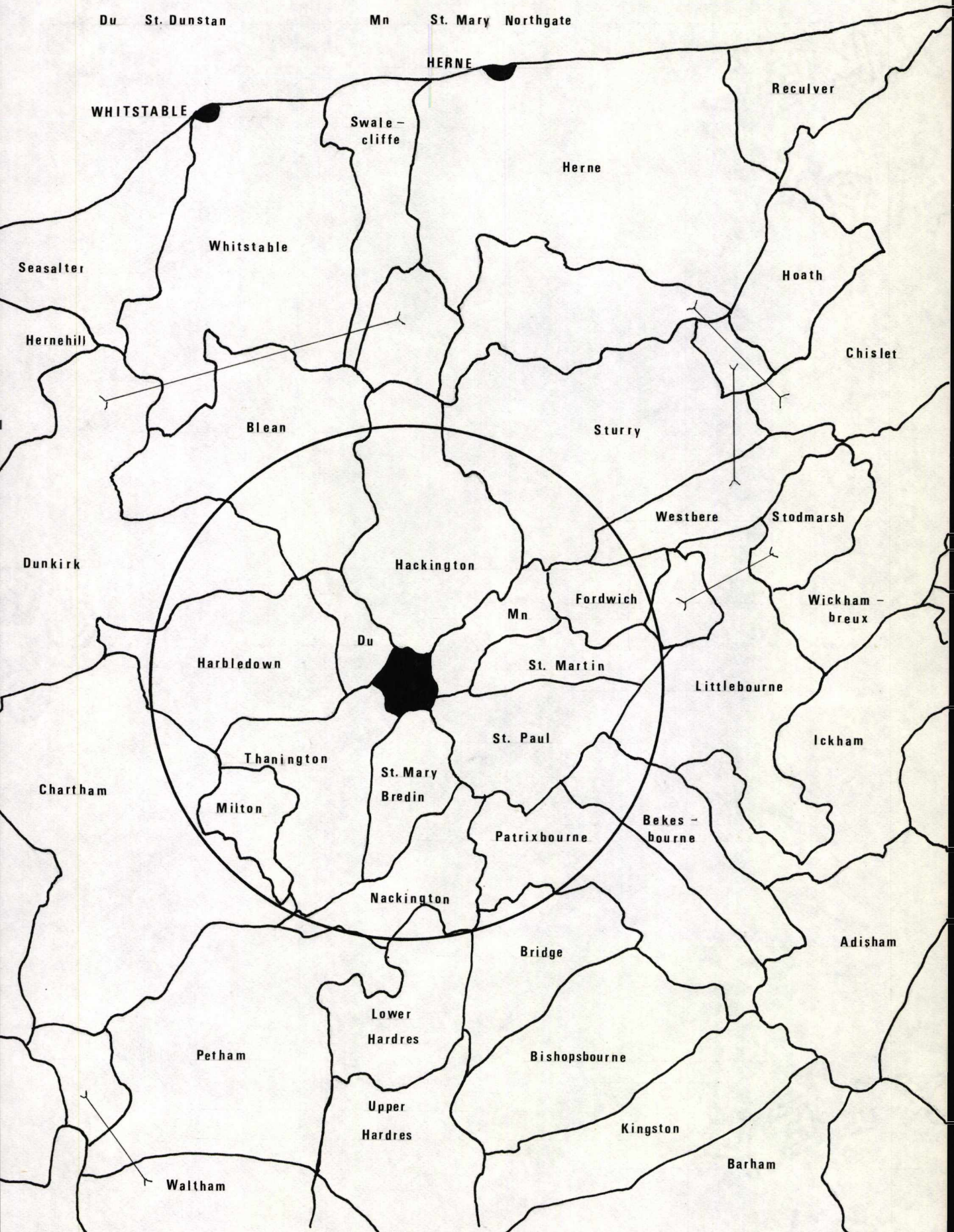
²Ellis, op. cit., V, 98.

³P. Hall, ed. Von Thünen's Isolated State, trans. Carla M. Wartenberg (Oxford 1966), xiii; M. Chisholm, Rural Settlement and Land Use (1966), 20-32.

Eighteenth-century 'City hop grounds' were concentrated within the circle (two and a half miles radius),

The inner shaded area comprises eleven parishes within the City walls: All Saints, Cathedral, Holy Cross, St. Alphege, St. Andrew, St. George, St. Margaret, St. Mary Bredman, St. Mary Magdalen, St. Mildred, St. Peter.

Du St. Dunstan Mn St. Mary Northgate

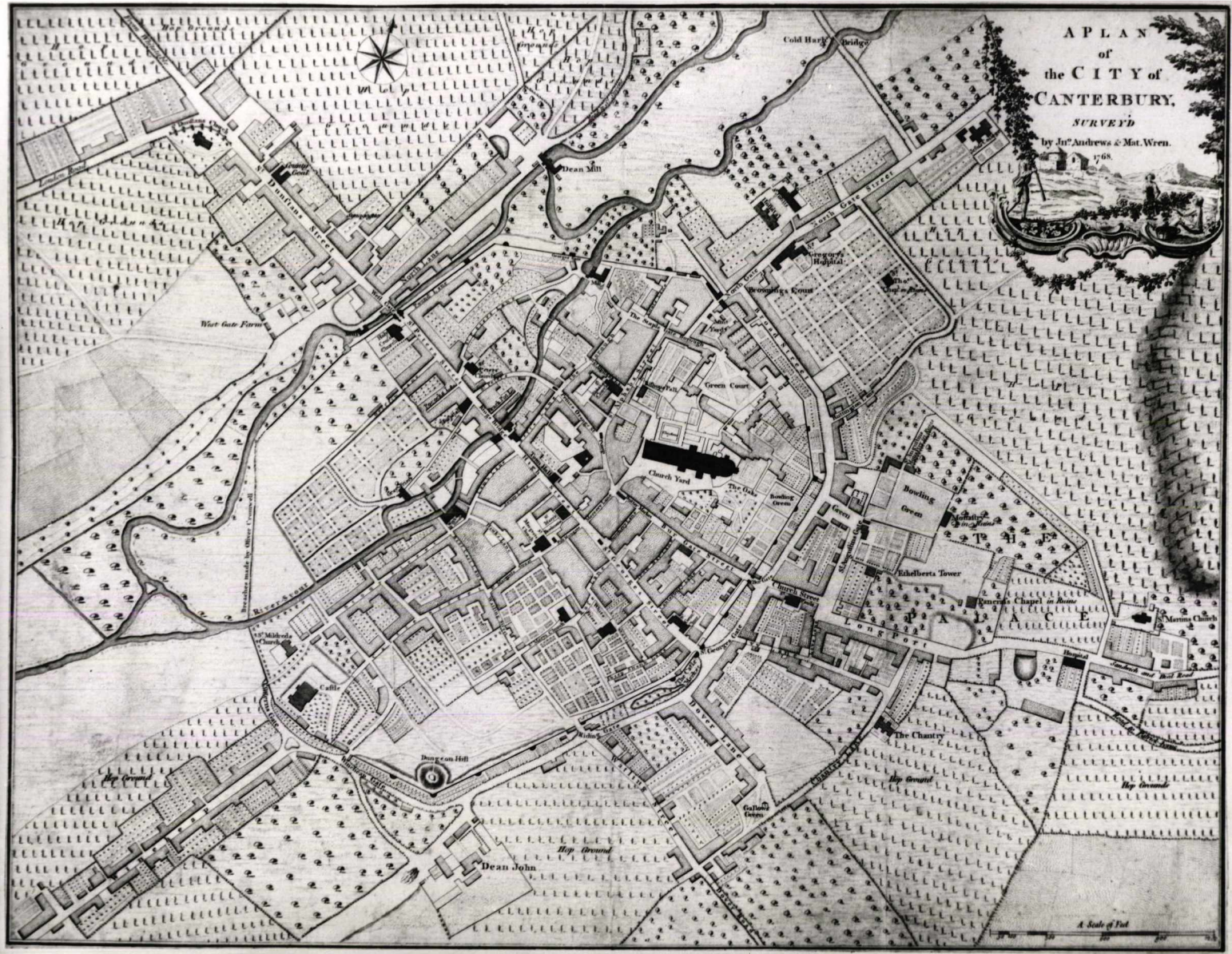
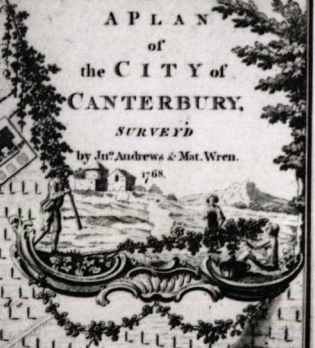


MAP 7 Canterbury Hop Growing Zone from circa 1680

Plate 11

Plan of the City of Canterbury (showing hop grounds) surveyed by John Andrews and Matthew Wren (1768), from an original print in Canterbury City Museum's Collection.

A PLAN
of
the CITY of
CANTERBURY.
SURVEY'D
by J^r Andrews & Mat. Wren.
1768.



A Scale of Feet

that the donkey can carry it.¹

One of the most important subsidiary facilities essential to hop cultivation was the supply of hop poles. The demand was heavy, the price high. Some 3,000 poles were required to establish an acre of hops, and 500 or 600 of these had to be replaced every year. Thomas Harris, a hop ground worker in the parish of Bridge in 1691, thought that "every three or four years it doth cost about £15 to new pole an acre of hops".² There were also strongly competing demands for the smaller timber that provided hop poles. The dyeing vats of clothiers, the kilns of brick and tile manufacturers, and the fences of numerous "improved" farms and market gardens consumed vast quantities of coppice production. Significantly, von Thünen put forestry as the land use occupying the zone second from the central city. There is abundant evidence to show that there developed in the region wide of Canterbury - particularly within the compass of a second "intensity ring" - a tradition of woodland management, designed especially for the production of hop poles.

There were conflicting views among contemporaries about the woods most suitable for hop poles, but chestnut, alder, ash, birch, willow and oak received frequent mention. Much of course would depend on the types available in the immediate locality. The Barton Court estate (St. Paul's parish) of Mr William Hougham was surveyed in 1757; a shaw of willow is located in one corner of a small $3\frac{1}{2}$ -acre hop garden. Such a situation was not untypical:³ frequently, a small plot next to a City ground would be coppiced for hop poles. The thickly-wooded parishes of Bridge, Hardres, Patricbourne, Bekesbourne, Chartham, Dunkirk and Blean could supply good quality poles of most types of wood to discriminating Canter-

¹M. Capstick, The Economics of Agriculture (1970), 25.

²PRO E134 3 Wm. & Mary/East. 9.

³KAO U239 Pl.

bury hop planters. Sir Anthony Aucher possessed three small hop grounds as well as extensive woodland in Bridge and Patricbourne: Gosley Wood, Whitehill and Shrubbswood. In the late seventeenth century these woodlands were supplying poles for Aucher's hop grounds, and a surplus for sale. During 1689-91 twenty acres of Whitehill Wood were felled; John Taylor of Bridge and Thomas Lawrence of Little Hardres, two of the labourers employed for this winter task, agreed that the hop poles they had cut were sold for 7s. a hundred. John Eldridge of Bridge, another woodcutter, estimated the cost of "felling and makeing an acre of wood" (i.e. cutting and preparing the poles growing on an acre) at 40s. He thought that poles worth 4s. and 5s. per hundred were kept for Sir Anthony's own hop grounds. Many hundreds of poles, therefore, were cut annually on this estate near Canterbury: during the winter 1682-3 at least 7,000 poles were cut. Many of these were for Sir Anthony Aucher's own use, but it seems the best quality poles were sold to other hop growers.¹ It was said, "Hop poles form a very material portion of the gain of a Kentish woodman".²

Whenever the sale or lease of a hop ground was advertised, the vendor was always careful to make a statement concerning the poles. Mary Clark, a widow, held the lease for 3 acres of hop ground in Thanington. When the remaining years of the lease were put on the market in 1761, it was noted that an oast house and "all the stock of hop poles on three acres of hop ground" were included in the transaction.³ There were many similar advertisements each year in the pages of the Kentish Post. Full-size, good quality poles were much sought after by Canterbury planters but there appear to have been ample supplies coming forward to keep pace

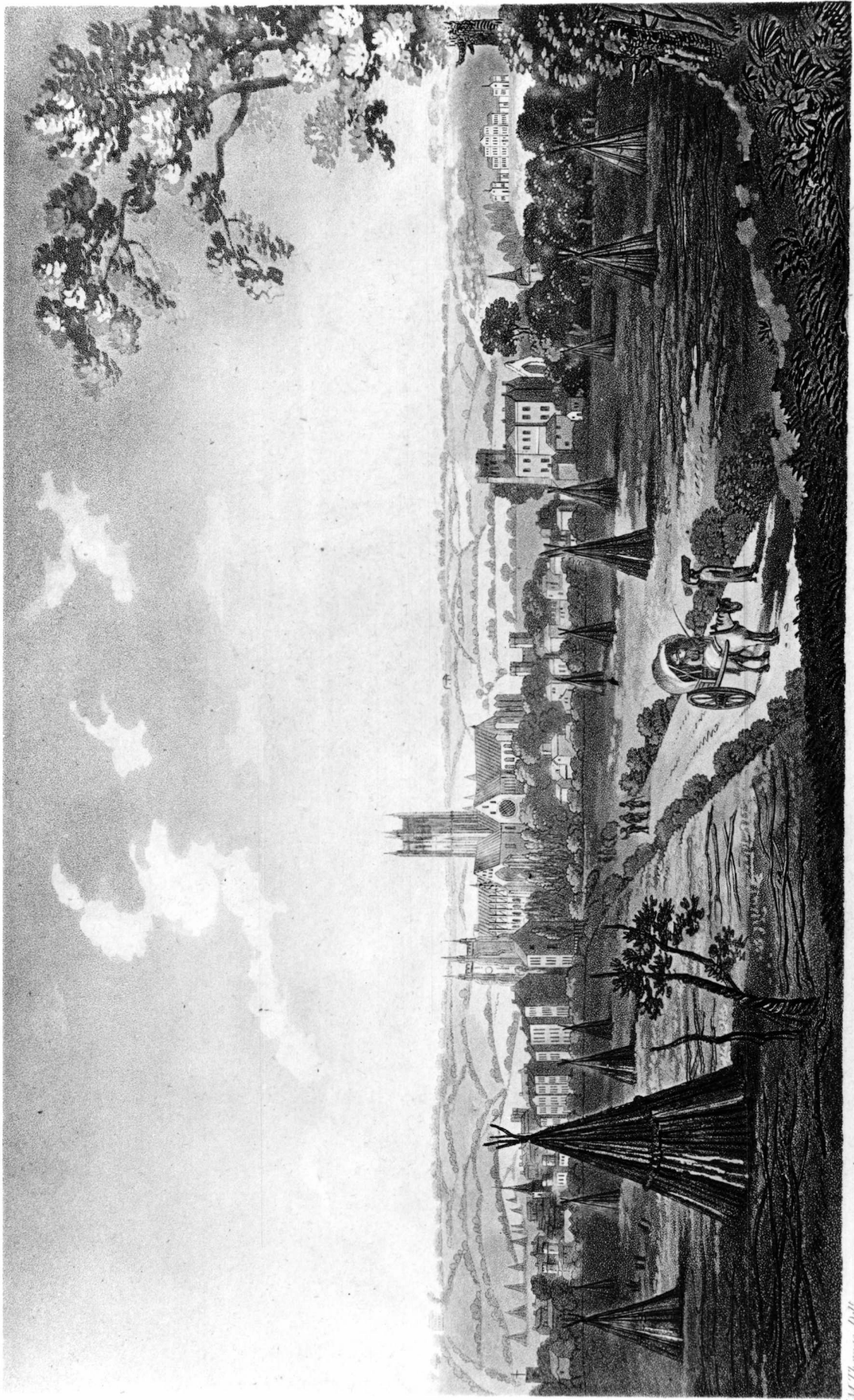
¹PRO E134 3 Wm. & Mary/East. 9.

²Banister, op. cit., 210.

³Kentish Post 9 December 1761.

Plate 12

South view of the City of Canterbury
(showing stacked hop poles) from an
original eighteenth-century print in
Canterbury City Museums' Collection.



T. Medford sculp

South View of the City of Canterbury

M. Thomas Del

with growing demand.

Hop cultivation required considerable skill. It was work "too hazardous to be attempted where not well understood". Benjamin Martin, writing in 1759, claimed: "At present Canterbury is celebrated as producing hops in greatest perfection". He thought that "probably the peculiar skill or care in some planters may not a little contribute to the difference".¹ A planter who had to initiate and sustain a complicated production and marketing schedule would need to have a sound knowledge of the techniques of cultivation, as well as good business sense. How did Canterbury hop planters measure up to these requirements? A few of them, particularly those who were already landowners and farmers and, possibly too, some of the brewers and maltsters, possessed the necessary knowledge and skill. But it can be argued that the vast majority of Canterbury hop planters - tradesmen, shopkeepers, widows - had neither the detailed knowledge required for successful hop growing nor the time to put it into practice. The yearly round of work was handled by professional hop ground stewards or managers.² Without these skilled agents who tended the City grounds, and indeed the hop lands in many rural parishes, such a large area of concentrated production could never have been maintained. In many cases, particularly on the smaller acreages, he is barely recognizable as a steward and takes on rather the appearance of a skilled and specialized farm labourer, working on an annual contract. The perfection of supervisory skills in hop ground management, and manual skills in hop garden routine, seem to have been rapid developments during the first half of the eighteenth century, further enhancing the City's reputation as Kent's leading hop centre. There seems to have been no problem in attracting labourers to work in the Canterbury grounds on an annual

¹Benjamin Martin, The Natural History of England (2 Vols. 1759), I, 149.

²For the case study of Robert Mein of Faversham see supra, 571-87.

engagement or for payment at recognized piece-rates. Where an annual engagement was the basis of employment Bradley thought "one man may keep two thousand hills, and yet reserve his winter's labour for any other purpose".¹ This seems to suggest that one skilled labourer could complete with ease all the necessary routine work on an acre of hop ground; but this programme would fully occupy his time.

Hop cultivation required a large casual labour force each picking season. The employment of poor families of the neighbourhood, and the use of seasonal migratory labour have been universal features of hop growing, from the earliest days until recent times. In some parts of Kent, from the early years of the seventeenth century pickers travelled several miles to work. George Franklyn employed between 50 and 60 pickers in his 6 acres of hop gardens in Chart Sutton in 1603. They included poor and crippled folk, "yea many soe extreame poore that they did lyve upon the almes of the parishes and poor mens boxes where they were resident".² In the Registers of St. George's, Canterbury, the baptism of little Sarah Even is recorded on 30 August 1719:

Sarah daughter of Edward Even and Alice, his pretended wife; hoppers and way-going persons.

There was no pretension about their means of livelihood in Canterbury, even though doubts were cast on the legitimacy of their leisure time activities beyond the city. A rather bizarre note appears in the registers of the same parish a few years earlier:

buried ... A poor woman that came a hoppin'³

¹R. Bradley, The Riches of a Hop Garden Explain'd (1729), 22.

²C.W. Chalklin, Seventeenth-Century Kent: a Social and Economic History (1965), 94.

³J.M. Cowper, ed. Parish Registers of St. George, Canterbury (Canterbury 1891), 13 September 1712; 30 August 1719.

Canterbury, situated in one of the more populous parts of the county, attracted hop pickers from surrounding villages and coastal towns, to supplement the host of willing hands in the city itself. There were, in Canterbury, large numbers of immigrant artisans, whose families flocked to the gardens at hop picking time. Celia Fiennes observed: "a great number of French people are Employ'd in the weaving and silk winding" in Canterbury. She went on: "I meet them every night going home in great Companies, but then some of them were Employ'd in the Hopping, it being the season for pulling them".¹ Was Jean de L'Ammoy in one of these "great Companies" of hop pickers? Possibly, for when he died in 1725 he was described as belonging to the "Congregation des Wallons en la Cité de Canterbury" in an inventory rendered wholly in French.²

The Waddells, farmers, maltsters, hop growers and merchants, employed a variety of workers in their gardens which lay in Nunnery Field, Gutteridge (14a.), Barnfield and Cockerdown, all in St. Paul's parish. During the 1740's and 1750's they employed, each picking season, a core of local families. Supplementing these, in years of large crops, came outsiders, from as far away as Dover and Folkestone. In 1746, for example, the hop picking season got away to an early start on 23rd August and lasted round to 16th September. 37 family groups were employed, eleven of these from distant centres lying, in the main, east of Canterbury: Dover, Deal and Ramsgate; Sarre and St. Nicholas in the Isle of Thanet; and Ashford, Chislet and Herne. These pickers gathered over 1,500 five-bushel baskets of hops that year, for which they were paid 9d. for each basket. Each family received at the end of the season an additional 1s. 6d. or 2s., which William Waddell "gave the Pickers in lieu of Hopkins" i.e. instead of hop ground "treats" of food and drink. The average take-

¹Fiennes, op. cit., 101-2.

²KAO PRC 11/77/196.

home pay earned by each family that season was £1 10s. 6d. However, more than a third of the families managed to earn over £2.

The 1759 season was disastrous for hops in St. Paul's parish and, it seems, generally. Picking started very late, on 14th September, and the last poles were pulled on 1st October, with only "one day bad wheather" recorded in this period. The crop, picked by the members of 17 families, amounted to only 667 baskets of green hops. It was a slow and tiresome task finding good hops to pick, for they were sparse on the bines that year. For this reason, the rate of pay was increased to 12d. a basket. There was just sufficient work for local pickers, including several wives of soldiers stationed at Canterbury. Once again a 6d. bonus was allowed to each picker "instead of Hopkins". The average sum taken home by each family was £1 11s. 3d. In 1759 - as in 1746 - about one third of the families earned more than £2.

The following year - 1760 - witnessed a busy hop picking season once again in which 1,240 baskets of hops were picked in the 11 fine days between 11th September and 4th October. But the piece-rate for picking dropped back to 10 $\frac{1}{2}$ d. Families from Dover and Folkestone, and soldiers from the local camp joined pickers whose homes lay nearby. In the 1760 season, only four families failed to earn more than £2. Average earnings per family rose that year to £3.¹

We can say with confidence that the wives and children of local farmers, farm workers, tradesmen and artisans, provided a readily available and stable labour force of hop pickers for Canterbury growers. Soldiers based in Canterbury, and their wives, were another useful source of labour. Occasionally, housemaids and other domestic servants would spend a half day or so in the gardens to eke out an odd shilling. Pickers from more distant places, especially Folkestone, Deal and other

¹PRO C111/55.

coastal towns, were a reserve pool to be drawn upon in years when the hops hung thick and called for a larger band of pickers than usual; more than could be mustered locally. Altogether, it was a flexible and workable system.

Some writers mentioned the seasonal migration of Londoners into Kent for the hop picking season,¹ but it is extremely doubtful whether they ever ventured as far as Canterbury during the eighteenth century. Cockney hoppers probably found plenty of work in the gardens of mid-Kent. Otherwise, much of Marshall's description of the hop picking season around Maidstone would have fitted the Canterbury scene quite well:

The description of workpeople is various; they being collected from various quarters. The country itself furnishes a great number, as it is the custom for women, of almost every degree, to assist at the hop picking. Tradesmen's daughters, even of the higher classes; and those of farmers and yeomen of the first rank, and best education, are seen busy at the hop bins. Beside the people of the neighbourhood, numbers flock from the populous towns of Kent; and many from the metropolis; also from Wales: hop picking being the last of the summer works of these itinerants.²

The rate paid at Canterbury seems higher than those offered in mid-Kent and the Weald. The daily earnings at Canterbury, for instance, were 25 per cent higher than those even at Faversham, only eight miles away. This was not due to any shortage of pickers. It seems likely that at least part of the premium received by the Canterbury grower for his hops, was passed on to his workers in the form of higher wage rates and earnings. He probably expected a high standard from his pickers, and also greater sobriety. At any rate, payments in kind - beer and spirits - feature less in Canterbury. These had a tendency, in other places, to accompany the huttet accommodation of the migrants, especially on the large farms.

¹See for example Ellis op. cit., V, 99.

²Marshall, op. cit., I, 242.

The welfare policy of a large, mid-Kent grower was described by William Ellis in 1750:

... he runs up a little hut, or shed, at every one or two bins and furnishes it with wheat-straw for the pickers to lie on, and a cask of small beer, that they may not lose time in quest of drink; and to make them proceed with greater courage, he gives each person, every morning, a quartern of gin, which is thought to be a preservative against the Kentish ague, that generally has the greatest power to seize those who live the poorest. This, with a penny a bushel for gathering, (only 5d. per basket in Canterbury terms) and a feast when the hop-work is all done, makes their hearts glad; and this he never fails of doing every year, by killing a fat steer and allowing them what strong beer they will drink.¹

The importance of prompt, careful and sufficient drying of hops has been known from the earliest days of hop growing. Reynold Scot gave full directions for the drying process in 1574 and supplied plans and sections showing the construction of an oast and furnace. The principle he laid down - that the moisture of the hop must be driven off by a rapid current of hot air - still holds true today.² Bradley mentions the use of a haircloth upon which the hops were spread out for drying in a layer of at least six inches. His ground plan of hop oast and furnace differs little from that of Scot.³ The author of Instructions for Planting Hops (1733) gave a detailed account of hop drying, pointing out the suitability of malt kilns for the task:

The best way of drying hops is with a charcoal fire, on a kiln cover'd with Hair-cloth, of the same form and fashion which is us'd for drying of Malt. In such parts of England, where hops grow, and a great deal of malt is made, hops are generally dried on the ordinary malt kilns.

Canterbury maltsters were closely concerned in hop drying, offering

¹Ellis, op. cit., V, 129.

²R. Scot, Perfite Platforme of a Hoppe Garden (1574), 38-44.

³Bradley, op. cit., 95.

their kilns and skilled services for this purpose.

But the writer of 1733 then added:

... where the hop planters have a much greater quantity of hops than can be dried in due time on their malt kilns, (for hops ought to be dry'd as soon as possible, after they are pick'd) they build several small kilns on purpose for drying of hops ...

A large number of purpose-built hop kilns, known as cockle oasts, were erected in Canterbury during the first half of the eighteenth century. The unique range of hop drying facilities available in the city derives from several features in the situation. First, the very large number of small oasts concentrated in a tiny land area, and operating non-stop through the picking season, ensured the minimum of delay in processing the local product. Secondly, the system which evolved was largely of contract drying, carried out efficiently at reasonable rates (5 shillings per hundredweight was the going rate). No grower need ever find himself without inexpensive drying facilities. Thirdly, the drying contractors were local businessmen - brewers, maltsters, innkeepers and farmers - who took pride in the quality of the service they offered. They employed competent dryers at high rates: three shillings a day for a head dryer, two shillings for his assistant.²

The system enabled small hop grounds to remain viable productive units. A planter faced with the need to build an oast for his sole use would have a strong urge to increase his hop acreage to unmanageable proportions, stretching his capital resources and increasing the risk beyond prudent limits. A large number of small, intensive, specialized growing-units, using common processing facilities, created a highly effective network of production, well able to withstand the characteristic

¹Instructions for Planting ... Hops, op. cit., 51-2.

²PRO C111/55.

stresses and strains of the industry. Nicholas Durant was one of several Common Brewers in Canterbury in the 1730's. In addition to his Castle Street brewery he owned several oast houses, a malthouse, and a number of public houses in the city and in neighbouring towns. Such a business represented an investment of four to five thousand pounds. Joseph Greenland described himself as "maltster and hop planter". He lived in the Riding-gate suburb of Canterbury during the 1730's. He owned hop gardens and ten "cockle and charcoal" oast houses. He undertook contract drying - and even offered his clients a choice of oast! He sold malt and dried hops, wholesale and retail.¹ Finally, the oasts themselves were modern, designed especially to make the most efficient use of the heat generated by the charcoal furnace. These small, shell-like structures represent an intermediate stage in English oast construction, standing between the old-style rectangular kilns depicted by Scot and Bradley, and the more capacious, high-pitched and cowled oasts of the nineteenth century. They mark an important stage of technical progress in the Kentish hop industry, developed during a period of high prosperity in Canterbury, yet they appear to have been entirely ignored by later generations.

Typical of the many advertisements relating to hop oasts, was one which appeared in the Kentish Post on 4th August 1764:

To be Lett and Enter'd upon immediately Three Cockle Oasts, Sixteen feet Square, with convenient Stowages, all in good Repair, near the Blue Boar, in the Parish of St. Alphege, in Canterbury.

Enquire for further Particulars of William Brewer.

The idea caught on in other east Kent parishes. A 15-foot cockle oast commissioned by Mr Robert Tritton of Chislet Park Farm was erected by a carpenter and bricklayer in 1745, for a total cost of £34 12s.²

¹Kentish Post 26 July 1729, 15 July 1732, 26 June 1736, 28 June 1740, 30 January 1760.

²PRO C107/96.

There was no shortage of material for making the bags and pockets in which the dried and pressed hops were marketed. The residents of the new Canterbury workhouse, built in 1728, were employed in making hop bagging for local sale. Private manufacturers competed with the institutional product and there are signs of intensive competition, reinforced by advertising campaigns. Sales by auction were common. The pages of the local newspaper provide the best guide to the situation:

The Guardians of the Poor of the City of Canterbury will at their next General Court to be holden the first Thursday in May next at the Workhouse in the said City, contract with any Person or Persons for all the Hop bagging they now have, or shall make on or before Michaelmas Day next - to be put up at Twenty Shillings per Hundred, and sold to the best bidder for ready Money, Weigh and Pay.

Advertisements being now become so very common, I may be thought deficient to myself in not thus publicly advertising my old Customers and others who please to favour me with their Custom.

That I will sell the best Home-made Hop-Bagging for two-pence Farthing per Pound; Fine Hop-Bagging, good Breadth and good Cloth, for Six-pence and Sixpence half-penny per Ell; and whoever please to pay present Money for the same, shall be allowed a Discount of twelve-pence in the Pound or three-pence in every Five Shillings.

I have also a few Pieces of strong coarse Hop-Bagging made of brown or blackish Flax Tow, which I will sell for two pence per Pound, with the same Allowance, as above, if present Money be paid for it.

By Henry Sims,
Cant.²

Once small hop gardens began to be established on the ideal Canterbury soils, from around 1680, a host of secondary economies began quickly to accumulate, making it particularly attractive and profitable to establish further hop grounds in the region. The agglomerative advantages, so far indicated, relate to: the growing propensity of local investors to

¹Kentish Post 8 April 1732.

²Ibid., 6 August 1743.

gamble in hops and bear the peculiar risks, together with a group of advantages related to economies of inputs - hop ground dressings, poles, managerial and manual labour skills, processing facilities, packaging materials.

These advantages in production however, were not the only ones at work, tending towards an intensive hop industry in Georgian Canterbury. There remain to be considered the agglomerative advantages which existed in the process of hop marketing. A production policy is only half a policy if it is not welded to effective use of resources in marketing!

Canterbury planters sold their hops in Canterbury itself and in London. Sales to local brewers were direct: no middlemen were involved. Hops sent to London were transported by waggon to the quaysides of Whitstable and Herne and loaded into coastal hoys which operated regular schedules to London. The cargoes of hops were unloaded at wharves along the south bank in the vicinity of London Bridge, and stowed in purpose-built warehouses, judiciously insured against loss or damage by fire. They were taken the short distance to the Borough Hop Market when required. Hop factors arranged sales to hop merchants and brewers, many of them with Southwark business addresses. In Canterbury, Whitstable and London, numerous inns provided the vital links in a tight chain of distribution. Small family firms predominated in hop growing, as we have seen already. This was also a characteristic of hoy businesses, factors', hop merchants', and brewers' concerns. We find some firms of hop merchants and brewers, though, which become large scale businesses even before mid century.¹

C Gentlemen Planters of Canterbury

The eastern suburb of Canterbury, beyond Burgate, is known as the Borough of Longport alias St. Paul's parish. "The family of the

¹The marketing of hops is discussed more fully in the next two chapters.

Waddell's", said Thomas Miles, a local farmer in 1763, "have long been principall people in the parish and many years assessors of the Land Tax".¹ Richard Waddell was the lay impropiator of tithes in this large parish from 1725 until 1733; the record of "small tithes" relates almost wholly to hops.² The information contained in Waddell's little notebook is unrivalled: correlated with leasehold and other evidence it makes possible a detailed analysis of hop growing in St. Paul's, where more than a hundred planters were involved. The tithery related to some 600 acres of cultivable land;³ as much as a half of this area was growing hops by the 1720's.

Richard Waddell possessed freehold property in Ash, Staple and Lower Hardres. He owned a sizeable house and a malting business in St. Paul's where he also rented a farm of more than 100 acres. Waddell also leased land to others for growing hops. He referred to himself as a "maltster" but he was also a farmer, a "gentleman planter", and a dealer in hops.⁴ Altogether, Waddell's diversified business interests made him a man of some substance, a worthy member of the pseudo-gentry in early Georgian Canterbury.

The progress of hop planting in St. Paul's during the nine-year period 1725-33 is summarized in Table 35, and Figures 14 and 15. The six years following 1725 were clearly a period of crisis in the English hop industry, largely due to a run of low hop prices. The season of 1725, when hops failed everywhere, has already been remarked upon.⁵

¹PRO C12 359/5.

²Ibid., C111/55.

³Ibid., E134 30 Geo.2/Trin. 4.

⁴KAO PRC 32/61; PRO C111/55.

⁵See supra, 540-1.

TABLE 35

FLUCTUATIONS IN HOP GROWING 1725-33

Year	St. Paul's Canterbury		3	Kent	England & Wales	Milstead (Kent)
	1 Number of Grounds	2 Average Area (acres)		4 Area of Hops (acres)	5 Area of Hops (acres)	6 Price (sh. per cwt.)
1725	110	2.84	312.50	8,127	23,602	210.0
1726	107	2.85	305.00	7,882	23,025	56.0
1727	97	2.94	285.00	7,501	22,454	56.0
1728	96	2.83	271.75	7,501	22,454	48.0
1729	91	2.77	252.50	6,949	20,824	32.0
1730	81	2.59	210.00	6,547	19,270	54.0
1731	74	2.85	211.00	6,502	18,790	130.0
1732	81	2.85	231.25	not available		147.0
1733	90	3.14	282.45	not available		75.0

Sources: Columns 1, 2, 3: PRO C111/55;
Columns 4, 5: Customs 48/12/221-2, 369; PRO TI 278/41;
Column 6: KAO U593 A2.

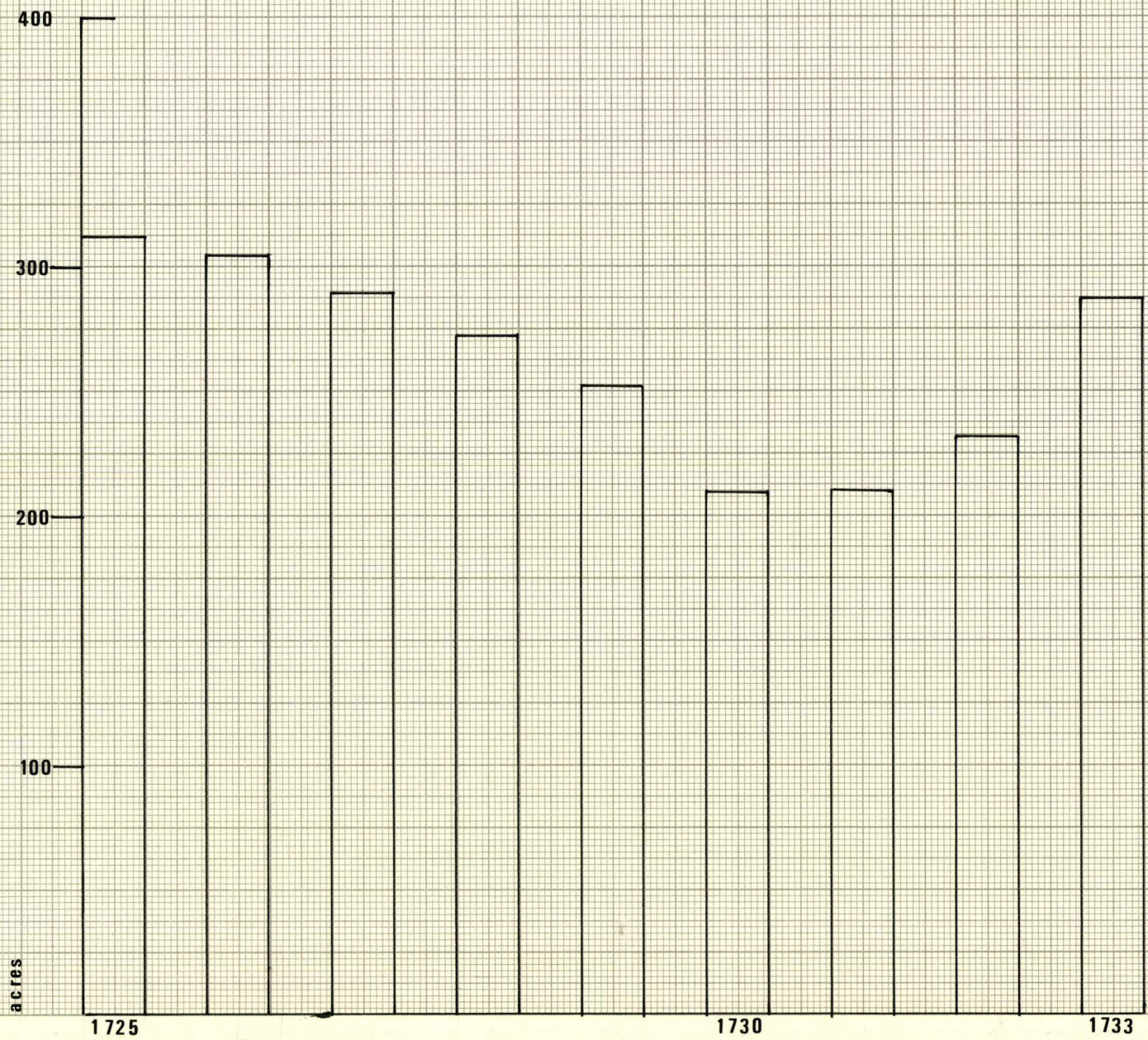


FIGURE 14 St Paul's Canterbury: Acreage under Hops 1725 - 33



FIGURE 15 St. Paul's Canterbury: Number of Hop Grounds 1725 - 33

TABLE 36

ST. PAUL'S CANTERBURY: HOP GROUNDS 1725-33

Size of Ground	1725		1730		1733	
	Number of Grounds	Per cent	Number of Grounds	Per cent	Number of Grounds	Per cent
under 2 acres	50	45.45	38	46.91	35	38.89
2-5 acres	47	42.73	37	45.68	43	47.78
over 5 acres	13	11.82	6	7.41	12	13.33
Total	110	100.00	81	100.00	90	100.00

Source: PRO C111/55.

Subsequently, low prices from 1726 to 1730 forced many small growers out of business and persuaded the larger growers to reduce their vulnerable acreages. In St. Paul's parish the total acreage under hops declined by a third, from 312 acres to 210 acres, in the five years following 1725. The number of growers declined by the same proportion reaching its nadir in 1731. A similar trend can be seen at county and national levels. Fortuitously the only extant national hop statistics for the eighteenth century relate to the period 1721-31 and can therefore be usefully employed for comparative purposes. We may guess that the higher prices which obtained in the early 1730's encouraged new plantings on a hitherto unprecedented scale until, by 1736, it was observed: "everybody is now in the humor of planting hops".¹ A great expansion in hop growing from about 1680 has been suggested, and in the long run this was undoubtedly true. But there were short-run fluctuations: the most serious setback came in the later 1720's. In St. Paul's at any rate, and almost certainly elsewhere, the turning point for recovery came in 1732. There are numerous references, in the tithe record for St. Paul's, to "young hops" and "young hop grounds" in 1732 and 1733; the tithe composition payable on these was two-thirds of the full rate, 6s. 8d. instead of 10s. an acre. No doubt Waddell's record was accurate on this score.

Table 36 illustrates the effect of crisis on the size of grounds. The figures for 1730 can be taken to represent the position at the lowest point of depression.² The largest percentage decline was in the number of large growers (although these are few in number anyway), but this does not mean they gave up hop growing altogether: they merely qualified for the "middle bracket" in view of their shrunken acres; the detailed record

¹Sussex Arch. Soc. MSS. RF15/25.

²1730 was the year of lowest recorded acreage and smallest average size of ground. But from the point of view of growers leaving the hop business, 1731 was the lowest point reached.

TABLE 37

CANTERBURY HOPS: LEASES OF GROUNDS (WADDELL) 1714-58

1	2	3	4	5	6	7		
Date of Lease	Lessee	Occupation	Size (acres)	Description	Term (years)	Rent (per annum)		
						£	s.	d.
2 Mar. 1714	Elizabeth and Mary Young	-	1	Hop ground in Barnfield, St. Paul's.	14	3	0	0
2 Mar. 1715	Robert Young	Hop planter	6	Hop ground in Barnfield, St. Paul's.	14	18	0	0
29 Oct. 1717	Elizabeth Young	-	1	Hop ground	12	3	0	0
22 Aug. 1718	George Dodson	Maltster	2	Hop land in Patrixbourne "now planted with hops".	6	6	0	0
3 Nov. 1718	William Waddell	Hop planter	1	"ground to be planted with hopps".	7	3	0	0
3 Nov. 1718	William Waddell	Hop planter	1	Ground in Cockerdown, St. Paul's, "to be planted with hopps".	7	3	0	0
3 Nov. 1718	Charles Dixon	Carpenter	0.5	"Ground to be planted with hopps".	7	1	10	0

TABLE 37 (Cont.)

1	2	3	4	5	6	7		
Date of Lease	Lessee	Occupation	Size (acres)	Description	Term (years)	Rent (per annum)		
						£	s.	d.
3 Nov. 1718	William Kemp	Maltster	1	"Ground to be planted with hopps".	7	3	0	0
- 1718	William Francis	Baker	5	Hop ground	9	15	0	0
30 Apr. 1719	Thomas Smith	Feltmaker	4.25	Hop ground "being now planted with hops"	9	12	15	0
Michaelmas 1719	Charles Dixon	Carpenter	1.25	Hop ground in Cockerdown, St. Paul's	7	3	15	0
6 Jan. 1720	John Williams	Maltster	1	" " "	7	3	0	0
10 Feb. 1720	Samuel Cox	Bricklayer	1	" " "	7	3	0	0
20 July 1720	John Williams	Hop planter	1	"Land to be planted with hopps"	7	3	0	0
2 Aug. 1720	Thomas Figg	Husbandman	1	Hop ground in Cockerdown, St. Paul's	7	3	0	0

TABLE 37 (Cont.)

1	2	3	4	5	6	7		
Date of Lease	Lessee	Occupation	Size (acres)	Description	Term (years)	Rent (per annum)		
						£	s.	d.
20 Oct. 1726	John Robinson	Vintner	1	Hop ground	7	3	0	0
5 Dec. 1727	Samuel Fremoult	Brewer	12	Hop ground in Patrixbourne	7	36	0	0
17 Mar. 1731	Thomas Wells	Victualler	1.5	Land "now markt and laid out for hopground"	7	4	10	0
17 Mar. 1731	Edward Hayward	Hop planter	2	Land "markt and laid for hopground"	7	6	0	0
17 Mar. 1731	James Abree Thomas Gill	Printer Hop Merchant	3	Hop ground "being part of a certain field called Barnsfield in the parish of St. Paul"	7	9	0	0
4 Feb. 1733	Thomas Hollingbery	Maltster	5.25	Hop ground (3 pieces)	7	15	0	0
10 Apr. 1733	William Waddell	"hopplanter and brother to ... Richard Waddell"	1	Hop ground (Barnsfield)	7	6	0	0
			1	Hop ground (Cockerdown)				

TABLE 37 (Cont.)

1	2	3	4	5	6	7		
Date of Lease	Lessee	Occupation	Size (acres)	Description	Term (years)	Rent (per annum)		
						£	s.	d.
3 Aug. 1733	Phebe Francis	widow	5	Hop ground (3 pieces)	9	15	0	0
10 Dec. 1733	Robert Sanders	Tailor	2	" " (2 ")	7	6	0	0
5 Nov. 1734	William Judivain	Silk weaver	4	" " (Cockerdown)	7	15	0	0
5 Nov. 1734	Philip Driver Thomas Bachelor	Innkeeper Husbandman	1	" " (Cockerdown)	7	3	0	0
5 Nov. 1734	Alexander Steady	Hop planter	1	" " "	7	3	0	0
28 Jan. 1740	John Gaige	Yeoman	2	" " (Barnsfield)	5	6	0	0
20 Oct. 1742	Rest Fenner	Brewer	6	" " (Patrixbourne)	7	18	0	0
5 Dec. 1744	Stephen Pilcher	Hop planter	0.5	Hop ground	7	1	10	0

TABLE 37 (Cont.)

1	2	3	4	5	6	7		
Date of Lease	Lessee	Occupation	Size (acres)	Description	Term (years)	Rent (per annum)		
						£	s.	d.
1 Jan. 1745	James Abree	Printer	3	Hop ground	7	9	0	0
10 Mar. 1746	John Sharpe	Cowkeeper	1	arable land "intended to be planted with hops" (Patricxbourne)	7	3	0	0
3 Oct. 1751	Robert Marsh	Victualler	3.5	Hop Ground (Barnsfield)	7	10	10	0
14 Nov. 1751	Thomas Cooper	-	3	" " (Patricxbourne)	7	8	5	0
22 Sep. 1752	John Spratt	Yeoman	1	Hop Ground (Barnsfield)	7	3	0	0
- 1758	James Abree	Printer	3	Hop Ground	7	9	0	0

Source: PRO C111/55.

TABLE 38

CITY OF CANTERBURY PROBATE INVENTORIES: HOP PLANTERS 1701-53

1	2	3	4	5	6			7	8		
KAO PRC	Date	Name	Parish	Occupation	Value of Inventory			Items related to hop growing	Value		
					£	s.	d.		£	s.	d.
11/62/207	1701	Thomas Younge	St. Mildred	"gardner"	240	6	6	45 cwt. hops "the hopp poals in several peeces of lande" 2 iron peelers, 2 hop dogs	131	4	0
27/35/177	8 May 1702	Thomas Buck	St. Mary Bredman	[farmer]	459	1	2	5½ acres hop ground 2 oast cloths Hop baskets	82	10	0
11/64/49	20 Apr. 1703	John Burden	City	"maulster"	301	5	0	"an acre and an halfe of hopground as it stands" "haire cloth"	39	0	0
11/66/105	3 Aug. 1705	Richard Austen	St. Mildred	Baker	129	18	0	Hops and hop poles 3 pieces of "new hop bagging"	50	0	0
27/37/242	12 Oct. 1706	Matthias Gray	City	"Alderman of the City"	773	2	0	"Six acres & a halfe of hopp poles"	50	0	0

TABLE 38 (Cont.)

1 KAO PRC	2 Date	3 Name	4 Parish	5 Occupation	6 Value of Inventory			7 Items related to hop growing	8 Value		
					£	s.	d.		£	s.	d.
11/69/21	18 May	1709 John Cranford	City	Brewer	1899	11	8	3 $\frac{1}{4}$ acres of hop ground and poles	65	0	0
								6 acres @ £30 and hop poles	180	0	0
								2 acres @ £10 and hop poles	20	0	0
								1 acre and hop poles	25	0	0
								$\frac{3}{4}$ " " " "	17	0	0
								2 $\frac{3}{4}$ acres @ £30 and hop poles	82	10	0
"for hops at London Charges excepted"								227	5	0	
20 hop baskets, 4 dogs								1	10	0	
11/70/96	3 May	1710 John Parker	St. Mary Bredin	"hop-planter"	206	15	4	"the hoppoles on the hopground"	115	0	0
11/70/242		1711 Nathaniel Hewing	St. Mildred	Pipe maker	127	12	6	"the poles of an acre and a halfe of hopground"	15	0	0
11/74/69	11 Apr.	1718 John Sheafe	St. Peter	Barber	132	10	5	4 acres of hop ground	48	0	0

TABLE 38 (Cont.)

1	2	3	4	5	6			7	8		
KAO PRC	Date	Name	Parish	Occupation	Value of Inventory			Items related to hop growing	Value		
					£	s.	d.		£	s.	d.
27/40/124	6 Oct. 1718	David Jones	St. Augustine	Grocer	209	15	6	"The hopground one Acer and a half of second year hopland"	20	0	0
11/75/54	11 Apr. 1720	Edward Harnett	City	Tallow Chandler	478	10	8 $\frac{3}{4}$	Hop poles and dung Plants, rent and "workmanship" "another parcell of hoppoles on Mr. Warner's ground"	20	0	0
									20	0	0
									3	0	0
11/77/177	22 Apr. 1725	George Elphick	St. Mildred	School-master	34	7	1	"4 baggs of hops weighing about ten hundred & five pounds which ... were in the hands of John Phillips who dryed & bagged them & which clear of that charge amounting to 3 li. 4s. and of 4 li. 3s. 9d. for the Kings duty ... and deducting 1ls. for ... selling & weighing sold for 21	5	9	

TABLE 38 (Cont.)

1	2	3	4	5	6			7	8		
KAO PRC	Date	Name	Parish	Occupation	Value of Inventory			Items related to hop growing	Value		
					£	s.	d.		£	s.	d.
11/79/146	7 Aug. 1728	William Lampard	City	Butcher	197	13	5 $\frac{1}{2}$	4 acres of hop ground and poles "Oast to dry hops": 6 hop baskets, 2 pieces of hop bagging, shovel and poker, "cockle dog"	20	0	0
11/79/228	23 July 1730	George Hammon	"within the Liberty of the old Castle near the City of Canterbury	Husbandman	51	0	0	"The hops & stock on the Hop-ground "Hop oast": 7 "hopp baskets", 7 "hopstooles", "some ropes & poles to draw hops up, one hair line, one hair cloth, 2 shovells, 1 hop pockett, 1 pitcher, 1 hop dog".	14	10	0
11/79/185	22 Oct. 1730	James Word	St. Mildred	Grocer	248	5	3 $\frac{1}{4}$	66 cwt. of "brown mouldy hops" 10 old hop baskets, 3 sacks charcoal, 2 old shovels "In the Hopgrounds the stock of poles on one acre in a peice call'd the Eighteen Acres"	99	14	0
									3	10	0

TABLE 38 (Cont.)

1	2	3	4	5	6			7	8		
KAO PRC	Date	Name	Parish	Occupation	Value of Inventory			Items related to hop growing	Value		
					£	s.	d.		£	s.	d.
								"The stock of poles on one acre in a peice call'd the Ten Acres"	5	0	0
								"The stock of poles on two acres in Bargate Field"	12	0	0
								"The stock of poles on three roods of ground in Coneydown"	3	10	0
11/80/60	16 Nov. 1732	Edward Rigden	City	"Wegener"	69	5	2	"1 Aker of yong hopgrowne"	20	0	0
11/80/219	3 Feb. 1736	Daniel Dawson	St. Mary Magdalen	"Linnen weaver"	333	4	4 $\frac{3}{4}$	50 pieces of hop bagging 44 $\frac{1}{2}$ yards of "hair cloth"			
11/82/62	29 Apr. 1742	Thomas Johnson	City	Baker	220	9	10	"In the hop oust": charcoal, ten pockets, haircloth, 8 hop baskets, 6 stools. Poles on 3 acres hop ground	26	0	0

TABLE 38 (Cont.)

1	2	3	4	5	6			7	8		
KAO PRC	Date	Name	Parish	Occupation	Value of Inventory			Items related to hop growing	Value		
					£	s.	d.		£	s.	d.
11/83/111	7 Aug. 1753	Benjamin Austen	Holy Cross	Tanner	801	13	5	4 acres of hop poles "In London - hops of the deceased's at the time of his death and since sold for"	28	0	0
									22	11	0

confirms this. Furthermore, the process continued downwards and it was the smallest growers who tended to be driven from hop growing altogether. In short, a downward "squeeze" meant that many growers reduced their acreages, the smallest of them to the point where they had nothing left. 1733 can be taken as the new "norm". We find not only the number of large growers restored: the proportion of small growers compared with 1725 has shrunk, the middle group has grown. The generally larger investments in hop growing in 1733 represent a renewed confidence in the crop, greater even than in pre-crisis days. By 1733 the size of an average hop garden in St. Paul's had risen to 3.14 acres compared with 2.84 acres in 1725.

Who were the planters? Here the evidence is singularly revealing. Table 37 summarizes the extant leasehold indentures of hop growers who rented land from Richard Waddell and, after Richard's death, from his brother William. These are but some of the many Canterbury growers who paid the small tithe to the Waddells until 1733. The wide range of occupations corroborates the evidence of Canterbury probate inventories (Table 38).

The term "hop planter" had acquired a measure of socio-economic significance and status before 1720 and growers were already adopting this nomenclature: William Waddell and Robert Young for instance; later on William Waddell was referred to as a "gentleman". Richard Waddell leased land to several fellow-maltsters, George Dodson, William Kemp, Thomas Hollingbery, Stephen Pilcher. In the 1720's and 1730's Thomas Hollingbery was one of the largest growers in St. Paul's, with an area of hops which varied from 10 to 12 acres. John Williams was both "maltster" and "hop planter" in lease indentures of the same year, which emphasises the difficulty of distinguishing the precise nature of his complex business.

Brewers, too, grew hops - a prime example of vertical integration in the industry. Messrs Rest Fenner and Samuel Fremoult were two leading

Common brewers in Canterbury during the first half of the century. Besides their considerable breweries, Fenner and Fremoult owned numerous inns, alehouses and oasts in the City and had sizeable investments in hop growing by 1725.¹ It is perhaps not surprising to find innkeepers, victuallers and vintners involved in hop growing, establishing convenient backward linkages in the drink-business. Philip Driver, who rented an acre of hop ground in partnership with Thomas Bachelor, a local farmer, was described as an "innkeeper" in 1734. As early as 1729 Driver was landlord of The Two Bells in St. George's Canterbury, where he also re-tailed oats, beans, peas, barley and clover seed "at reasonable rates".²

Numerous tradesmen with no apparent interest in general farming were involved in the hop business: carpenters, bricklayers, bakers, felt-makers, tailors, silkweavers and a host of others. Yeomen and husbandmen rented additional ground for hops but the appearance of a "cowkeeper" is perhaps unusual.

It is clear from the leases that land rented from Richard Waddell was intended to be kept as hop ground; it was usual for specific conditions to be attached to the lease. The acre of ground leased to William Kemp in 1718, for instance, was to be surrendered at the end of seven years "sufficiently planted with good and well thriving hopsetts or hop-plants", the ground leased to others in the same year similarly. Sometimes a penalty clause was inserted: when Elizabeth Young's lease of an acre was renewed for twelve years in 1717, it was stipulated that "if during the last 2 years of the lease ... the land is broken up and not continued in hops ... £10 shall be paid to Richard Waddell". In 1727 Samuel Fremoult was permitted, should he wish, to convert his 12 acres of hop ground to tillage but only on condition that it was cultivated in

¹Kentish Post 1 December 1725, 14 February 1730, 22 April 1741, 1 August 1744, 6 February 1751, 30 January 1760, 16 August 1760.

²Ibid., 26 November 1729.

"a round tilt ... with wheat, beans and barley". Furthermore, he was obliged to spread annually "fifty good cart loads of good and well rotted dung" and to ensure that the work was performed in "a good and husbandlike manner". A clause in Rest Fenner's lease of 6 acres in Patricbourne related to trees growing on the land:

Rest Fenner ... shall not cut down top or lop any of the timber trees growing on the demised premisses save only that it may be lawful for him ... to cut off such branches as shall happen to hang over and prejudice or damage any of the hops that shall grow or be on the demised premisses ...

The wide range of occupations of hop growers is further confirmed in the list of over a hundred growers who, at one time or another before 1733, paid tithe to Richard Waddell. No occupations are stated in the record itself but familiar names can be traced in the pages of the Kentish Post or in extant probate inventories. Some examples illustrate the value of this exercise. Hercules Hills (4 acres) owned a bakery business near the butchers' shambles in St. George's parish. John Talputt (3a.) was a leading Canterbury baker from at least 1736 when he owned a business in Burgate; he was Mayor of Canterbury in 1750. Two of his fellow hop planters in St. Paul's - Hall (3a.) and Picard (3a.) - were aldermen of the City.¹ Mr Randolph Ludd (15a.) was a brewer in the High Street.² John Greenland (2a.) was a maltster who also possessed ten oasts used for contract hop drying.³ Ralph Claringbole (1 a.), landlord of The Castle in Butchery Lane - a local "exchange" for farmers - also possessed oast houses in Sheepshanks Lane in Canterbury.⁴ John Bolver (3a.) and Thomas Hartcup (2.5a.) were in competition in the stage-coach business, running

¹Ibid., 28 February 1736, 14 February 1750.

²Ibid., 17 April 1728, 21 June 1730.

³Ibid., 15 July 1732, 22 May 1736, 28 June 1740.

⁴Ibid., 3 September 1726, 12 May 1750.

regular schedules to London on three days each week as early as 1728; three years later Bolver and Hartcup were business partners operating the "Canterbury Flying Stage Coaches" to London. John Bolver was also an undertaker: in 1748 he supplied a hearse, two coaches and six horses for the funeral of Mrs Catherine Swift at Sharsted Court, Doddington.¹

Dr Corbett paid a rent of £2 to Richard Waddell in 1729 for a hop ground in St. Paul's. Have we at last found the real author of Riches of a Hop Garden published in the same year by Richard Bradley? If we can trust the word of an early eighteenth-century graffito expert, undoubtedly this is our man!²

James Abree and Thomas Gill were partners in a 3-acre enterprise; Abree was editor of the Kentish Post from at least 1726 until 1768; Gill, who lived in Chartham, was a farmer, hop dealer, and prominent Canterbury businessman.³ Rev. David Jones (2a.) was Rector of Great Hardres and brother-in-law of Sir William Hardres; he died at the age of eighty in 1750.⁴

Finally, planters of immigrant stock are evident in the tithe record: Edward Wolfe, Benjamin Lucarne, Samuel Fremoult, Henry Lenacre, John Le Lesden, William Judvain to name the obvious ones. We cannot test and confirm every instance but the evidence is so far convincing. Judvain appears in his lease as a silkweaver. The origin of the anglicized form Fremoult can be established from the inventory of William Fremaux, a

¹Ibid., 20 March 1728, 24 March 1731; KAO U145 A4/4.

²For the context of this comment: "this treatise belongs originally to Dr Corbett LL.D. near Canterbury but stole and published by Bradley with some few things of his own inserted" see supra, 490.

³KAO PRC 11/83/85, 31/222.

⁴Kentish Post 22 August 1750.

weaver of St. Paul's parish who died in 1687.¹ A branch of this family became prominent brewers in Canterbury during the early eighteenth century. John Le Lesden had become Lellesden before he died in 1753; in that year he possessed 5 acres of hops; the value of his investments in hop growing amounted to more than three-fifths of his personal wealth.² Such examples provide further evidence for the contribution made by immigrant families to the hop business although, of course, by the 1720's integration of the alien community was virtually complete.

A meaningful study of Hanoverian Canterbury would need to take into account social factors which can only be briefly mentioned here. Hop planters, a prestigious group, contributed to, and benefited from the intense social life of the City in its palmy days of prosperity. They invested in its social capital and ensured a high rate of return for themselves. The social magnet of Canterbury might well be considered an agglomerative advantage of the first magnitude, serving to attract the adventurer who sought, besides the gamble of a good hop ground, a "new built", "bricked" and "new-sashed" town house, complete with walled garden; good eating in the "London style", jewellers and peruke makers of unquestionable taste and quality, and any one of a dozen other conspicuous facilities - from attorneys and surgeons to horse-races and music societies - which would enhance his style of living and encourage his efforts to retain, or more likely seize for the first time, the status of gentleman. In early Georgian Canterbury the aspiring hop planter could find all these delights and more besides. Flower nurserymen and their stocks proliferated in the grounds near the Archbishop's Palace; many a migrant pastrycook or fashion draper, hot-foot from London, set up shop in the High Street or Mercery Lane. And a London printer who

¹KAO PRC 11/51/12.

²Ibid., 11/83/106.

settled in the commercial quarter around St. Margaret's early in the century, was encouraged by the Mayor and Aldermen to expand his business. Thus in 1717, The Kentish Post and Canterbury Newsletter, one of the earliest and finest of England's early provincial newspapers, burgeoned among the hop grounds. Both flourished.

By the time William Gostling recorded his Walks around Canterbury perhaps the greatest half-century of prosperity in that City was beginning to wane. But the hops were still there in the 1770's, as Gostling saw for himself:

Within the circuit of two miles and a half round Canterbury in what are called the city grounds, more than two thousand acres of land are in continual cultivation for hops, which are greatly esteemed in the London market for their superior strength and colour.¹

Canterbury was far from being an Isolated State, but for the gentlemen hop planters who lived a full life there in the early Georgian Age, it must have seemed something like an Ideal State.

¹W. Gostling, A Walk in and about the City of Canterbury (1774), 1.

TABLE 39

CANTERBURY HOP GROUNDS 1733-1823

Parish	Acreages				
	1733	1760	1807	1821	1823
St. Dunstan	-	123	36	18	20
Hackington	-	-	136	31.5	32
Harbledown	-	-	134	81	78
St. Martin	-	-	12	9	21
St. Mary Bredin	-	-	307	228	170
St. Mildred	-	-	11	11	9
St. Paul	282	-	161	84	60
Thanington	-	-	261	182	174

Sources: 1733: PRO C111/55.

1760: Cathedral Archives Library, Canterbury, St. Dunstan's Rate Books.

1807, 1821, 1823: Parl. Papers 1821, XVII (343-69), 1823, XIII (473-80).

CHAPTER 12

THE MARKETING OF HOPS I

A The Brewing Industry: Growth in Demand for Kent Hops

Hops produced in north-east Kent supplied the needs of local and London breweries; negligible quantities were retained on the farms for home-brewing. The extent of supply evidenced the scale of demand. There was, however, no overall increase in the national amount of beer produced during the first half of the eighteenth century. National output of strong beer, according to the Excise Revenue Accounts, was running at around $3\frac{1}{2}$ million barrels annually throughout the period; 1760 was the first year when more than 4 million barrels were excised.¹ In London annual barrelage was running at 1-2 million until 1727; subsequently there was a decline to between 0.8-1 million barrels due to the impact of gin drinking; output gradually rose again after 1758.² In order to explain the growing demand for hops we must therefore examine important changes within the brewing industry: technical changes and redeployment of resources. Three developments account for the expansion of the hop market in north-east Kent: the innovation of hops in country brewing; the rise of porter brewing; and the growth of naval brewhouses.

From the fifteenth to the seventeenth centuries malt liquors were described as either ale or beer: ale was unhopped fermented malt liquor, the traditional English drink; beer was hopped ale which gained a measure of popularity in England in the fifteenth and sixteenth centuries, especially in the towns. The beer brewers in London and Canterbury, for instance, had become strongly organised in the sixteenth century, under

¹T.S. Ashton, An Economic History of England (1955), 242.

²P. Mathias, The Brewing Industry in England 1700-1830 (Cambridge 1959), 22.

the influence of aliens from the Low Countries. By the early eighteenth century, however, all malt liquor was hopped and "there had been a silent mutation in the meaning of the two terms".¹

The period from around 1680 until the 1720's saw the completion of the broad movement whereby hops came to be used in all country brewing: by the Common Brewers in Canterbury, Faversham, Sandwich and other market towns, and by Brewing Victuallers and publicans in every corner of the region. Hopping malt liquor allowed it to survive much longer without deterioration, and to resist more successfully the effects of heat or the movement inevitable in distribution. These were vital considerations especially for the Common Brewers who sold to a host of dependent non-brewing publicans. Common Brewers were a fast-growing sector of the industry in towns like Canterbury and Faversham. The hop ensured for them a more stable product which could survive the storage and distribution incident to large-scale production. Hence "the introduction of the hop to country-brewed ales during the seventeenth and early eighteenth centuries meant that the hop-planters faced a rising demand even though there was no significant rise in the total quantities of beer and ale paying duty between 1684 and 1760". A gradual change in public taste, encouraged by brewers searching for greater efficiency and better quality in their product, meant that hops saw their first "major triumph" in the latter part of the seventeenth century.²

The original dichotomy of ale and beer lost all real meaning in the "twilight years" from 1680 to the 1720's. But old habits die hard: the term "beer" continued to be used for the malt liquor found in the towns whilst "ale" was the term in general use in the rural areas.

Innovation in the brewing industry after 1720 - the rise of porter

¹Ibid., xvii, 3.

²Ibid., 481.

brewing in London - was the occasion for a new dichotomy of terms both within the trade and generally. The word "beer" became attached to the new City drink - "thick black and stored for several months" - in contrast to the clearer, lighter-coloured provincial "ales" which were drunk when "young". Thus, technical differences of product once again imparted real differences in meaning between beer and ale in the eighteenth century.¹ It is generally agreed that the new beer was first brewed in 1722 by Ralph Harwood, a partner in the Bell Brewhouse situated on the east side of the High Street in Shoreditch. The first trade directory for London includes "Harwood, Ralph and James, Brewers, Shoreditch".² Porter was intended to combine the virtues of the mixtures of beers then drawn from various casks by publicans: the new drink became known as "entire butt" or "entire" since "it was drawn entirely from one cask or butt and, being a hearty nourishing liquor, it was very suitable for porters and other working people". Thereafter known as "porter" it was reputed to have been first retailed in The Blue Last, Curtain Road, Leigh.³ As early as 1726, a visitor to London noticed the innovation and included some perceptive remarks about English drinking habits:

In this country nothing but beer is drunk, and it is made of several qualities. Small beer is what everyone drinks when thirsty: it is used even in the best houses and costs only a penny the pot. Another kind of beer is called porter meaning carrier, because the great quantity of this beer is consumed by the working classes. It is a thick and strong beverage, and the effect it produces, if drunk in excess, is the same as that of wine; this porter costs threepence the pot. In London there are a great number of alehouses where nothing but this sort of beer is sold. There are again other clear beers called

¹Ibid., xvii.

²J. Bickerdyke, Curiosities of Ale and Beer (1886), 365; Henry Kent, Directory (1736).

³W. Rendle and P. Norman, The Inns of Old Southwark (1888), 30.

ale, some of these being as transparent as fine¹ old wine, foreigners often mistaking them for the latter.

Porter triumphed in the eighteenth century and the isolated achievement of Harwood provides the "heroic" explanation of change. But the introduction and success of this new product implies certain preconditions of growth, the details of which are unknown. Such considerations complicate the story of innovation. Professor Mathias appears to be the only historian to have raised this vital question which he has discussed in relation to changes in malting and malt.² Harwood probably bought a new sort of high-dried, dark brown malt from Hertfordshire, the chief source of porter malt in the eighteenth century. The problem to be explained rests on the fact that "London porter was described as a thicker, blacker, more bitter and stronger beer (for its price) than any other which had been known (of any variety), and therefore must have relied in turn upon a new kind of malt which gave it such qualities". The "discovery" of such a new malt probably occurred by accident, or possibly by negligence "being the result of a parcel of normal brown malt fired to excess".³ It will probably never be known whether the new porter malt was first developed by Harwood in Shore-ditch (a doubtful possibility), on commission in Hertfordshire, or in collaboration with maltsters there. The new scorched malt was soon recognized as distinctive, however, and was in part responsible for the bitter taste of porter. William Waddell of Canterbury sent malt to London in 1743 but his product evidently failed to meet market requirements as his agent informed him:

¹César de Saussure, A Foreign View of England in the Reigns of George I and George II (1902), 158.

²Mathias, op. cit., 15, 413-15.

³Ibid., 413.

... as I wrote you last weeke your malt is not¹ fired near enough for our market no Brewer will use such.

The same kind of argument might be applied to hops. Porter was by nature a bitter drink which needed to be stored for many months to come to perfection, and so required heavier hopping (3-5 lb. per barrel) than other malt liquors to survive in safety. In turn the heavier hopping accentuated the bitterness of the brew. It was soon realized that Kent hops were ideal for this purpose. Readily at hand in the warehouses of Southwark merchants, selected bags of Kent hops were no doubt used in Harwood's original brewings of porter in 1722. But as in the case of barley we cannot trace the precise source. Benjamin Martin extolled the particular virtue of Kent hops:

Kentish hops are a coarser leaf, stronger $\sqrt{\text{than}}$ Farnham hops/ tho' not so agreeable a Bitter, and are esteemed preferable for London porter and for keeping beer. There are different sorts ... which are, in reality, most suitable to the soil of that spot, or are most esteemed in those parts; and probably the peculiar skill or care in some planters may not a little contribute to the difference. At present Canterbury is² celebrated as producing hops in greatest perfection.

Brewed from Hertfordshire malt and Kent hops, porter was "the first beer technically suited for mass-production at contemporary standards of control".³ Concentrated in Southwark, the porter breweries rose to massive production before 1750, thus establishing the modern structure of the brewing industry in London. The wealth of the porter brewers with their "capital" houses was legendary: Ralph Thrale (Anchor Brewery), Samuel Whitbread, Benjamin Truman and Sir William and Felix Calvert were the great entrepreneurs at the apex of this business pyramid. There is

¹PRO C111/55.

²B. Martin, The Natural History of England (2 Vols. 1759), I, 149.

³Mathias, op. cit., 13.

evidence of vast amounts of capital tied up in London brewing - rising capital valuations of the breweries, as well as evidence of "the rise in the numbers of casks and horses employed, the great vats, the control over distribution, the clerical organisation of the trade, the foundation of the porter-brewing dynasties and a traditional social consolidation of wealth in the Home Counties and in London ...". By 1750 "a large porter brewery was as different from the inn brewhouse as the later cotton mill was from a cottage workshop".¹ The Calverts were the first to brew more than 50,000 barrels in 1748. The three largest brewers of porter in London in 1760 were:

	Annual Production (barrels)
Calvert & Co.	74,734
Whitbread	63,408 ²
Truman	60,140 ²

It was reported in the early 1760's that London brewers consumed 15,000 bags of hops annually.³ The vast bulk of these hops came by water from Kent destined for the vats of the porter brewers in Southwark.⁴

From an early date, the Admiralty had set up modest naval brewhouses in the main fleet ports but, in the seventeenth century, these breweries never satisfied the large temporary demands of a mobilised fleet appearing at irregular intervals. Thus, contract brewers at London, Chatham, Portsmouth and Plymouth were employed to satisfy wartime needs. But in the eighteenth century new naval breweries were built; contract brewers

¹Ibid., 25.

²Rendle & Norman, loc. cit.

³BM. Add. MS. 38,339 f. 12.

⁴Mathias, op. cit., 499.

remained as mere adjuncts to these large establishments. In the early years of the century the Admiralty Victualling Commissioners bought or leased large breweries in the naval ports including Dover. The largest of these, and indeed one of the largest breweries in Georgian London, was the Hartshorne Brewhouse near the Tower in East Smithfield; it remained the navy's main "victualling brewhouse" until a new one was erected at Deptford in 1792.¹

An examination of the Minute Books of the Naval Victualling Board shows a dramatic increase in purchases of hops before 1760.² Before 1720 annual purchases rarely rose above 300 cwt., but by the 1730's this figure had more than doubled: in 1734, for instance, 890 cwt. of hops were bought by the Victualling office. In the 1740's annual purchases of hops were running at around 800-1,000 cwt. During the 1750's as many as 2,000 cwt. were consumed by the naval breweries in a single year. It has been possible to identify the vendors of these hops, in each case a prominent Southwark merchant known to have bought Kent hops from factors in the Borough.³

The innovation of hops in country brewing, the spread of porter brewing and the rise of the naval brewhouses, together effected a critical chrysalid development in hop marketing during the half century from 1680. By 1730 metamorphosis was complete: the new life-style of the hop trade emerged in glittering form to beguile the gentleman planters of Canterbury and their fellow-growers. The hop market beckoned, Kentish farmers responded.

¹Ibid., 201-2.

²PRO Adm. 111/1-48.

³See infra., 701-2.

B Nature of the Market; Prices; Grades

"The produce of the hop", wrote a nineteenth-century agriculturalist, "is more variable than that of any other crop. It is frequently nearly a failure".¹

The uncertainty of hop-growing derives from the hop plant's extreme vulnerability to adverse weather conditions, pests and diseases. The unpredictability of yields gave rise to a highly volatile and speculative market which, in turn, resulted in wildly fluctuating profits for the farmer. As the Milstead Price Series demonstrates, the average price per cwt. could vary from 32s. to more than £10 in the space of a few years (the spectrum of actual ruling prices was even greater).² Thus, severe short-term fluctuations, with no discernible long-term trend, created a bizarre price situation which inhibited forward planning and left the grower floundering, and perhaps insolvent. There is, as we might expect, a direct relationship between, on the one hand, the selling price and, on the other, the size of the annual crop together with the quantities of hops of previous years' growth brought out of storage. The total quantity of hops coming forward in the markets had a critical effect on the levels of market prices. Hops were notoriously susceptible to the ravages of insects, especially aphids, diseases such as mould, and the weather. And, of course, complex inter-relationships exist between annual and seasonal weather variations, rates of plant growth, the build up of aphids, and levels of fungi attack. Soil conditions and the quality of management are independent variables serving to exacerbate or mitigate the syndrome. From the pioneer days of hop growing to the present time, writers have discussed the notorious unreliability of hops, not always scientifically, but nevertheless always appreciating the true

¹D. Low, Elements of Practical Agriculture (5th ed., 1847), 464.

²See Table 32 and Figure 10.

nature of the plant and the hazards to be faced. William Prynne, a grower in Gloucestershire, in a pamphlet dated 1654, launched a bitter attack against the Protectorate government for imposing an excise on hops. He adduced in his argument that growers paid a sufficient penalty already, arising from the nature of the plant and the many ruined crops:

Hops are a great certain charge, and most uncertain commodity and gain. The last year before this, there was such a blight that I and others, had not the sixth part of the ready money disbursed out of purse for the dressing and polling of them; and this year the crop of hops was so small, that it would hardly quit the cost bestowed in dressing, polling, tying and gathering.¹

William Ellis, writing in 1750 was at pains to point out the penalties and rewards of growing hops:

Happy are they, whose large plantations have escaped the damage of flies, lice, bugs, blight, frost or mould, storms and other pernicious incidents, and who at last enjoy a dry mild time for gathering or picking them ... for it is the notion of some concerned in hop plantations that they are liable to fifty accidents in a year, ...²

Another Kentish writer saw the hop aphid as the "barometer of poverty".³

Finally here is part of another report:

The weather is generally the most important single factor to influence the growth of a crop: it was certainly so in the year under review as far as the hop crop was concerned. A wet autumn ... gave way to a cold, wet winter during which the soil remained waterlogged for long periods ... wherever drainage was less than good, the stocks were weakened by the waterlogged conditions in winter ... At the beginning of harvest a very severe build up of aphids took place in north Kent, resulting in many acres being rendered unfit for picking. This sudden

¹W. Prynne, A Declaration and Protestation against the Illegal, Detestable, Oft-condemned, New Tax and Extortion of Excise In general and for Hops (a Native uncertain commodity) in particular (1654), 27.

²W. Ellis, The Modern Husbandman (8 Vols. 1750), V, 126.

³E.J. Lance, The Hop Farmer or a Complete Account of Hop Culture (1838), 76.

tragedy was totally unexpected and was no doubt accounted for by the very dry soil and the high temperatures experienced at that time.

This extract was taken from the 1969 Annual Report of the Department of Hop Research of Wye College! Disease and pest controls, even today, fall far short of perfection. Furthermore, gale-force winds in August can wreak havoc in the gardens, and freak hailstorms, at a time when the hops hang heavy on the vines, can strip the plants utterly bare. Other seasons, 1729 for instance, may witness bumper yields. In years of scarcity, popularly reckoned as one year in three or four, prices will soar (as in 1725) but this is poor consolation for the grower who has lost his crop.

A season of undisguised catastrophe was long-remembered by the growers: such was 1725. The Austen family, of genteel descent, lived in a "good house" on St. Martin's hill, Canterbury. From the 1720's Mr John Austen cultivated some 7 acres of hops in the parishes of St. Martin and St. Paul.¹ This gentleman-planter is undoubtedly the "Mr Austen of Canterbury" whose "Account of the State of hops in Kent in the year 1725" was printed by John Mills in the 1760's.² The account was reputedly first published in a work by Hales in the 1720's (Treatise of Vegetable Statics which the present writer has been unable to trace. Austen was described as "a very great planter and an accurate observer". His unique report, which has gone unnoticed by Kent historians, reflects the intractable problems with which Canterbury growers had to grapple in a year of exceptional difficulty.³ The disastrous pattern recorded for

¹PRO El34 30 Geo.2/Trin. 2; C111/55; E. Hasted, The History and Topographical Survey of the County of Kent (12 Vols. 1797-1801), XI, 118.

²J. Mills, A New and Complete System of Practical Husbandry (5 Vols. 1765), IV, 455-6.

³See Appendix X.

the Canterbury district in 1725 seems to have been widespread. We are told it was "a year of extremes": from mid January to mid April "an exceptionally dry spell occurred ... one of the driest ever known in England"; then, in late summer, heavy rain and gales swept the country during an unusually cold spell - "one of the coldest periods lasted from July 13th to September 4th".¹ Famine prices of £10-12 a hundredweight were forecast, and indeed market prophecies proved accurate.²

Gilbert White frequently recorded in his Journal the damage afforded to hops by wind, rain, hail and infestations of the aphids. Most of his observations relate to the grounds in his native Selborne, or other Hampshire villages. From time to time, however, he mentioned places further afield in Kent, Surrey and Sussex:

30 July 1775 By this evenings post I am informed, by a Gent: who is just come from thence that the hops all round Canterbury have failed: there are many hundred acres not worth picking.³

Although there were winds and thunderstorms in 1729, these occurred before the hops reached full growth; the season brought forth a bountiful hop harvest; rock-bottom prices as low as 20s. were recorded for the crop of that year.⁴ A Southwark hop factor reported to a Canterbury grower:

Our market for hops is very dull, everybody for selling but few persons care to buy. I have sold yours at 33s. 6d. its a poor price but have done the best I could with them.⁵

¹J.M. Stratton, Agricultural Records A.D. 220-1968 (1969), 70.

²KAO U791 E79, Letter from Walter Jones of Faversham to Mr George Huddleston, Rockingham Castle, 13 September 1725; U593 A2.

³W. Johnson ed., Gilbert White's Journals (1931), 107.

⁴Stratton, op. cit., 71; Kentish Post 6 April 1730.

⁵PRO C111/55.

At any given moment a wide range of hop prices was operative in the market. It is really quite meaningless and naïve to talk about an average price for hops. There was no such thing. For this reason the figures tabulated are actual recorded "farm-gate" prices. The prices in the Milstead Series appear to fall somewhere in the middle of the current range for new hops, and the main swings in the series correspond to contemporary weather reports and other seasonal commentaries recorded by Tylden and others. But even this more practical approach is an inevitable over-simplification.

In order to appreciate the growing complexity of the hop market with regard to prices it is first of all necessary to understand the methods of packaging. Marshall explained that when men spoke of "bagging" hops they were using a general term for "packing" hops into "bags" and "pockets". The bags were made of coarse, refuse hemp ("tow") or sometimes tow and hemp intermixed. So coarsely were these bags woven that the threads were "nearly as thick as the finger". Such bags, over 7 feet long and weighing 20 lb., were calculated to hold $2\frac{1}{2}$ cwt. of hops. As we shall see, the precise weight could vary by as much as a quarter of a hundredweight, but the weighings taken on the farm and in the market were always accurate to the nearest pound; this procedure never varied. The pockets were made of strong, fine canvas. About the same length as a bag, but narrower, the pocket required 4 lb. weight of material and had a capacity for $1\frac{1}{4}$ cwt. of hops. The two types of package - bags of coarse cloth and pockets of fine cloth - were intended to signify different qualities of hops. It became common practice quite early in the eighteenth century, to put hops of inferior or discoloured quality into coarse bags. The fine pockets were used for the best coloured and finest flavoured hops. But the actual division into grades was by rule of thumb for "the precise degree of those qualities, which direct the hop grower to a choice of the one or the other, depends on the existing, or probable

demand for pockets; and this, in a great measure, on the general quality of the given crop, throughout the kingdom". In a year when hops were generally of high quality, only the very finest would be put in pockets; in a "brown hop season" many of the hops put into pockets would have found their way into bags in a better season. As a general but not invariable rule the porter brewers bought hops in bags rather than pockets. In a year when supply greatly exceeded demand it was thought better to hold back surplus hops in bags rather than pockets since they stored better over a long period. In any case it is obvious the choice of package was far from straightforward and "a prudent manager consults his merchant or his factor before he determines on the species of package".¹

When did this dichotomy of packaging and grading come into general use? All the evidence examined points confidently to the early 1730's as the period of common acceptance. Hops entering the Southwark Market in the second decade of the century all came in bags of around $2\frac{1}{2}$ cwt. (there are some 80,000 of them recorded individually!). Bradley, in his work published in 1729, discusses only bags weighing over 2 cwt. He cites the authority of "an eminent hop merchant in Southwark". Bradley also mentions the method of leaving "samples" in the corners of the bag. These were later cut and examined by prospective buyers in the market:

It is the custom nowadays to have samples of hops in the corners of every bag and those corners at the bottom must be first fill'd and ty'd up.²

Richard Tylden of Milstead first adopted the new packaging scheme in 1733 when he "bagged" 7 "fine bags" and 11 "coarse bags" which were eventually sent to London. It is clear, however, that what he chose to call "fine bags" were in fact pockets - the recorded weights provide the necessary

¹W. Marshall, Rural Economy of the Southern Counties (2 Vols. 1798), I, 271-4; Lance, op. cit., 121; G. Clinch, English Hops (1919), 36.

²R. Bradley, The Riches of a Hop Garden Explain'd (1729), 100.

evidence.¹

It was inevitable that a subsidiary industry producing bagging material grew up in the "hop towns" of Kent, particularly Canterbury and Maidstone. It has already been observed that the inmates of the Canterbury Workhouse wove bagging material which the Master subsequently advertised for sale.² The Kentish Post frequently printed advertisements of private manufacturers who offered a choice of grades:

Thomas Burdock, Linnen-Weaver, in Sandwich, makes and sells all sorts of hop-bagging. The brown sort at twopence per pound and the white sort at twopence three farthings.³

In Maidstone the weaving of fine quality canvas hop-bagging was an extension of the linen thread industry which employed large numbers of local workers.⁴ The woven hop-bagging, purchased by weight, was made up into bags and pockets by the farm workers or their wives. Sir Brooke Bridges of Goodnestone Court near Wingham purchased, in Canterbury, 2 cwt. 3 qr. 5 lb. of "hopbagging" for a total cost of 19s. 6d. in the spring of 1731.⁵

From the foregoing discussion it follows that there were at least two price-ranges operative in the market at any given moment - one for hops in bags, the other for pockets. Hence, from around 1730 there evolved the practice of quoting prices for "hops in coarse cloth" (bags) and for "hops in fine cloth" (pockets). Since the gradings were, in themselves, imprecise, the two price-ranges overlapped: a bag of especially good quality hops from grower A (who might market most of his

¹KAO U593 A3 f. 145v.

²See supra, 614-5.

³Kentish Post 6 August 1748.

⁴W. Newton, The History and Antiquities of Maidstone (1741), 102.

⁵KAO U373 E10 (27 March 1731).

hops in bags) would fetch a higher price per hundredweight than an indifferent pocket of hops from grower B who had been over-zealous in his use of pockets that year.

So far we have discussed only "new" hops put on the market from the time they were picked in September (or possibly late August) to August of the following year. Once the succeeding crop had been picked these hops (if any remained unsold) became known as "old" hops and, as such, were worth less in the market than the new season's crop. However, if the new harvest happened to be poor, the old hops would sell at a good price, possibly more than if they had been marketed as "new" during the previous twelve months. In this way, in an abundant year, hops were held in store, as a safeguard or speculation should the following year, or even the year after that, prove to be disastrous for the crop.

Literally tens of hundreds of examples could be cited to illustrate these price-ranges relating to hops both old and new, and for pockets and bags, since they not only appear in certain farm records but were quoted regularly in the bi-weekly Kentish Post throughout the year. Yet the whole concept of price-ranges and their practical significance appear to have escaped economic historians who invariably resort to the use of average prices in their discussions. Indubitably, farmers and dealers considered together both the quality of their product and the range of prices within which this product should be pitched; the precise point at which it came to rest depended on a great number of variables apart from quality, including the time, place, and the knowledge, temperaments and bargaining powers of the parties concerned in the transaction. The sophisticated world of the hop market was no place for Hodge's master so he employed a specialist (factor) who had a thorough knowledge of the hop business from long experience and upbringing. The brewers, with precious little time to spend away from their tuns and vats, employed merchants to handle their deals. In short, ruling prices (examples of which we shall

examine) were settled by factors and merchants in the specialized hop marts at Southwark, Stourbridge and Weyhill; dealers in the smaller provincial towns like Canterbury constantly looked to "the state of the market" in these larger centres for guidance and edification.

In the scarce year 1725 there was "panic" buying of hops in the early autumn which forced up prices to unusually high levels; merchants and brewers bought up the few available hops and used old hops from their warehouses to meet the balance of demand. Richard Tylden either "played" the market skilfully, or was merely fortunate, when he sold his three bags of hops from Milstead for £10 10s. a hundredweight in October; he received £48 5s. net from his hoyman, John Tappenden, on 4 November.¹ By the end of the year consumer resistance was apparent. The following announcement appeared in the earliest extant issue of the Kentish Post:

Our markets for hops are very dull in demand and price; no certain prices but as we meet with chapmen.² We expect no good markets till after the holidays.

Apart from an absence of hop prices the "letter from London" (which remained the basis of price quotations in the Kentish Post) was typical: a list of eight price ranges for farm crops and malt was printed.

In 1726 Tylden's hops were sold in Southwark in two lots; the difference in price received may have represented a real difference in quality:

¹ KAO U593 A2, A3 108v.

² Kentish Post 1 December 1725. The term "chapmen" or "chap" was commonly used in Southwark for hop merchants. This is at first sight confusing since the wealthy hop merchants were in a very different class from the provincial pedlars who were also known as chapmen. The word derives from the Old English cēap meaning barter; a characteristic of hop merchants was their ability to "barter" or haggle with factors over prices in order to get the best bargain.

10 Sept. 1726 Reced of Mr Tappenden 8 C. 3 qr. 12 li. of hops sold for 2 li. 16s., and for 9 C. 2 qr. 5 li. of hops sold for 2 li. 17s.

Tappenden returned £49 16s. ("charges paid") to Milstead for these sales.¹

The price-ranges current at the time were:

New hops	£1 10s. to £3
Old hops	10s. to 38s. ²

But Tylden held back some of his 1726 crop for a few months hoping for higher prices; in the event he fared no better. A further consignment of hops marketed in December was sold in two lots at similar prices - £2 17s. and £2 15s.; the quoted range of Southwark prices remained unchanged.³ It is interesting to note that in 1726 Tylden received for 17 bags of hops only £8 more than was returned to him the previous year for 3 bags of hops.

1733 saw Tylden's first "experiment" with pockets. His decision to follow the fashionable trend was no doubt the result of considered debate with his new hoyman John Page who himself was in constant touch with Southwark hop factors. Early in October Tylden was paid for his crop. 7 pockets had been sold for £4 10s. a hundredweight and 4 bags for £3 3s. The quoted price-ranges, which by this time reflected the new-style marketing were:

in fine cloth	90s. to 105s. ⁴
in coarse cloth	40s. to 84s. ⁴

¹KAO U593 A2.

²Kentish Post 10 October 1726.

³KAO U593 A2; Kentish Post 5 December 1726.

⁴KAO U593 A2; Kentish Post 3 October 1733.

Tylden continued to market his hops in bags and pockets for several years, but after 1740 he reverted in most years to his earlier practice of using only coarse bags, each holding around $2\frac{1}{2}$ cwt. This policy-change almost certainly reflects the established pattern of demand in the market with the porter brewers by now seeking vast quantities of Kentish hops in bags.

But Tylden made another important change in policy from the later 1740's: he usually held back part of his crop - sometimes all - until the following spring or early summer, in order to capture a better market. In one year at least, 1758, he held back part of his crop until the following season, and this speculation proved worthwhile. In October 1758 eight "fine pockets" of hops were sent to London where they were sold for £4 2s. a cwt. The remainder of the crop - over 19 cwt. in bags - was held in store until December 1759 when Tylden received £5 8s. a cwt. His few "new hops" sold at this time fetched £8 a hundredweight but, unfortunately, he had less than a bag to sell; 1759 was another disastrous year for hops when even old hops fetched unusually high prices. Quotations of Southwark price-ranges relating to these two seasons clarify the point and illustrate the wisdom or good fortune of Tylden's policy:¹

[1758]	Pockets in fine cloth	£3 3s. to £5.
	Bags in coarse cloth	£3 to £4 5s.
	Old hops	14s. to £3 10s.
[1759]	Pockets in fine cloth	£7 to £8 4s.
	Bags in coarse cloth	£6.
	Old hops	14s. to £5.

It will be seen that price-ranges for pockets and bags overlap, a normal feature of the market from the late 1730's. Another feature was the extremely wide range of current prices for old hops. This deserves further comment.

Although hops can be safely stored for some time they are, in the long-run, perishable: a slow deterioration sets in. Marshall put the

¹Kentish Post 4 October 1758, 7 April 1760.

point clearly:

Hops are a perishable article of produce; losing, in twelve months time, much of their color and flavor; and, in two years, those in the smaller packages lose most of their essential character; the decay taking place at the surface. And hence the use of a thick covering, and of a bulky package.¹

Hops two or three years old did appear on the market in exceptional years and the most ancient of these were likely to be very poor indeed, worth only shillings. Hops held over for two seasons were marketable, older than this scarcely so. In 1764 it was reckoned that 29,000 acres of hops out of a national total of 33,000 acres had virtually failed. The 4,000 successful acres had been so prolific that they had yielded 12,000 bags, three-quarters of the national crop that year; they were reported to be "uncommonly fine ... of exalted quality" and sold for high prices. But there were many old hops on the market, including the surplus stocks of brewers who held in store many hops from the two previous years which had been plentiful seasons. Only "a very inconsiderable quantity" of 1761 hops were still around hoping for a sale. Old hops of 1762 fetched prices as high as £5 10s. to £6 and hops of 1763 from £5 10s. to £7 10s., according to quality. It was said, however, that many of these old hops were of "the inferior kinds". The real sufferers were the cultivators of 29,000 acres in 1764, and so great was their despair and misfortune that they appealed to the government for relief.² The extent of the scarcity of hops of 1764 vintage is illustrated in a report made in January 1765:

The price of new hops in bags proper for the London brewers sell this day from £10 10s. to £11 5s. per cwt. Fine cloth from £11 to £11 5s. per cwt. very few of either sorts to be met with at the above prices. In December

¹Marshall, op. cit., 280.

²B.M. Add. MS. 38,339 ff. 12-13.

last Mr Hunter declared in the Three Crown Coffee House in the Hop Market that if the brewers did not approve of the then price of hops they must buy at much higher prices, for he was very certain there will not be one single bagg of¹ new hops left on the market in the month of March next.

In 1736 the Canterbury district was in the happy position of picking a bumper crop at a time when the hops of other areas had failed. An optimistic report appeared in the local newspaper at the beginning of the picking season:

Our general picking of hops is now begun and they prove better than has been known for some years which, considering the small stock in hand; that the quantity now do not rise as was expected; the damage of the winds, and the small crop on the country grounds, as well as in Sussex, with the putting down² of gin; makes it believed they must sell at great prices.

The forecast proved accurate and the report can be corroborated. Tylden commented that his hops in 1736 were "blighted" like those in most "country" grounds but, he added, "the town grounds were better". Prices during September and October were as high as £7 a cwt.³ The year 1736 was the kind of season for which Canterbury planters waited unashamedly.

C The Local Market

Locally, the chief buyers of hops were the Common Brewers and Brewing Victuallers. The public brewhouses, or "Common Brewhouses" as they were known in law, were familiar landmarks in the larger market towns of north-east Kent - Faversham, Sandwich, the Thanet ports and, above all, Canterbury. In the later seventeenth century Common Brewers increased

¹Ibid., f. 13v.

²Kentish Post 25 August 1736.

³KAO U593 A3 ff. 158-158v.

their numbers in provincial towns.¹ The north-east region of Kent shared in the expansion.

The Brewing Victualler, smallest entrepreneur in the industry, could be found in every village alongside his social equals - the butcher, grocer, baker and blacksmith. Individually insignificant, the collective demand for hops by the Brewing Victuallers must have been quite considerable in the eighteenth century. The more enterprising of them accumulated sufficient capital to enable them to brew on a scale large enough to supply beer to their fellow-publicans "beginning a process of unconscious mutation which would eventually lead them to the position of being Common Brewers". They would then sell only wholesale to publicans, and to private individuals in largish quantities, maybe a cask or a gallon. Their customers would be reduced to the status of client-retailers who no longer brewed for themselves. This process of evolution, poorly documented, was "one of the most common routes for the emergence of Common Brewers" in the eighteenth century.² The brewers' profits were invariably ploughed back into the trade in one way or another; thereby many Common Brewers came to possess their own public houses which, leased to others, remained under the control of the brewer who supplied all their beer. High overland transport costs limited expansion possibilities of individual brewers to an economical marketing area of not more than six miles: even the most dynamic brewer remained "locked inside his local market". Clearly the best opportunities for expansion lay in concentrated urban areas where numerous oft-frequented inns lay within range of the brewery drays.³

Alexander Bax, youngest son of Stephen Bax of Hills Court, Ash, left

¹Mathias, op. cit., 6.

²Ibid., 254.

³Ibid., xxii-xxiii.

his father's farm in the 1670's to become a businessman in Faversham. He described himself as a brewer in his marriage licence in 1684 by which date he was already a townsman of some standing. The following year he was elected to the Common Council of Faversham.¹ Bax founded a great brewery in Faversham, progenitor of the famous Rigden Brewery. His inventory (January 1701) provides an excellent portrayal of the premises of a late seventeenth-century Common Brewer. Alongside the numerous barrels, kilderkins, firkins, hogsheads and butts was a huge quantity of malt, worth more than £100, as well as hops. A dray stood in the yard, two horses and their "dray harness" in the stable. Alexander Bax possessed two public houses in Faversham. In The George in West Street were "three barrels of strong Beer in the Sellar" and "att the signe of The Mason's Armes in Preston Street seaven butts of strong Beer in the sellar".² It seems that Bax had bought The Mason's Arms for £55 in 1696 when it was in the tenure of John Berry.³ Although The George exists today The Mason's Arms has long since disappeared. The profits from brewing enabled Alexander Bax to purchase the lease of the Abbey Farm from the Earl of Faversham, the lease of the Rectory and Parsonage of Faversham from the Dean and Chapter of Canterbury, the "School lands" from the Governors of the Free Grammar School, and large holdings of land in Sheppey and numerous other Kent parishes. Shortly before his death Bax purchased a large Tudor house in Abbey Street. At the time of his death in 1701 Bax was described as "a Brewer in great dealings".⁴ His children, Stephen and Mary, inherited the family properties. The brewing tradition continued and gained in complexity. When Stephen died in

¹A.N. Bax, A Bax Family of East Kent: A Study in Social History (1950), 93.

²Ibid., 97-8.

³F. Bywater, The Inns and Taverns of Faversham (Faversham 1967), 20.

⁴Bax, op. cit., 93, 96.

1758 the Bax Brewery passed to Messrs Rigden & Co. and formed the basis of their great brewing business in Faversham which, after 1949, became Fremlin's Brewery.

In 1698 Richard Marsh founded the Brewery which now belongs to Messrs Shepherd Neame Ltd. Richard Marsh married Mary Bax and their daughter, who inherited the brewery, later sold it to Samuel Shepherd her step-father (Mary's third husband). Julius Shepherd, son of Samuel and Mary, joined his father in a partnership which was the foundation of a long-renowned Faversham brewing business.¹ The town became one of Kent's chief brewing centres; the consequent demand for hops was considerable.

Thomas Higgs the elder must have been the doyen of Faversham brewers when he died in 1707. The goods in his inventory were valued at £2,826 16s. 9d. He owned a chain of public houses in the town: The Ship, Three Tuns, Stag, Nag's Head, King's Head, Queen's Head, Flower de Luce, Black Moor's Head, Bell, and Blue Anchor. Higgs possessed 200 quarters of malt stored "in the brewhouse", as well as a bag of hops worth £7 10s. The inventory was taken in June, at a time when brewers would have held few hops in store. But the large number of strong beer containers - 195 butts and 107 barrels as well as numerous half-barrels and hogsheads - give some indication of the extent of his business.² A large proportion of the Common Brewer's expenses lay in circulating capital - the stocks of malt, hops and beer on hand - but as the business expanded, heavy burdens of credit were sustained by him.³ Thomas Higgs had "debts good and bad" owing to him which totalled £1,821 11s., almost two-thirds of his personal estate.⁴

¹Ibid., 106; H. Dane, A Thousand Years of Faversham's History (Faversham 1968), 15, 17.

²KAO PRC 11/67/93.

³Mathias, op. cit., 253-4.

⁴KAO PRC 11/67/93.

Although a handful of prosperous Common Brewers were the main buyers of hops in Faversham, local victuallers and grocers made frequent small purchases. William Rogers, a Faversham victualler, had only 56 lb. of hops, valued at £3, in his brewhouse when he died in 1725. In 1700 Edward Worrall, a local grocer, possessed "a parcel of hops" alongside Suffolk and Cheshire cheeses "in the sellar" of his shop. It was usual for provincial grocers to purchase hops, a bag or two at a time, for retailing over the counter to their customers; home-brewing was still widely practised.¹

Hops were plentiful in the Faversham district and supply far exceeded the needs of the immediate locality. Growers were enabled to sell their crops to outsiders for immediate cash and with minimum trouble and expense:

This is to give notice to all hop-planters and dealers in hops that Mr Thomas Gill, hop-buyer, will attend every Tuesday at Mr Hunt's at the Ship Tavern in Faversham, to buy hops; therefore all persons who are dispos'd to sell their hops, are desir'd to bring samples of 'em. He also buys hops at his house in Castle Street, Canterbury.²
N.B. Ready money will be paid for the hops.

The extent of the brewing industry in Sandwich and the Thanet ports is apparent from numerous inventories of brewers and maltsters. When John James, a Sandwich brewer, died in 1740 his personal estate was worth almost £2,000. The largest item recorded in his inventory was £597 11s. 6d. for "book debts good and bad". But the most valuable goods were:

483 barrells of strong beer in storehouses and in
the hands of customers £398 8s.

In his storehouse there was a vast quantity of malt worth almost as much as the beer, as well as 32 cwt. of hops valued at £52 10s. A few miles distant, in the large village of Ash, Joseph Bear conducted a sizeable

¹Ibid., 11/77/257, 11/62/22.

²Kentish Post 27 August 1726.

malting and brewing business. The most valuable item in his inventory was "240 barrels of strong beer" worth £273 12s. John James and Joseph Bear each possessed horses, waggons, carts and drays - vital transport facilities for the large quantities of hops, malt and beer which they moved each year.¹

When Samuel Pepys' ship dropped anchor in the Downs in May 1660, he was presented with a dozen bottles of "Margate ale". This celebrated brew appears to have kept Pepys and his friends "laughing and very merry" into the early hours.² In 1763 John Lyon, the old schoolmaster at Margate wrote:

About seventy years ago one Prince of this place made himself famous for brewing a particular sort of ale which, from its being first brewed at Northdown, went by the name of Northdown Ale, and afterwards was called Margate Ale ... we have now no such great ale. Prince drove a great trade in it.³

Illuminating inventories are those of John Prince of Margate (1687) and Thomas Thomson of Ramsgate (1740). Prince was recognized locally as a brewer although he was also a maltster; he invested some of his industrial profits in shipping ("parts of vessels"), giving rise to an interesting sideline. This Thanet businessman possessed a brewery, malthouse and "hophouse"; his hops in store were worth £60. Thomson was a farmer as well as a brewer and maltster: he cultivated, alongside his other crops, three-quarters of an acre of hop ground which provided a proportion of the hops he brewed each year. The largest item in his inventory is "121 butts of beer in and about the brewhouse and in customers' hands" said to be worth £363. Prince and Thomson each possessed total personal estate

¹KAO PRC 11/81/229, 27/40/9.

²H.B. Wheatley ed., The Diary of Samuel Pepys (3 Vols. 1949), I, 121-2.

³John Lyon, A Description of the Isle of Thanet and particularly of the Town of Margate (1763), 11-12.

of around £1,000.¹

The foremost hop mart in north-east Kent was Canterbury, the regional capital. The centre of Kent's greatest hop-growing district, it is hardly surprising that the City predominated in the marketing sector throughout this period. From at least the 1720's a number of local family names were closely associated with brewing in Canterbury: Cantis, Cranford, Durant, Fenner, Fremoult, Jekin, Ludd and Rigden. These were the Common Brewers of the City who, in addition to their breweries, possessed hop gardens, oasts, malthouses and numerous inns and alehouses in Canterbury and elsewhere.²

John Cranford possessed personal estate worth £1,899 11s. 8d. when he died in 1709. In addition to a well-stocked "malthouse" and "brew-house" he cultivated over 12 acres of hops in local grounds. Cranford supplied beer to at least 15 Canterbury inns including The Butcher's Arms, a local "exchange" for farmers. He also supplied inns and taverns beyond the City in Bridge and Chartham; a vast quantity of butts, barrels, kilderkins, hogsheads and other containers were said to be stored "in several customers' cellars" in these parishes. A normal feature of the brewing industry, credit was a vital element in Cranford's business as evidenced by "good debts" totalling £552 2s. 2d. and "badd debts" running at the risky level of more than £300.³

Individual public houses in Canterbury used several barrels of well-hopped beer each week. The following example is probably typical of the 1720's:

¹KAO PRC 11/51/101, 11/82/36.

²Kentish Post 21 January 1730, 2 December 1732, 23 June 1739, 22 April 1741, 16 August 1760.

³KAO PRC 11/69/21.

There is now to be lett at £11 a year a very good publick house, being the sign of The Three Queens in High Street, Canterbury, having a great deal of room in the house, and a large good stable, the house well-furnished, 9 beds being standing; the furniture may be had or the house be lett without it. John Gilbert has lived in it a year and a half, and drew in that time above 200 barrels of strong beer, besides a great deal of punch and brandy ...¹

There were over 60 inns situated in Canterbury by mid-century besides a further three dozen or so "without the walls".² In addition there was a multitude of smaller taverns and alehouses; these lesser retailers would have shown more than a passing interest in the advertised products of the Common Brewers:

This is to inform all persons, private families and those who keep publick houses that William Jones, Publick Brewer in Canterbury, hath brewed a stock of strong beer before Michaelmas and since, and intends at this time to begin the sale of it to any person that will pleasure him with their custom, in any quantity from a butt to a firkin, and no less measure, at as cheap a rate as can be afforded.³

Over 7 tons of hops were produced in Sir Peter Gleane's grounds in the 1719 season. Most of this crop was sold to local brewers: $4\frac{1}{2}$ tons to Jekin, and 2 tons to the Fenner Brewery. Between them, these two Common Brewers paid over £500 to the administrators of Sir Peter's estate.⁴ The smaller growers found it particularly convenient to take cart-loads of green hops direct to the oasts of local brewers and maltsters who not only dried the crop, but arranged to take it off their hands at current market prices.⁵

¹Kentish Post 17 April 1728.

²KAO Q/SB 1756.

³Kentish Post 20 February 1748.

⁴KAO PRC 11/79/223.

⁵Kentish Post 15 July 1732, 26 June 1736, 11 September 1742.

Hop grounds were a striking feature of St. Dunstan's parish, particularly from about 1720. By the middle of the century the parish possessed 123 acres of land under hops. There were also many brewers in St. Dunstan's, some of them with interests in malting and hop growing. Mr Thomas Tilbe first appears, in the extant parish records, in 1720 as a non-resident occupier of property valued at £9 for rateable purposes. By 1727 he occupied a dwelling house, storehouse and hop grounds and was assessed on property valued at £54; he was already one of the larger ratepayers of the parish. Thereafter, we witness a further accretion of property into Tilbe's hands. In 1733, for instance, the churchwardens of St. Dunstan's agreed to sell him a small property standing on common land on St. Thomas's hill; he is described as a "beer brewer" at this time. By 1740, in addition to his dwelling house and brewery, malthouse, stores and barns, he possessed oast houses and hop grounds, some of which had earlier belonged to Thomas Gill, a well-to-do Chartham hop-planter and merchant. The Blue Anchor, one of six public houses in St. Dunstan's, also came into his hands. His annual assessment for rating purposes rose to £104, doubling in little more than a decade. Tilbe had as many as four oasts in use at least as early as 1757. His 11 acres of hops, although much larger than the average holding, would not have justified such extensive drying facilities, and we can reasonably assume that he purchased each year the freshly picked hops of local growers, particularly those of small men like William Baker, the local blacksmith, who cultivated a half-acre hop garden near his forge. The largest ratepayer in 1730 - far ahead of anyone else - was Mr John Jekin, a brewer whose property was valued at £130 for rateable purposes. A hop grower, Mr Clement Court, bears the next largest assessment, £34 10s., a long way below Jekin. Brewers and hop growers are prominent in the better-off section of the community. Non-resident brewers and hop growers also had property interests in St. Dunstan's: Samuel Fremoult of St. Mildred's, and William

Rigden & Co., for example. Reading down the names of the churchwardens, who hold office for a year or so at a time, is rather like thumbing through the pages of a brewers' and hop growers' directory!¹

It was normal for brewers to integrate backwards into hop growing and malting, thereby gaining greater control over the supply and price of their raw materials. But integration went further than this. Through personal contacts with growers whose grounds abutted their own, and who shared the same parish offices, and by the provision of drying facilities in their oasts on attractive terms, they were able to secure an adequate supply of hops each season for their breweries. The system appears to have worked well, and of course there were inns and alehouses galore in which to settle the deals.

The hop planters of Canterbury were a well-organized and influential group of businessmen: at least two co-ordinated bodies existed in the City by 1740. The Fountain in St. Margaret's Street - "one of the most commodious inns in the City" - was the venue for weekly meetings of the "Gentlemen of the Hop Club" or, as it was sometimes simply known, "The Fountain Club". Other planters met regularly at The King's Head in the High Street, Canterbury's largest inn.² By the 1760's The Fountain had become the informal "hop exchange" of the City. On 28 July 1766 prominent hop planters, brewers and merchants attended an enquiry and presented a petition at The Fountain, at a meeting presided over by the Sheriff of the City, Mr Lawrence Tuck. Canterbury's leading businessmen pleaded:

... it is not nor will be to the damage or prejudice of His Majesty or of any other, nor to the hurt of the neighbouring markets if His Majesty should grant to the Mayor, Aldermen, and Commonalty of the said City of Canterbury and their successors license that they may have and hold within the City aforesaid one market, toll free, on Wed-

¹Canterbury Cathedral Archives Library, St. Dunstan's Rate Books, 1701-60.

²Kentish Post 31 October, 25 November 1747, 6 February 1760.

nesday in every week of the year for ever, for the buying and selling of hops by wholesale and retail, in baggs, pockets or otherwise ...¹

On the return of a writ of ad quod damnum in Chancery, George III granted, in 1766, "his Charter to the Mayor, Aldermen, and Commonalty of Canterbury ... the liberty of a market, toll free, within the City, on Wednesday in every week, for ever, for buying and selling of hops ..." ² Alderman Bunce later recorded:

This market is held at the Fleece tavern, in the parish of St. Andrew of this City, on every Wednesday in the year; and, at particular times, much business is transacted at it. There is usually a public dinner at this tavern, every Wednesday in the hop season; which, in plentiful years is very numerously attended by the neighbouring hop planters, dealers and farmers, who make contracts there, for the buying and selling of hops, by sample, to a very considerable amount.³

By way of explanation it was stated that the new weekly Hop Market would provide the means by which "gentlemen, merchants, brewers, and all consumers of and dealers in hops may have opportunity of being supplied with hops on easy and advantageous terms; and buyers of fair character and reputation will be allowed a reasonable credit". Rather optimistically, the report stated that local growers and dealers had "unanimously resolved to sell their hops at those markets, and not to their prejudice (as has been the custom) to send them to London, to be sold by factors, by which means expences will be saved both to the buyers and sellers".⁴

The granting of a weekly provincial market by royal charter at this

¹PRO Chancery Files, Petty Bag Office, C202/154.

²PRO Patent Rolls C66/3708/13.

³MS. Minutes of the Court of Burghmote, City of Canterbury, Bunce Extracts ff. 13, 55. The original market charter is in the keeping of the Town Clerk of Canterbury and is stored in the strong room of The Public Library and Beaney Institute.

⁴Kentish Post 6 September 1766.

late date illustrates the tremendous local importance attached to hops. A royal grant set the official seal of approval on a trade that had existed for 250 years. It was a defiant gesture towards the powerful Southwark hop factors. However, although the market flourished until the twentieth century - and no doubt facilitated local trade in hops - it did nothing to change the long-established custom of marketing the bulk of east Kent hops through Southwark factors.

CHAPTER 13

THE MARKETING OF HOPS II

A Hoymen, Factors and Merchants in Canterbury and Southwark

Very little hop cultivation was being undertaken in and around Canterbury during the first half of the seventeenth century. However, an episode in the reign of James I shows that the City was already a market centre for the few hops grown in that neighbourhood, and that agreements were made for hops to be consigned to London. Two metropolitan hop dealers contracted to take delivery of 21 bags of hops to be sent from Canterbury during the season of 1615. The hops which were despatched weighed altogether nearly two tons. A price of forty shillings a hundredweight was agreed. An allowance of twenty shillings was made for water-carriage to London. The contract was for hops described as "sweet and merchantable" and which "did not then exceed the age of two or three years growth". In the event, the hops which were actually shipped to the London dealers by Richard Jervis of Canterbury fell short of this specification, and were said by the purchasers to be "rotten and stinking hoppes and very old, beinge at the least seaven or eight years growth". They condemned the consignment as "not wholesome nor fitt for any use".¹ There is no indication where these hops were grown but it is extremely unlikely that they came from the Canterbury parishes which later became famous for their hop grounds.

Sending hops to London was always a much more complicated business than selling them locally. But not for the grower. A chain of specialists lifted the worries from his shoulders. The hoymen carried hops from the coastal ports of Whitstable and Herne to Southwark, where they were then unloaded into riverside warehouses. Freightage was

¹PRO C2 James I Hil. 13/24.

arranged between hoyman and grower over a pot of local brew in one of the Canterbury inns. The Castle in Butchery Lane, The Rose in St. George's, The "Flower de Luce" (Fleur de Lis) in the High Street, and The George and Hoy in Beer Cart Lane were regular haunts of hoymen, farmers, hop growers, and other local businessmen who wished to ship goods between Canterbury and London. And possibly they might travel themselves occasionally as farepaying passengers. From the beginning, the chief purpose of the Kentish hoymen was to supply the London market with bulky foodstuffs and raw materials, especially wheat, barley, malt, beans and peas. Hops and wool, too, were carried by hoy to London from the early seventeenth century. The corn crops sent from Kent to London were unloaded at Bear Key where, as we have seen, the Kentish hoymen were a well-organized and powerful group in a position of influence as corn factors. They accepted commissions from farmers to sell at Bear Key, and they handled all the financial transactions.¹

The Kentish hoy business consisted of a growing number of small family concerns with sons, brothers, and even widows inheriting vessels and goodwill. Occasionally small partnerships were formed, cemented by marriage more often than not. Thus the young master of a vessel might promote his interests by marrying the hoyman's daughter. A growing intensive spirit of competition among the various family firms characterized the Kentish hoy business during the eighteenth century. In the carriage of hops, as with other cargoes, there is no evidence of price-competition; competition existed in the quality of the services offered, and these services were advertised regularly in the Kentish Post:

This is to give notice that Mark Pearce, hoyman, from Faversham, is removed to Hearn; and will carry hops, corn, goods and passengers from thence to London

¹See supra, 300-20.

every fortnight.¹

The hoymen arranged with local innkeepers in Canterbury, Whitstable and Herne for hops to be stored temporarily on their premises while awaiting shipment to London; they organized waggon transport - often their own - between Canterbury and the coastal ports; they made the necessary contacts with hop factors who already awaited their consignments in Southwark; and finally, they acted as financial intermediaries transmitting funds to and from the capital according to their clients' wishes. Transport charges were extremely modest. Merchants and hop planters were informed:

John Knowler of Whitstable, owner of the New Canterbury hoy, will begin, from the 18th day of September, to carry hops to London for eighteen pence the bag in coarse cloth, and pockets in fine cloth at twelve pence each.²

These were standard rates for the region. Even in years of very low hop prices, transport charges could not have amounted to more than 2 per cent of the selling price, in years of dearth perhaps half of one per cent.

The Port of Faversham in the technical sense of the word (i.e. the Customs Port), included three ports in the topographical sense of the term: Faversham, Whitstable and Herne. Faversham exports of hops, 1656-85, averaged little more than 100 bags a year. By 1689-1701, however, exports had risen to 750 bags a year, and in the nine recorded months of 1741 they exceeded 2,500 bags and pockets. The entire trade was with London.³ This trade provides striking corroboration for the expansion of hop growing in north-east Kent, and a closer examination of

¹Kentish Post 3 August 1728.

²Ibid., 16 September 1732.

³J.H. Andrews, Geographical Aspects of the Maritime Trade of Kent and Sussex, 1650-1750, University of London Ph.D. Thesis (1954), 214.

the port trade reveals the significance of the Canterbury district. It is necessary, initially, to make the assumption that hoys belonging to Whitstable traded with Whitstable and the hoys of Herne traded with Herne. This is not unreasonable in the case of outgoing coasters. We already know that London-bound hops from the Canterbury district were shipped through these two ports.

In 1741, eleven hoys were carrying hops from north-east Kent to Southwark, sailing fortnightly. Six of these vessels handled hops of the Canterbury district. In the four months September to December, they conveyed between them 1,232 bags and pockets. The three Whitstable hoys were the Success owned by James Fagg, Joseph Tolbutt's Endeavour, and the Ann which belonged to the old-established firm of William Philpott. Three hoy businesses were conducted from Herne: John and Michael Martin operated the Hopewell, William Oliver the Three Brothers, and the Prosperous was the joint property of William Cook and William Amis. These six vessels carried between them 60 per cent of the hops sent from the Port of Faversham to London. In other words, three out of every five bags of hops leaving north-east Kent for Southwark Hop Market were carried in the hoys of Whitstable and Herne, which were freighted by the hop growers of the Canterbury district.¹

Southwark was, and still is, the London centre of the hop trade. By the second decade of the eighteenth century, over fifty Southwark factors were selling thousands of bags and pockets annually to more than a hundred merchants and brewers, many of them freemen of the Borough. A few important families controlled the bulk of the trade. Longevity of the leading firms, with a tendency towards large-scale operations, and all-year-round trading, at times feverish, were features of the Southwark

¹PRO E190 718/3, 23.

hop trade.¹

The working of the system can best be understood by considering briefly three families whose destinies and livelihoods were bound closely together in the hop business. Richard Waddell and his brother William, were middling citizens of Canterbury during the reigns of the first two Georges; they were farmers, maltsters, hop planters and merchants in the parish of St. Paul. Some of their numerous small hop grounds were leased to local residents, whose modest crops were sold each year to the Waddells. Throughout the year, according to market prospects, the Waddells consigned hops to the Gillows, leading factors in Southwark and cousins of the Waddells. Carriage of the hops was normally undertaken by John and Michael Martin of Herne, although other local firms were employed from time to time, for example Fagg of Whitstable and Sherwood of Faversham. Regular accounts were submitted by the Gillows to their Canterbury cousins, detailing the sale of each consignment, carefully noting current prices and gross and net returns on the transaction. Balances were drawn after deductions for expenses and disbursements made in London and elsewhere by Francis Gillow on behalf of his cousin. In some years, at least, profits remained in London to be invested, for example in annuities of the South Sea Company. Michael Martin - and no doubt other hoymen as well - rendered regular accounts to their clients, and transmitted cash balances from London to the provinces. A constant but irregular flow of hops was put forward to be acknowledged by a backward current of cash balances and market information relating to current prices and future prospects. This complementary pattern, tightly woven, nevertheless stretched from at least the reign of Queen Anne to the accession of George III.²

Through the medium of the Kentish Post hop growers were kept fully

¹See infra., 689-94.

²PRO C111/55.

informed of the range of services offered. James Abree, the editor, was himself a "gentleman planter" and was fully aware of the complexities of the market, and there seems little doubt that his professional opinion was available to advertisers. In addition to published farm commodity prices and the lucid advertisements of hoymen, other benefits became evident as factors vied with each other for business. Factors in the Borough maintained close connexions with Canterbury. John Latter, a "hop factor in Bear Court Southwark, near London Bridge" owned seven acres of hop ground, a malt house, and two cockle oasts in Canterbury, all of which he leased to local men who were no doubt also his clients.¹ This is no isolated example and, furthermore, there is a suggestion that some factors had Canterbury origins and moved to London as the business of middlemen expanded:

To be lett from Michaelmas next, the dwelling house, gardens and hop-oast, belonging to Mr Henry Linaker in Canterbury, who removes to the backside of the Bear Tavern on London Bridge, Southwark; where hop planters &c. may apply to him for the sale of their hops by commission, after the first day of August 1726.²

In 1755, John Whiddeet, a Borough factor, moved from The White Hart Inn, Southwark to become landlord of The Plymouth Arms, near Battle Bridge; he was careful to announce his change of address in the Canterbury newspaper seeking, at the same time, "the continuance of his friends' favours".³

Canterbury growers were left in no doubt about the storage and portorage facilities available on the south bank of the Thames:

At Cotton's Wharf next the Bridge yard, Southwark: ware-

¹Kentish Post 18 September 1731.

²Ibid., 23 July 1726.

³Ibid., 1 November 1755.

houses convenient for hops or other goods, insured from fire, which being close to the Thames-side, vessels may come in to unload or load every tide; where is constant attendance to receive in and deliver out.¹

The formative period in the history of fire insurance in this country was from about 1680 to 1750. The Sun Fire Office, established in 1710, played a leading part in this "new and hazardous business". The development of fire insurance provided welcome security for policy-holders and enabled entrepreneurs to spread their risks - "a necessary condition of the expansion of business". It was only after the first decade that fire insurance, previously restricted to the cover of houses in the metropolis, was extended to cover goods both in London and the provinces. Warehouses soon came to represent a third of the total premiums paid. Waterside fire insurances along the Thames remained the riskiest undertakings. The policies of the Sun Fire Office were "simple documents obliging it to cover the holder's loss up to a stated sum provided he paid his premiums regularly". The policies were assignable and devisable.²

Kentish growers who marketed in London could relax in the knowledge that their hops, once disembarked and in store, were insured against fire. The leading London wharfingers - Ralph Hilditch, Alexander Hay, and the partnership of Hargrave & Charlton - gave due publicity each year to the fact that the goods in their warehouses at Cox's Wharf and Cotton's Wharf (as well as the buildings themselves) were fully covered against fire risk. It was common for the owners of London warehouses to deposit the relevant policies (numbers 86,202 and 86,223 were the most important) with a well-known, reputable and easily accessible person in Kent - a Maidstone brewer, an alderman of the City of Canterbury, or the editor of

¹Ibid., 28 September 1743.

²P.G.M. Dickson, The Sun Insurance Office, 1710-1960 (1960), xi, 15, 26, 77-9, 86-7.

the Kentish Post; sceptical farmers were invited to inspect the documents.¹ It seems that throughout the length of the marketing chain no effort was spared to prove the strength of each and every link. The following advertisement is typical:

Sun Fire Office Policy 86,202.

This is to acquaint all gentlemen, planters, and dealers in hops, that there is an insurance made for the benefit of the owners of what hops and clover seeds shall be landed at Cox's Wharf, Southwark, or put into the warehouses there, to the amount of six thousand pounds, in case of loss by fire.

N.B. The Policy is in Alderman Robinson's hands in Canterbury.

Alexander Hay, Wharfinger.

Note, Cox's Wharf was not burnt.²

A thoroughgoing appreciation of the multilateral complexities of the Hanoverian hop markets must take into account the network of family and business connexions which bonded those markets together over distance and time, and the personalities who built up and preserved their families' fortunes: Thomas Tilbe, Richard Waddell, Francis Gillow, and a hundred and one other entrepreneurs. Buttressing the main edifice were other, lesser families - hoymen and innkeepers - whose props were essential for the preservation of the whole marketing structure: the Martins of Herne, and the Philpotts of Whitstable who plied to and fro along the coast; and the innkeepers of The Rose in Canterbury, The Ship by the quay at Whitstable, The George in the High Street at Southwark, and many more. An army of waggoners, weighmen, wharfingers, merchant seamen, porters and post boys ensured that bags and pockets moved easily and safely along the channel of distribution from hop garden to brewer's vat.

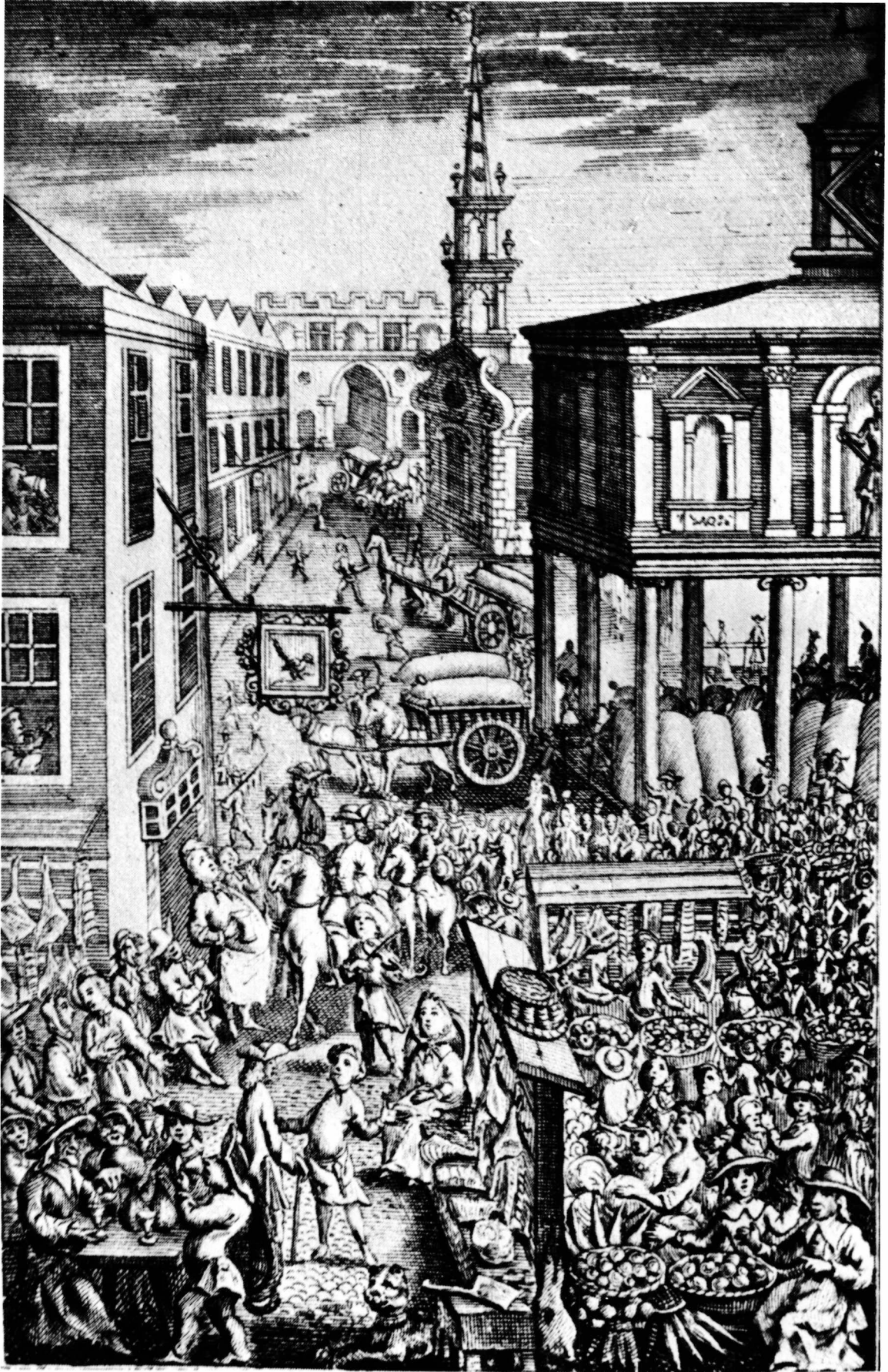
¹Kentish Post 5 August 1741, 10 August, 4 September 1745, 2 August 1758, 13 August 1760.

²Ibid., 21 August 1751.

Plate 13

The Hop Market in the Borough of Southwark
from R. Bradley, The Riches of a Hop Garden
Explain'd (1729).

The Hop Market is shown on the ground floor
of the old Town Hall. Pockets of Kent
hops are being unloaded from carts which
have brought them from quayside warehouses.
Crowds of local people flock around the
adjacent greengrocers' stalls and butchers'
shambles, while others patronize local inns
such as The Cock. One can see in the
distance the embattled gateway which forms
the entrance to London Bridge; nearby is
the church of St. Thomas.



THE HOP MARKET IN THE BOROUGH.

B The Southwark Hop Market

Conveniently situated for the Kentish traffic, Southwark was also the home of the metropolitan brewing industry, including the great eighteenth-century porter brewers who obtained, in normal times, all their supplies from Kent. Naturally enough, the Borough abounded in old inns which, besides supplying the needs of tired and hungry travellers, served as local "exchanges" for businessmen, not least among them the traders in hops. The Hop Market in Southwark "grew up and was at all times founded upon the crops of the Kent and Sussex gardens". A distinguishing feature of the Borough Market was "the existence of specialized factors intermediary between the many growers and the relatively few merchants", and it was here in Southwark that "the greatest merchants and wealthiest factors" in the country had their businesses.¹

In an otherwise excellent study of marketing processes in the early-modern period, Westerfield says almost nothing on hops, dismissing the trade in a puerile paragraph. Undoubtedly, lack of source material inhibited more detailed treatment.² Parker did not include Southwark in his index, an incredible omission, but then he said precious little about the greatest of English hop marts. However, Parker mentions the existence of a hop market in London as early as 1681; it was situated in Little East Cheap on the north bank of the Thames. In that year the Common Council of the City of London enacted:

that the weigh house built since the fire in Little East Cheap should for the future be used as the office of tronnage and weighing of merchandise: and that it should

¹P. Mathias, The Brewing Industry in England, 1700-1830 (Cambridge 1959), 497, 507.

²R.B. Westerfield, Middlemen in English Business, particularly between 1660 and 1760, Transactions Connecticut Academy of Arts and Sciences, xix (New Haven, Conn. U.S.A., 1915), 184-5.

be the common market for the buying and selling of hops of English growth.¹

This was undoubtedly the genesis of the organized hop trade in London. East Cheap Market was within sight of Southwark, over which the City possessed jurisdiction at this period. Moreover the Borough was already well-endowed with warehouses and brewhouses and, being situated on the south side of London Bridge, was the convenient terminus for traffic coming from Kent, whether by water or via the Old Dover Road. At what precise date the hop merchants and factors moved across the river and became concentrated in Southwark is not entirely clear but it was probably in the first decade of the eighteenth century and certainly not later than 1711. The broad outlines of the trade are clear enough.² Hops, mostly from Kent, were transported to Southwark by waggon or, more often, by coastal hoy. Factors, acting for the growers, sold the hops to merchants and brewers; London brewers were the ultimate customers for the bulk of these hops; their breweries were situated mainly in Southwark but also in Bermondsey to the east, and just across the river in Clerkenwell and Shoreditch. However, as Professor Mathias has observed "the intricate commercial details of the market in hops often remain obscure".³

It has now become possible for the first time, to supply those market details which have eluded us for so long: from records that have lain under dust for more than 250 years. In the Guildhall Record Office are six manuscript volumes of "Registers" which, according to the archivist, have not seen "the light of day" in modern times.⁴ The contents, at

¹H.H. Parker, The Hop Industry (1934), 44.

²The best general discussion of English hop markets in the eighteenth century is Mathias, op. cit., Ch. XV, 496-533.

³Ibid., 504.

⁴Guildhall Record Office, Borough Registers (Hops, Entry of Tronage), 1711-18.

first sight unintelligible and worthless, are uninviting: hundreds of names, thousands of figures in monotonous columns, and a fantastic assortment of hieroglyphics fill the pages of these cryptic volumes. But, analysed and correlated with (and interpreted by) other critical evidence, the Registers are a rich mine of information on the mechanism of the Southwark Hop Market. They are unique: the writer knows of no other similar record. Tronage can be defined as "the weighing of merchandise at the tron; a charge or toll upon goods so weighed; the right of levying such charge".¹ Tronage had to be paid on every bag of hops, at the time of its sale in the Southwark Market. This was the occasion when, after a "bargain" had been struck, each bag was weighed (to the nearest pound) on the official "beam"; buyer and seller adhered to this weight for the purpose of calculating the total selling price. Two tolls or levies were payable, one the responsibility of the seller, the other the buyer's. Furthermore, there were two levels of tronage: $3\frac{1}{2}$ d. and $6\frac{1}{2}$ d.; those who were "free" (freemen) of the Borough of Southwark paid the lower toll. Sometimes, by mutual arrangement, one of the parties to the transaction (more often than not the seller) paid both levies. Thus a freeman selling hops to a non-freeman would pay, in all, 10d., if he had previously agreed to be responsible for both tronages:

Mr James Richardson

21 August 1711 ✓sold to M^r Dicks
M^r Richardson pays both ✓10d.

It also seems to have been common practice to pay the beam-keeper's "beer money" - 2d. for each "parcel" or consignment of hops weighed.

There were two beam-keepers who recorded (in detail) each transaction in their day-books; one of them was a Mr Barham. This information was later transposed chronologically into "registers"; ledgers were then com-

¹O.E.D.

piled listing names of dealers alphabetically and giving page cross-references to the registers. A single clue suggests that the registers and ledgers were kept by Mr Thomas Hawdon who was almost certainly Clerk of the Market. The first three extant volumes (Registers A, B and C) relate to the years 1711-18, and these were apparently compiled from Barham's day-books. The third volume is a ledger which relates to Registers A, B and C but covers only the years 1711-16; together, these four volumes are the most valuable, and the period 1711-16 is the one most easily examined. The remaining volumes are also Registers (for the present purpose designated D and E); they relate to the years 1711-15 and were almost certainly compiled from the day-books of another beam-keeper; but, unfortunately, there is not an extant ledger to accompany them and, in this sense, the record is incomplete.

Is there any significance in the terminal dates? It might be suspected that 1711 was the first year of operations in Southwark. But 1711 was also the year when an excise duty of 1d. on each pound of hops was imposed.¹ However, the excise was paid by the growers locally and was in no way connected with the markets. The commencing dates could therefore be coincidental - the opening of the Southwark Market and the imposition of the hop excise duty. The records are incomplete for 1718 and there are none thereafter. The simple and obvious explanation is that subsequent volumes have, like so many market records, been lost. This seems to be the correct interpretation and the tronage system evidenced in these volumes continued long afterwards, possibly into the twentieth century.

Before considering the value of this material, a few examples will demonstrate the lay-out of entries in the Registers. It is worth noting that the word "hops" never occurs and there are no stated units of weight:

¹9 Anne c.12.

the obvious was not worthy of mention. Also, there are no prices mentioned since these were the private concern of buyers and sellers. The lay-out in the Registers followed, with minor variations, a uniform pattern:

Oct. 31 1711 Mr Andrewes to Mr Frame

RT	2.	2.	20
	2.	2.	24
	2.	2.	24
	2.	2.	16
	3.	0.	02
	2.	3.	06
	2.	2.	09
	2.	2.	25
	2.	1.	22

At the end of October 1711 Mr Andrews, a Southwark factor agreed to sell 9 bags of hops to Mr Frame, a hop merchant; the hops involved in this transaction all came from the same grower and each bag carried his trade-mark "RT". The figures record the weight of each bag in cwt. qr. lb. (hops were the only farm crop to be marketed in this form). In the case where a consignment comprised hops from different farms this was always clearly indicated against each bag. Thus on 28 October 1713, Mr Jenkin Gillow sold 10 bags of hops to Mr Thomas Inwen: one bag carried the mark "WR", two "TH", two "TM", one "WL", one "EG", two "IS", and one "O"; this consignment comprised hops from seven different farmers. There were as many trade-marks as there were growers, literally hundreds. Where the grower's initials were appropriate these were used wherever possible, but obviously duplication had to be avoided so that many growers used a hieroglyphic form, for example:



By the early nineteenth century it was customary to mark bags and pockets with the grower's name, the parish where grown, and the year; this practice continues today. At least as early as the 1830's hops which bore the arms of the City of Canterbury carried a premium of 5s. a

hundredweight.¹

It was a matter of considerable pride, for both grower and factor, to market the first new hops of the season, no matter how small the quantity:

July 13 1719 Mr Clark to Mr Huxley

B	0.	3.	01
	[qr.]	[lb.]	

First new hops.

In the late nineteenth century the first pocket of new hops from Kent was sold year after year by the firm of W.H. & H. Le May, Southwark Hop Factors. The pocket was invariably sold at a premium, rather like the Champion Beast sold at a present-day fatstock show, where butchers vie with each other for the privilege of its purchase and the prestigious publicity pertaining.²

The Tronage Registers enable us to establish the size of the Southwark Market, and to examine its functions and structure; they are also valuable in throwing light on the transactions of individual dealers who can be identified from other sources.

Size of the Market

An estimate of the annual throughput for the years 1711-17 is shown in Figure 16. On average, some 12,000 bags entered the Market each year with the usual marked seasonal variations we associate with this product. Thus, in 1711 almost 16,000 bags were handled, in 1714 less than 8,000. There is a remarkably close, but not unexpected, inverse correlation

¹E.J. Lance, The Hop Farmer (1838), 122, 127.

²The firm of Le May was founded in 1873 and is, today, one of five remaining firms of English hop factors, four of them situated in Southwark. I am deeply indebted to Mr Dudley Le May of Tonbridge, senior partner in the family business, and to his manager Mr Arthur Crane, for showing me the firm's (original) premises in the Borough High Street and their huge warehouses in Southwark, and for discussing with me the intricacies of the hop factoring business.

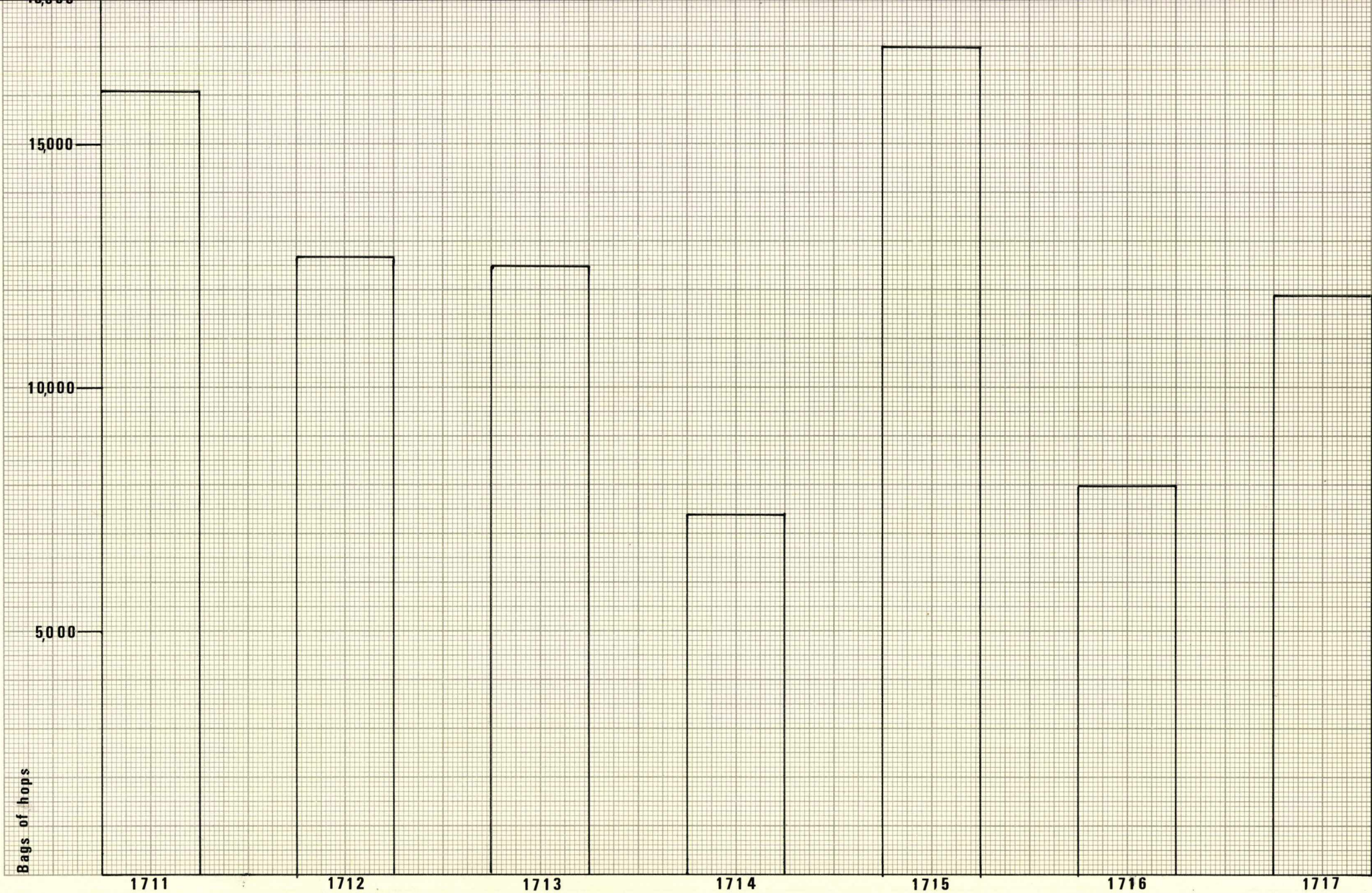


FIGURE 16 Southwark Hop Market: Annual Throughput

between the sizes of throughput and the levels of known Southwark prices for these years (See Milstead Price Series in Table 32 and Figure 10). At this early date the Market was already operating on a considerable scale. It was reckoned in the early 1760's that the London brewers used altogether 15,000 bags of hops annually; these were purchased in Southwark.¹ Unfortunately we have no idea how many hops the City brewers consumed in the early part of the century, or what proportion of the total is represented by their purchases in the 1760's. However, the estimated throughput reflects the size of the Kent hop acreage at this time since the hops marketed in Southwark were almost entirely the produce of that county. Assuming an average yield of 6 cwt. per acre, the hops sold in Southwark were the product of 5,000 acres. A Kent hop area of 3,000 acres has already been suggested as reasonable for the end of the seventeenth century. A total of around 5,000 acres appears equally reasonable for the second decade. We know for certain that there were more than 7,000 acres of hops in Kent in the 1720's (more than half of these lay in east Kent) during which period the Southwark Market was expanding and probably handled 17,000 bags on average each year, more than 20,000 bags in abundant seasons. But however we view it, the Registers show that the hop trade was already big business before 1720.

Function of the Market

The purpose of the Borough Hop Market was to enable sellers and buyers to meet together to agree prices and effect sales of accurately weighed hops from known sources of supply. The weighing-beam itself was carefully maintained, and serviced by John Smart, who submitted regular accounts for the repairs he carried out and the new chains and weights he supplied during the years 1715-21.² The buying and selling of hops in

¹BM. Add. MS. 38,339 f. 12.

²Guildhall Record Office MS. 71/81.

Southwark was continuous six days a week, every week throughout the year. The Market rarely closed, other than for an exceptional reason, such as occurred at the end of the Marlborough Wars. Thomas Hawdon in ecstatic mood, recorded the following unique entries in his Register in 1713:

1713

- 4 July A New May Pole erected in the Strand
- 7 July Fire Works on the River Thames being a Thanks-giving Day for Peace between her Most Gracious Majesty Queen Ann & Lewis y^e XIV King of France.
Nothing weighed
- 8 July ditto.

From the method of recording, it is easy to distinguish buyers and sellers. The names of more than 50 sellers and over 100 buyers from Registers A, B and C, and the Ledger account have been observed. The sellers were factors and the buyers merchants, brewers and private individuals. The Registers show that in almost every recorded entry we are looking at a coarse bag of hops weighing around $2\frac{1}{2}$ cwt. Parts of bags were packaged on the farm (nothing was wasted) and these were marketable as "ends". Pockets ($1\frac{1}{4}$ cwt.) rarely appear at this time and never by name.

It can be suggested that the Southwark Hop Market provides a fairly good example of perfect competition in agriculture. The conditions of perfect competition, already familiar to most of us, state that there is for any market a very large number of independent producers, none of whom produces such a proportion of total output that he is able to influence market price by offering or withholding his product; there is also a large number of similarly independent buyers, none of whom individually is in a position to influence price; the produce in any one market is homogeneous; finally, all buyers and sellers have at any one time full information about the ruling price in the market.

Hops from hundreds of separate farms were sent to Southwark to be sold by a large number of factors to an even greater number of buyers from London and (especially in scarce years) from further afield. There was unhampered entry to the Market. The buyers were independent but, to the extent that a small number of large buyers dominated the market (also the case with sellers) there is a deviation from the perfect model; there is, however, no evidence that individual dealers by themselves affected price; they remained in full competition with each other and there is no hint of "rings" or collusion. The product was homogeneous since, although a wide range of grades existed, each grade could be assessed by sample and matched to price accordingly. Factors and merchants had full knowledge of market prices both for Southwark and the other English hop marts, especially Weyhill and Stourbridge. Growers were also fully cognisant of current prices through the bi-weekly quotations in the Kentish Post and from information contained in the accounts and correspondence returned to them by their factors.

Structure of the Market

Professor Mathias has suggested that numbers of dealers in trade directories "because of the large-scale dealings of a few individuals, do not reflect the true nature of the market, for the many people in a very small way of trade are entered in them on the same terms as the greatest, which can give a misleading picture of the whole".¹ This hypothesis is wholly substantiated by a detailed examination of the Tronage Registers. 53 sellers (factors) operating in Southwark (1711-12) handled over 20,000 bags of hops. But six of these factors (10 per cent) controlled 75 per cent of the market. Francis Gillow and William Streek were the "giants" of the hop-selling business and probably controlled between them a quarter to a third of the Southwark trade. Ten out of 94 buyers purchased more

¹Mathias, op. cit., 508.

than half of the hops sold. It has proved possible to identify enough of the biggest buyers to show that they were wealthy Southwark hop merchants who were already operating large-scale businesses in some cases in partnership. Such were the firms of Samuel Barnard, Henry Bartellot, and Colvill & Co. We now know something about the size of their transactions. From a sample of more than 4,000 transactions, involving over 18,000 bags of hops and nearly 60 dealers, we can conclude that the average deal involved four or five bags of hops, not necessarily from the same grower. However, the largest transactions feature in the records of the biggest merchants; the size of purchase increased over time. Thus, "Mr Colvill & Co." purchased 106 bags in 37 lots (average 2.9 bags) in the period 28 June - 4 September 1711; in 1715 (28 February - 8 November) this firm bought 766 bags of hops in 83 lots (average 9.2). By 1716 exceptionally large transactions can be found in the records of the larger dealers: for example in November of that year Jenkin Gillow sold Mr Thomas Inwen 54 bags of hops (from fourteen different growers) in a single transaction. But deals involving 4 or 5 bags remained more numerous, and sometimes only a single bag of hops changed hands.

Brewers were reckoned to buy at least a third of their hop requirements before Christmas each year.¹ This suggests a hectic business in hops for a few brief months with an easier pace thereafter. Since the hottest months were unsuitable for brewing, there was a seasonal rhythm, with great activity from September until the early summer followed by a period used for brewery repairs and maintenance.² The analysed records of sales by Jenkin Gillow, one of the largest factors, reflects the seasonal fluctuations in demand. Table 40 summarizes Gillow's monthly sales of hops for a three year period. The months of heavy trading

¹BM. Add. MS. 38,339 f. 12.

²Mathias, op. cit., 502.

TABLE 40

JENKIN GILLOW, SOUTHWARK FACTOR: DISTRIBUTION OF HOP SALES 1712-14

Month	<u>1712-13 (H.Y. 1712)</u>		<u>1713-14 (H.Y. 1713)</u>		<u>1714-15 (H.Y. 1714)</u>	
	No. of Bags	Per Cent	No. of Bags	Per Cent	No. of Bags	Per Cent
September	98	9.2	78	7.4	272	23.7
October	264	24.9	159	15.1	158	13.8
November	73	6.9	116	11.0	140	12.2
December	48	4.5	94	8.9	14	1.2
January	99	9.3	55	5.2	109	9.5
February	112	10.5	83	7.9	96	8.4
March	52	4.9	56	5.3	129	11.2
April	42	4.0	101	9.6	31	2.7
May	87	8.2	130	12.3	79	6.9
June	60	5.6	90	8.5	97	8.5
July	71	6.7	53	5.0	10	0.9
August	56	5.3	39	3.7	12	1.0
Total	1062	100.0	1054	99.9	1147	100.0

Source: PRO C111/55.

(Sept. - Nov.) are immediately apparent - more than a third of his business took place in this period; the slackest months were June - August which saw less than 20 per cent of the year's trading activity. A further point of some interest emerges from Table 40. In 1714 (a 12-month period Sept. 1714 - Aug. 1715) not only were more hops sold but the distribution of sales was more uneven. There was exceptional activity in September, and considerable sales during the following two months: by Christmas half the year's trading had been completed. From April, trade was running at a very modest level, and the period June - August witnessed only 10 per cent of the annual turnover. But the year 1714 saw the shortest crop in the series: fewer than 7,500 bags entered the Market and these sold at high prices. We might have expected Gillow to handle fewer hops that year, but it seems that the small number of large operators not only increased their share of the trade but the absolute amount as well, temporarily squeezing out the smaller dealers. In a year of scarcity, when growers had few hops to sell, they would be so intent on getting the highest possible price in order to maximise returns that they would employ only firms of the highest standing - influential factors who could drive hard bargains with the great merchants. In this situation an experienced large-scale factor like Gillow would find his services in great demand. The brewers, aware of scarcity and fearing their production would suffer if hops became unobtainable later in the season, bought larger quantities than usual in September and October. By the following summer hops were indeed scarce. But the brewers, speculating on an abundant crop in 1715, refrained from buying more than the bare minimum during the two or three months before picking. Thus, in a year of scarcity not only was the trade concentrated in fewer hands but the normal monthly swings of activity were exacerbated.


The Dealers in Hops

The Tronage Registers can only be fully exploited when they are correlated with information from other sources. Some years ago Eileen Power discussed the business of a firm of wool merchants, Cely & Sons. "Not once or twice in our rough island story," she wrote, "the fruits of litigation have been a godsend to the economic historian". Like the Celys, the Waddells of Canterbury became involved in a lawsuit which resulted in their business correspondence and accounts going up to Chancery "and once there in Chancery they remained to find a home finally in the Public Record Office."¹ The collection of letters and papers of the Waddells are, for the eighteenth-century hop trade, a striking counterpart to those of the Celys for the late medieval wool trade.² The brothers Richard and William Waddell were substantial farmers, maltsters, hop growers and hop merchants in Canterbury during the first half of the eighteenth century - prominent members of the "pseudo-gentry" of that City. They sent regular consignments of hops and other farm crops to London; part of this produce was of their own growth, some the marketable surpluses of others. Their sole agents in London were the Gillows, leading hop factors in Southwark, and close relations of the Waddells. The main body of papers covers the period 1708-60: at first Richard Waddell conducted business with his uncle Jenkin Gillow, after 1720 with his cousin Francis, son of Jenkin. After Richard's death in 1738, his brother William became principal of the firm and continued to transact business with Francis Gillow. A subsidiary set of papers, covering the years 1733-65, are the accounts of Michael and John Martin, hoymen of Herne: so far as is known these are the only extant records relating to a Kentish hoy business. If the present writer had not previously

¹E. Power, The Wool Trade in English Medieval History (1941), 55.

²The Waddell collection is in Chancery Masters' Exhibits, PRO C111/55.

scrutinized the Waddell documents it would have been virtually impossible to interpret the Tronage Registers; this correlation is implicit in the foregoing discussion.

Some of the Southwark firms, including the Gillows, were characterized by longevity. These family businesses and partnerships emerged during the formative years of the early eighteenth century and were dominating the market in the 1750's and later. Even small but important details like trade-marks are made abundantly clear: Richard Waddell sent bags of hops marked IS, for instance, to Francis Gillow in Southwark; these were the hops of Mr I. Sawbridge of Canterbury. William Waddell's bags always bore the interwoven symbol . Buyers soon came to associate such trade-marks with specific types and qualities. In his letters Gillow frequently named the merchants to whom he sold hops on commission:¹ Messrs Thomas Barry; Barton; Colvill & Co.; England; Foreman; Hudson; Joseph; and Stephenson & Co. In every case it has proved possible to trace these leading merchants - either in the Tronage Registers, or in the earliest London Trade Directories, or both.² A notable feature of Gillow's accounts in the Tronage Registers is the appearance of a large number of new names in 1714, a year when hops were generally hard to come by. One can imagine that these buyers came from further afield. The Waddell documents make it clear that, although most of Gillow's business lay in London, he also had dealings with merchants and brewers beyond the City: for instance, in 1721 he sold 6 bags of Richard Waddell's hops to "Gilman att Hertford".

The fascinating diary of Peter Briggins throws light on the hop trade for the first decade of the century and affords a measure of correlation with the Tronage Registers which, chronologically, follow hard on its

¹The standard rate of commission was 2s. 6d. a bag.

²Henry Kent, Directory (1736 etc.).

heels.¹ Peter Briggins' father, William, was a wholesale dealer in tobacco; Peter was a general merchant who included hops in his dealings.² He was a member of the Society of Friends, growing a few hops himself as a side-line at Stoke Newington, while speculating regularly in hops, honey, wax and tobacco, in addition to his main dealings on the Exchange in the Funds. In his hop dealings Briggins was guided by his nephew William Tibey "whom the diary reveals obliquely as a professional operator in the hop markets."³ It is interesting to see Tibey emerge later in the Tronage Registers as a regular buyer of hops in Southwark; Gillow was one of the factors from whom he obtained his consignments. On 15 October 1706 Briggins bought hops from a man called Engier: one of the largest merchants in the Tronage Registers was Thomas Engier. On 24 June 1707 Briggins received payment for hops sold to William Cholmeley: the Cholmeleys were prominent London brewers and William regularly bought hops in Southwark Market in the years 1711-18. John Cholmeley, William's father, was one of a number of brewer-M.P.s for Southwark.⁴ Briggins usually dealt on his own account but Tibey frequently accompanied him to the Southwark inns where bargains were settled with factors, merchants and brewers. Briggins was in fact the true speculator, buying only for a rise and resale to the same groups from whom he purchased. The business caution of dealers is implicit in the following extract from his diary:

¹I was able to trace Briggins' diary through the kindness of Professor Mathias who used it at the time when it was in private hands. The reference is now: Greater London Record Office 1017/2, Diary of Peter Briggins of Bartholomew Close, London (1706-8). Briggins' diaries for 1703-5 and 1711-12 were not received by the GLRO. Fortunately, however, the most valuable information relating to hops belongs to the years 1706-8.

²E. Howard ed., The Eliot Papers (1895), 25-6.

³Mathias, op. cit., 505.

⁴Guildhall RO. Borough Registers 1711-18; Mathias, op. cit., 333-4.

17 September 1707

went to Southwark about hops there was a prity many at the inns but cared not to sell till they saw how the Stourbridge fair went & called at Petits Coffee House.

The peripatetic life of William Tibey took him to Kent, Sussex, Weyhill (Hampshire), Stourbridge (Cambs.), Worcester, and even as far as Shropshire. Briggins was kept well-informed on the state of the English hop markets, as a typical entry in his diary illustrates:

25 October 1707

I received a letter this week from Bridge North Shropshire wherein he William Tibey gives me an account that there was about 1600 pockets of hops at the fair which was very dull & but few buyers. New hops about £5.

There are numerous references in the diary to Briggins' visits to inns and coffee houses in Southwark and the City. These establishments were the regular meeting places where dealers completed their transactions: The Castle and The Ram in Smithfield; The George and The Greyhound in Southwark; Three Cups, Sergeant's Head and White Horse on the north bank; as well as Petit's Coffee House¹ and Etheridge's Coffee House. These mercantile "exchanges" were the metropolitan counterparts of the provincial inns and taverns of Canterbury and the Kent coastal towns.

Briggins and Tibey made frequent excursions into Kent in order to assess the state of hops. On 1 July 1707 Tibey "went to Maidstone" and three days later "WT wrote word hops are but indiferant at Maidston". Again at the end of the month "WT went into the country towards Maidston to se the hops". The following year Tibey spent much of August in Kent in order to gauge the size of the pending harvest and the likely state of the market:

¹The Tronage Registers show that Edward Petit was a hop dealer on a large scale.

7 August 1708

W^m Tibie went yesterday into the country towards Maidston.

14 August 1708

The hopps lookt very badd [at Stoke Newington] but this day I received a letter from WT & he writes they stand well towards Canterbury & like to be as many there as ever.

21 August 1708

Hops declining. Old from about 56s. to £3 10s. & foarhand bargins now about 65s. or 70s.

The season of 1708 witnessed a good average crop in the Canterbury district, but it seems that some grounds, including Briggins' own at Newington Green, yielded poorly. By November hops in Southwark were fetching as much as £4 a hundredweight.

Rate books are not the most promising source for agrarian historians, since ratepayers' occupations are rarely stated. However, they should not be ignored, especially when they can be correlated with other sources. There are six parishes in Southwark, but the hub of the Borough's hop business lay in St. Saviour's parish: a reading of St. Saviour's Rate Books,¹ in conjunction with Henry Kent's Directories for London in the same period, provides further interesting evidence of a great concentration of factors, merchants and brewers, all of whom dealt in Kentish hops. The largest ratepayer by far was the eminent brewer Ralph Thrale, owner of the famous Anchor Brewery. He lived in lavish style at Deadmans Place, but also occupied warehouses in other parts of the parish. The premises of factors and merchants are to be found in the yards and mews of local inns - George, Spur, King's Head, Talbot, Ship and White Hart for example. One such factor was William Golding, landlord of the famous George. In all but three of the fourteen seasons 1744-57, it was William Golding who arranged for hops to go from a Tonbridge farm to

¹Newington District Library, Southwark Collection, Rate Books of St. Saviour's 1748-66.

Southwark warehouses, from where he subsequently sold them to local dealers.¹ The extensive premises at The George were, nevertheless, insufficient for Golding's large-scale dealings and he found it necessary to use two warehouses at the nearby Talbot.² John Oddy, one of the churchwardens, was a factor who occupied premises at The King's Head; he was probably the landlord. Hanson & Clark were described as "Hop Merchants and Dry Salters" in Kent's Directory.³ The firm occupied extensive premises in "Chequer Alley" and a warehouse in "Winchester Yard". A drysalter was a middleman whose "outstanding characteristic ... was the remarkable variety of products he dealt in". It was not uncommon to find numerous dyestuffs, tanning materials, copperas, alum, gums, aqua fortis and soap, as well as Kentish hops in a drysalter's warehouse.⁴

A few other Southwark dealers can be mentioned briefly: Richard Page (hop merchant) occupied buildings in Chequer Alley, Stephen Weekes and Edmund Wagg & Co. were located at The White Hart; Edward Pollard & Son had their main premises at The Talbot and occupied other warehousing in Winchester Yard; Benjamin Jagger, one of the Overseers of the Poor, was a hop merchant who lived at the "Triangle". Numerous other examples could be cited. Many of the names in the Rate Books appeared in the earlier Tronage Registers but, by the 1750's, "& Co." was frequently appendaged which is an indication of considerable expansion in the business.

¹D. Baker, 'Tatlingbury: An Eighteenth-Century Wealden Hop Farm', Cantium, Vol. 3, no. 1 (1971), 6.

²It is easy to recognize warehouses in the Rate Books: they are listed separately, sometimes named, and always assessed each quarter for rates of 4s. 4d. each.

³Kent, Directory (1754).

⁴A.H. John, 'Miles Nightingale - Drysalter, A Study in Eighteenth-Century Trade', Economic History Review, XVII, no. 1 (1965), 153.

Henry Bartellot was one of the largest buyers of hops in Southwark Market in the second decade; he purchased regular consignments of Kentish hops from Jenkin Gillow. It seems that Bartellot raised additional working capital by mortgaging his extensive properties in the Borough. An indenture dated 2 January 1709 shows that Henry Bartellot senior lived at Fittleworth in Sussex and had probably retired from business. His son, also Henry, lived in St. Saviour's Southwark and was described as a "hop-master"; in a deed dated 14 February 1718 he was known as a "hop merchant". In 1709 the Bartellots, who owned property in Sussex, Surrey and Kent, raised £600 by mortgaging properties to John Vilett, a merchant, and Richard Hall, haberdasher, both of St. Saviour's. The mortgaged properties included The Spur inn near the Hop Market (see Plate 13), "three other messuages between the West Chain Gate and Fowle Lane Southwark" as well as "certain pieces of land with the buildings erected thereon since the dreadfull fire of May 26th 1676". The deed of 1718 shows that £2,200 was raised by mortgaging the Bartellot properties in Southwark to Andrew Wither esquire of Gray's Inn.¹ It can be suggested that, as the hop business expanded, necessitating greater cash flows throughout the year, merchants and factors sought a solution to their liquidity problem by mortgaging valuable real assets in the Borough. Presumably the growing profitability of the hop trade ensured that the larger dealers, at any rate, could afford to pay large sums of interest to their creditors and, at the same time, maintain themselves at high standards of comfort.

Many of the properties used by Southwark dealers were rented, particularly as business grew and the need arose for additional warehousing facilities. In a lease dated 20 September 1732 the "Mayor Aldermen and Burgesses of Shrewsbury" leased two Southwark properties in Three Crown Court to Joseph Foy, a hop factor already resident there, for 21 years at

¹Minet Library Lambeth, Surrey Deeds 452, 1433, 1469.

an annual rent of £34. In 1756 Dyer Bond, a prominent hop merchant, was leased by the co-heirs of Thomas Malyne esquire "a messuage and stillhouse now warehouse" in a back street "against the King's Arms Tavern" for 21 years at an annual rent of £20. The following year Thomas Gray, another hop merchant, agreed to rent property in Tooley Street from Thomas Leigh of Magdalen College, Oxford, for 21 years paying £40 annual rent.¹

Thomas Inwen was the greatest buyer of hops in Southwark Market during the years covered by the Tronage Registers; he handled as much as 10 per cent of the trade in some years. He was also the largest of Jenkin Gillow's clients, buying each year vast quantities of Kent hops. Thomas Engier, another of Gillow's clients, was also one of half a dozen or so large-scale merchants in Southwark at this time. Undoubtedly many of these Kent hops passing along the channel of distribution found their way into the vats of London brewers. But there was another important outlet - the navy. Beer for the navy was brewed "extra strong" so that it would keep well at sea; the daily allowance for a seaman of a gallon a day every day of the week appears considerable! Nevertheless, it seems "the men were allowed not just a gallon, but in reality as much as they wanted; and when their friends came aboard all drank freely". Despite the fact that beer was "bulky, expensive, and troublesome" there was apparently no possibility of limiting the issues: everyone knew how the seamen valued their "ancient liberty of resorting to the Beer at Pleasure".² The vast bulk of the navy's victualling supplies was bought by the Victualling Commissioners themselves in London.³ Naval brewhouses were purchased or leased in the early eighteenth century and the role of the

¹Ibid., 1399, 4972, 1492.

²D.A. Baugh, British Naval Administration in the Age of Walpole (Princeton, U.S.A. 1965), 375-7.

³Ibid., 405.

old contract brewers diminished. The main naval brewhouse was the Hartshorne Brewery in East Smithfield, one of the largest breweries in London. New naval breweries were established at Plymouth and Dover during the Marlborough Wars and, subsequently, another at Gosport to serve the Portsmouth ships. Naval brewhouses "remained among the largest of all provincial breweries" until the late eighteenth century.¹ The Minutes of the Admiralty Victualling Board are illuminating.² The marked growth in hop purchases by the navy during the period has already been remarked upon.³ Each quarter, tenders for the supply of hops were submitted by a handful of the biggest London dealers, for only they could afford to negotiate and finance the huge quantities involved. The minutes of the Victualling Board's meeting held on 18 March 1717 is a typical record:

"18 March 1716/17

Tenders of Hopps for London

		1st time	2nd time
Mr Samuel Keeling	offers 40 Bags @	£9 15s. per C. New	£9
Mr Thomas Engier	" 20 " "	£7 15 " " "	£7 12
Mr Thomas Inwen	" 30 " "	£7 10 " " "	£7 5
Mr Thos Barnard for his father Samuel Barnard	" 16 " "	£7 5 " " "	£7
Mrs Hawkins	" 16 " "	£7 12 6 " " "	£7 10s.
Mr Thomas Engier jnr.	" 30 " "	£7 5 0 " " "	£7

A tender from Mr Wm. Hart of 18th inst. opened tendering New Hopps @ £7 7s. and old at £6 4s. per c.

The Clerk of the Brewhouse and Master Brewer represented that neither Mr Barnard's nor Mr Engier junior's hops were good and that Mr Inwen's were 20s. per C. better than either of theirs - so Mr Thos. Inwen agreed with for 30 Bags of New Hopps at £7 5s.

¹ Mathias, op. cit., 201-3.

² PRO Adm. 111.

³ See supra, 647.

Tenders of Hopps for Dover

		1st time	2nd time
Mr Thos. Flint	offers 8 bags @	£8 10s.	per C. £8 10s.
Mr Thos. Slade	" 20 " "	£8 10s.	" " £7 15s.
Mr Jenkin Gillow	" 20 " "	£8 10s.	" " £8 8s.
Mr Thomas Inwen	" 30 " "	£7 17s. 6d.	" " £7 15s.

Mr Slade called a 3rd time offers @ £7 10s.

Mr Inwen " " " " " " £7 14s.

Mr Thos. Slade on behalf of Mr Henry Henshaw of Dover agreed with for 20 baggs of New Hopps at £7 10s."¹

In 1732 and 1733 tenders were submitted by Engier, Inwen, Barnard and Hudson. Much hard bargaining is evident and invariably the first bids were not accepted. On 22 September 1732 it was recorded: "Thos Engier agreed with for 75 cwt. of Hopps answerable to sample at £6 6s. per cwt. to be delivered forthwith". In January of the following year Engier again submitted the successful bid but on 9 March it was stated "Mr Engier - the Master Brewer reported his samples are not fitt" and the contract went to another dealer: "Thos Inwen Esq. agreed with for 50 cwt. of Hopps at £7 5s. per cwt. to be English Growth of the Year 1732".²

The examples could be multiplied several hundredfold and the theme developed at length. Suffice it to say that the same dealers' names appear year after year with almost monotonous regularity. Inwen and Engier submitted the most successful bids until the 1730's when Hudson, Davis & Co. of Upper Thames Street, Solomon Barton of Tower Hill and Joseph Colvill & Co. of Watling Street moved into the leading positions where they remained until at least 1760. By the 1750's tenders for as many as 1,000 bags were not uncommon. On 31 March 1756 it was eventually agreed by the Commissioners that Mr Thomas Symes should supply 500 bags of hops at the low price of 24s. per cwt. Hops were plentiful at this

¹PRO Adm. 111/15.

²Ibid., 111/24.

time but, as the minutes demonstrate, many were of doubtful quality:

The samples delivered ... being very different in goodness and some not judged to be fitt for the Service by the Master Brewer, the Board ordered him to pick out such samples as he thought were in all respects good and fit for the service and accordingly he chose 6 samples and all the dealers being called in together, were told that they would buy by those samples and that they should call them in again and take their prices upon the same.¹

More troubles beset the Board with regard to hops and beer than any other commodity. In 1701 there was an exposure of many subversive sales from the King's brewhouses to the general public.² The quality of beer was frequently suspect and, as early as 1689, Admiral Russell reported: "... in severall of the butts of beare, great heapes of stuff was found at the bottom of the butts not unlike men's guts, which has alaramed the seamen to a strange degre". The report of one captain that all his beer "was Condemned and thrown overboard within a week after he Sailed" seems fairly typical.³ But the growers in Kent had long since been paid for those hops which met abuse in the hands of the naval brewers.

Agricultural history has tended to concentrate on "the analysis of technical changes for their own sakes, and has given special reference to the changing status of those earning their living on the land" but "the effects of changing demand upon these developments has not been studied in more than a general way".⁴ The foregoing discussion, by portraying the precociously mature form which the English hop market assumed in the early eighteenth century, is an attempt to correct this imbalance.

¹Ibid., 111/43.

²Mathias, op. cit., 203.

³Baugh, op. cit., 423, 428.

⁴Mathias, op. cit., 387.

TABLE 41

HOP ACREAGES, ENGLAND AND WALESYEARS OF GROWTH/PICKING: 1723-31

Excise Collections	1723	1724	1725	1726	1727	1728	1729	1730	1731	Average 1723-31	Percentage
Kent											
Canterbury	3,735	3,904	3,994	3,825	3,671	3,671	3,642	3,540	3,535	3,724	17.0
Rochester	3,912	3,851	4,133	4,057	3,830	3,830	3,307	3,007	2,967	3,655	16.7
Sussex											
Surrey	736	736	729	739	738	738	706	699	709	726	3.3
Hampshire	461	468	464	491	453	453	439	356	345	437	1.9
Essex											
Suffolk	314	284	320	302	303	303	200	257	249	281	1.3
Hereford											
Shropshire	1,437	1,550	1,495	1,483	1,511	1,511	1,351	1,247	1,322	1,434	6.6
Worcester	2,638	2,418	2,415	2,641	2,624	2,624	2,533	2,386	2,286	2,507	11.5
Lincoln											
Lincoln	895	834	887	870	824	824	837	676	681	814	3.7
All others											
All others	1,107	1,053	1,101	1,261	1,199	1,199	857	719	655	1,017	4.6
TOTAL	23,404	23,164	23,602	23,025	22,454	22,454	20,824	19,270	18,790	21,887	99.9

Sources: Customs 48/12/221-2; 48/12/369; PRO T1 278/41. Collections do not exactly coincide with counties. Only the important areas are noted individually.

TABLE 42

HOP PRODUCTION, ENGLAND AND WALES, YEARS OF GROWTH 1721-31ANNUAL OUTPUT '000s LB.

Selected Collections	1721	1722	1723	1724	1725	1726	1727	1728	1729	1730	1731
Kent											
Canterbury	3328.0	3061.6	1798.4	2735.1	636.2	4897.6	4345.8	2498.7	3015.4	2661.0	2122.8
Rochester	3662.7	3410.4	2491.0	3277.7	367.7	5159.9	3404.3	2912.3	2490.5	2444.6	1636.6
Sussex											
Surrey	2169.0	2058.3	465.0	2119.4	262.7	2720.4	2573.8	1332.3	1287.1	1259.6	216.0
Hampshire	556.5	726.4	195.5	738.5	53.9	1026.8	655.2	761.9	384.1	720.4	310.7
Essex											
Suffolk	180.2	480.4	51.3	370.1	48.2	472.3	465.9	319.9	179.1	292.7	118.9
Essex											
Suffolk	736.7	379.1	470.9	683.9	34.5	836.0	848.9	473.0	485.6	601.2	132.1
Suffolk											
Suffolk	241.4	91.1	134.3	256.9	6.0	256.3	291.2	128.8	146.7	227.9	43.7
Hereford											
Shropshire	1367.1	552.4	375.6	1762.0	30.8	1622.2	1172.2	536.4	1354.1	826.8	228.7
Worcester	487.5	162.2	158.8	609.1	16.6	639.5	459.2	171.4	539.3	283.8	49.0
Worcester											
Worcester	867.7	312.2	413.3	1048.6	37.7	1356.3	826.4	285.9	882.1	612.7	65.0
Lincoln											
Lincoln	557.2	184.6	399.5	330.3	18.8	485.0	669.3	68.8	518.0	248.0	321.8
TOTAL											
TOTAL	14763.8	11938.0	7266.0	14687.6	1565.9	20391.6	16659.0	9954.8	11625.9	10636.3	5415.3

Sources: Customs 48/12/221-2; 48/12/369; PRO T1 278/41.

TABLE 43

AREA UNDER HOPS: ENGLAND AND WALES; KENT

Year	<u>England and Wales</u>	<u>Canterbury Collection (E. Kent)</u>		<u>Rochester Collection (W. Kent)</u>	
	acres	acres	share of total per cent	acres	share of total per cent
1723-31 (average)	21,887	3,724	17.0	3,655	16.7
1731	18,790	3,535	18.8	2,967	15.8
1807	38,218	6,191	16.2	8,746	22.9
1820	50,148	8,804	17.6	12,068	24.1

Sources: Customs 48/12/221-2, 369; PRO T1 278/41; Parl. Papers 1821, XVII, 343-69.

TABLE 44

COASTWISE EXPORTS OF HOPS: NORTH-EAST KENT TO LONDON

Customs Port	1662-3 (12 months)	1699-1700 (12 months)	1741 (9 months)
Faversham	81 bags	1809 bags	2288 bags 366 bags and pockets
(/ Milton	44 bags 3 pockets	116 bags 1 pocket	151 bags and pockets
Sandwich	-	-	293 bags 2 pockets

Sources: (1) D.C. Coleman, The Economy of Kent under the Later Stuarts, University of London Ph.D. Thesis (1951), 104;
 (2) J.H. Andrews, Geographical Aspects of the Maritime Trade of Kent and Sussex, 1650-1750, University of London Ph.D. Thesis (1954), 214. See KAO for it.

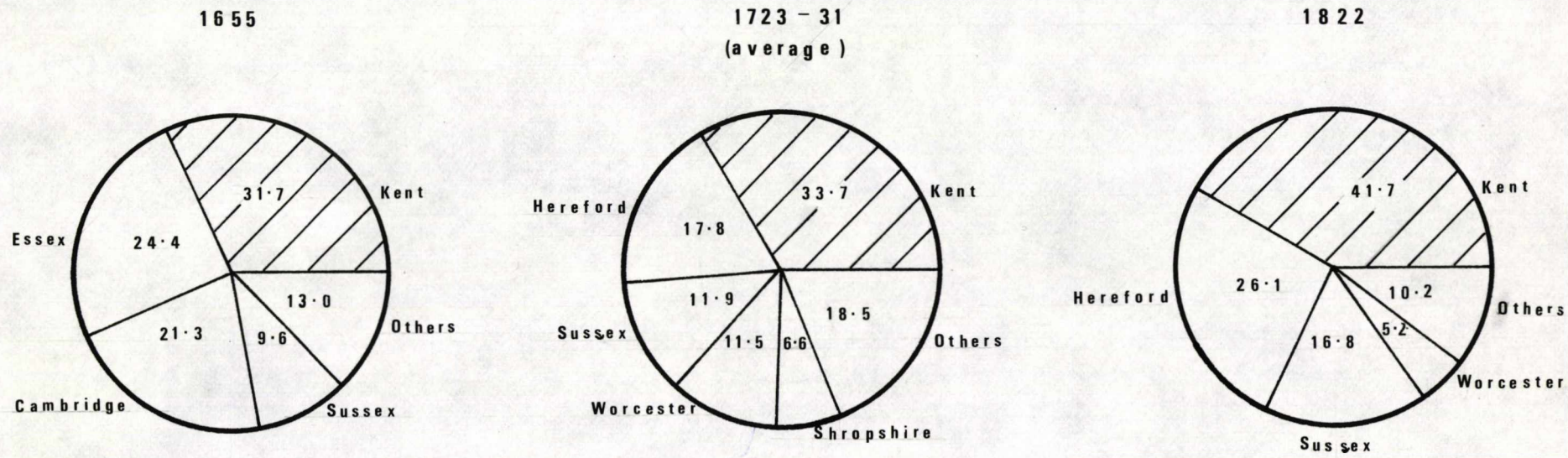


FIGURE 17 Area under Hops: percentages of national total, by counties

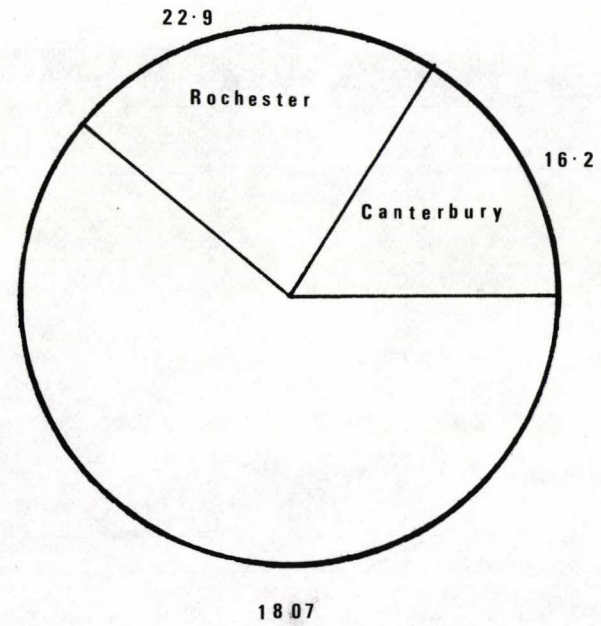
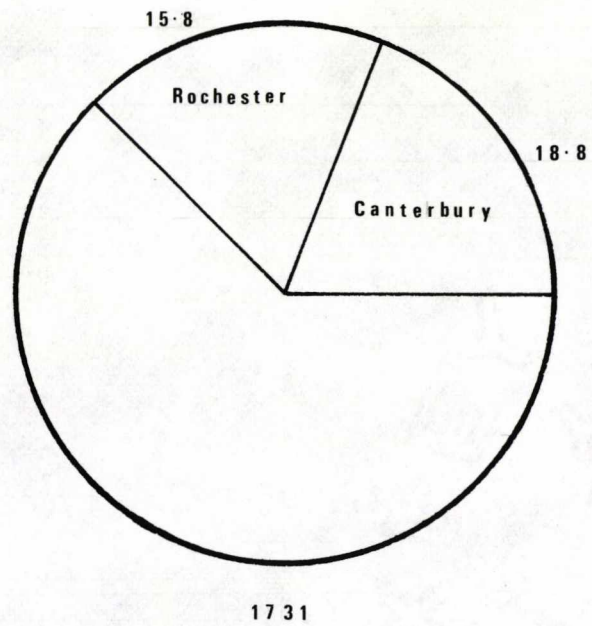


FIGURE 18 Kent Hop Production: percentages of national total, Canterbury and Rochester Excise Collections, 1731 and 1807

C Conclusion: The Growth of Hop Production and Trade in Kent, 1655-1822

The development of the Kentish hop industry is summarized in Tables 41 to 44 and Figures 17 and 18. The only continuous series for the eighteenth century relates to the years 1723-31. Early nineteenth-century statistics are available in Parliamentary Papers.

With regard to Table 44 the main difficulty is a lack of hop statistics in the eighteenth-century Port Books, apart from a short series covering a nine-month period in 1741. Foreign exports from Kent were always negligible (94 per cent of English hop exports were from London); the hop trade from Sandwich was extremely small before 1700 and can be ignored; hardly any hops were exported (coastwise or foreign) in ships of Dover and Deal, or in Thanet vessels.¹

¹ Andrews, op. cit., 213-5.

CHAPTER 14

SUMMARY OF CONCLUSIONS

The rural landscape of north-east Kent in the seventeenth and eighteenth centuries differed little from its modern form. The wooded dip slope of the North Downs, extensive tracts of coastal and riparian marshes, and a huge expanse of open, flat, treeless terrain in Thanet supplied the larger features which dominated the natural scenery of the region. This irregular, diversified belt of country, possessed of a wide range of generally fertile soils, supported the greatest galaxy of "improving" farmers in early Georgian England. Their farmsteads and lands were distributed throughout scores of nucleated villages and scattered hamlets covering a hundred or so parishes. A multitude of enclosed arable fields both large and small, each surrounded by some neat fence or quickset hedge, lay intermingled with numerous small orchards, hop gardens, shaws, and pasture closes. It was this intensely variegated and picturesque pattern of countryside, a veritable "Garden of England", which impressed itself on many a traveller as he journeyed across the northern rim of the county.

A diversity of soil types, even within the boundary of a single farm, gave maximum scope for manoeuvrability and adaptability, and involved high levels of experimentation, innovation, and investment. Thus it was that a balanced maturation was manifest in a multifarious farm economy which provided the basis of agricultural prosperity in the region, opening new vistas of comfort and wealth to the Men of Kent.

We have seen that an outstanding attribute of the farmers of north-east Kent was their ability to maximize returns in a hostile price situation. The experience of short-run price changes was as old as farming itself: the vagaries of the weather and consequent price swings, both annual and seasonal, were long-accepted hazards of working the land for a

livelihood. Seven fat years may not always have followed in the wake of seven lean, but there were usually sufficient of them over a generation or so to strike a tolerable balance. However, in the long run, changes more fundamental in character impinged on the market and demanded altogether new responses from producers. Not since the later Middle Ages had a prolonged period of deflation confronted English farmers and it seems doubtful whether the incipient downward trend of prices which set in after the Restoration was perceived with any clarity until 1680, possibly later.

We have substantiated the existing evidence for long-run falling prices, especially for cereals, by examining available Kentish data: the phenomenon must now surely remain beyond dispute. It has been demonstrated how a variety of positive responses on the part of farmers in north-east Kent during the period 1680-1760, enabled them to survive, indeed prosper, during the years of low prices which reached a nadir in the 1730's and '40's.

It is clear that many farmers were cognizant of the economic and technical advantages pertaining to a large farm. The tendency towards larger farms has been observed in north-east Kent during this period. The trend was especially well marked during the 1730's and '40's by which time the concept of a farm of optimal size (100-150 acres) seems to have evolved. Most of the holdings which exceeded the optimum possessed extensive grazing facilities, fine dwelling houses and an impressive range of outbuildings, and were occupied by tenants who were chosen with great care. The long-term tendency towards larger farm units was a slow, almost imperceptible process which involved, variously, the acquisition of additional plots, marshland reclamation, and the amalgamation of two or more farms. Small occupiers remained numerous, however, and tended to concentrate on specialized, intensive production yielding high returns per acre, combining this type of activity with a convenient sideline in

order to supplement the income from their modest properties. Among the smaller tenants were numerous farm labourers who retained a stake in the land, combining wage-work with small-scale farming on their own account. This refreshing conclusion holds far-reaching implications regarding the subsequent fate of the agricultural labourers' holdings.

Crop statistics show that wheat, barley, and beans remained the chief arable crops in the "Granary of Kent"; it was only in Thanet where wheat lost its leading position to barley. The overall shift in cereal production in favour of the highest-priced grain, wheat, was the most significant trend observed in the region as a whole, while in Thanet optimal conditions also favoured an expansion of the barley acreage. Oats, sown mainly for horse-feed, played a subsidiary role in the cereal range although there were notable variations locally: in Sheppey and along the Downland margin, for instance, the crop's importance was greater than elsewhere.

A range of relevant rotations was employed - even in the fields of an individual farm - and the land received heavy applications of farmyard manure, seaweed, lime, and other fertilizers. Nevertheless, we are now certain that some of England's finest farmers did not prematurely eschew the practice of bare fallowing. Experiments with new varieties, and the use of seed dressings, supplemented soil improvements and resulted in yield-ratios which stand comparison with those calculated for other areas, while there is some indication that yields per acre increased.

The clean cultivation of beans as a row crop, an outstanding regional feature, was Kent's unique contribution to the process of "agricultural revolution" in England during this period. This development gave rise to a whole new range of indigenous tools and implements, the most notable of which was the shim, brake, or Kentish horse-hoe.

In Thanet the improvement of light, free-draining soils, inherently infertile, by skilled cultivations, by the use of specially devised rota-

tions incorporating "new" crops and undersown leys, by the widespread cultivation of sainfoin, and by the intensive stocking of these barley lands with sheep using the fold system, produced a remarkably mature version of "high farming" in the first half of the eighteenth century. This is perhaps the most spectacular example of successful improved farming in early Georgian England.

A wide range of specialist undertakings in which the region enjoyed distinct comparative advantages, imparted an incalculable measure of vitality to the rural economy. If most of the extraordinary crops grown in north-east Kent were already bereft of some of their novelty before 1680, the force of the subsequent innovatory impact, the frenetic endeavours which effected their widespread adoption, the unusually high degree of speculation, and the technological advances subsumed, were altogether new features of the farming scene.

Hops and fruit have for long been popularly regarded as the hallmarks of Kentish agriculture. The period under review was critical for both. The climacteric of hop growing in north-east Kent came in the 1680's with new developments in brewing, after which the business of cultivating hops rapidly assumed the air of an industry which knew its destiny. The general farmer opted for safety and planted only a small acreage of hops as a valuable adjunct to his mixed enterprise. This pattern was repeated across the landscape of north and east Kent as hop farms proliferated. But farmers were not the only hop growers in the county. Another type of entrepreneur who engaged in this highly speculative, expensive, and exciting activity was the gentleman or tradesman with a mobile fortune gained from some other business. Lack of technical knowledge was no barrier to his entry for he could employ one of the new, emerging class of professional hop ground managers to supervise the yearly round of work. Hop gardens burgeoned in the environs of Canterbury where the City planters enjoyed a unique set of agglomerative advan-

tages. In our rich agrarian history the rise of the Canterbury hop grounds is a suburban development without parallel.

The climacteric of the long-established Kentish fruit industry came in the 1730's when prices, imperceptibly falling since the early 1600's, suddenly plummeted to their nadir. The plight of the fruit growers was mitigated by the fact that their individual investments in orchards were small. Furthermore, land which had proved suitable for fruit growing could be reckoned ideal for hops. Thus, the farmers of north-east Kent responded to low wheat and barley prices by increasing their acreages of these staple cash crops striving, simultaneously, for greater efficiency in their production. But when fruit prices declined, the tendency was to grub the oldest or least productive orchards and plant hops. In the case of landowners, many of their fruit grounds ceased to be directly exploited and, other than those required for household purposes, were shed into the hands of tenants. There is some evidence that this course of action also helped to maintain the level of rents. Kentish cherries and Pippins retained their prestigious position in the markets but we cannot avoid the conclusion that the local fruit industry lost some of its vigour in the last two or three decades of our period when a temporary recession is evidenced.

Market gardening was an intensive, suburban development associated with Canterbury, Faversham, Newington, Sittingbourne, and above all Sandwich. As in hop growing, a strong alien influence was apparent. Market gardeners undertook a wide range of activities on their holdings: the production of flowers and vegetables (and their seeds); the skilful grafting of fruit trees as well as the raising of woodland species; the cultivation of fields of beans, flax, and canary grass - crops which also fitted comfortably into the cropping pattern of the general farm, especially in Thanet. Canary grass, high yielding though uncertain, was in fact peculiar to this corner of England.

In the arable fields throughout the region many other new crops became firmly established by the early eighteenth century. Clover and trefoil, sown in the spring with oats or barley as a "nurse" crop, produced short, nutritious leys which both supplemented the fodder supplies from permanent pasture in orchard, marsh and meadow, and also improved the structure and fertility of the soil for succeeding crops. Leys of longer duration were obtained by sowing sainfoin, a practice which was especially significant on the chalky soils in the Isle of Thanet and along the dip slope of the Downs.

Almost alone among the farmers of old England who grew weld or woold were the cultivators of the thinnest soils on the North Downs. There were also experiments in growing other industrial dye-plants, of which the short-lived venture in madder cultivation at Faversham was perhaps the most notable example. Few crops of commercial importance failed to find a place on the farms of this highly diversified region, although the near-absence of turnips is a phenomenon worthy of note. Throughout the eighteenth century Kentish farmers eschewed the cultivation of the turnip, preferring instead the nutritious bean as a row crop of superior merit.

Livestock made a valuable contribution to the farming economy of the region and there evolved a striking symbiosis of crop and animal husbandry. The direct relationship between the density of the horse population and expanding arable is at once apparent. The role of sheep in the arable sector, especially on Thanet farms where the fold system prevailed, was more complex but no less objective. The dung from yarded cattle was of inestimable value to the crop grower. The omnivorous pig proved to be an indispensable converter of low-grade foods which might otherwise have been discarded.

In a region where prosperity rested mainly on the large-scale production of a range of arable cash crops, the emergence of successful undertakings based on livestock products is not without interest: a

brawn-making industry of national repute at Canterbury; an old-established leather industry at Faversham; the ubiquitous business of pickling pork for which Kentish farmers were renowned; the breeding of asses for milk production.

Nevertheless, erstwhile livestock farmers in north-east Kent were far from self-sufficient on the breeding side, and in order to sustain the commercial viability of stables, dairies, and other animal enterprises they were obliged to turn to other regions of the country. In this way their teams, flocks, and herds were replenished. Strings of well-bred horses arrived each year from the Midlands and northern counties; West Country sheep, prolific and neatly compact, supplemented flocks of local Kents; poultry farmers, with an eye to table production, purchased choice specimens of the Dorking breed. But the greatest trade of them all was the droving each year of hundreds of dual-purpose Black cattle from the wild Welsh hills to the Kentish marts at Maidstone, Canterbury, Charing, Chilham, and Wingham. This traffic continued unabated even during the cataclysm of cattle plague in the middle years of the eighteenth century. In many a mixed cattle enterprise Welsh runts munched contentedly alongside their country-bred companions.

Our farmers were no less adept at marketing their crops and livestock than in their production. The maritime physiognomy of Kent favoured the north-east region: an extensive coastline and convenient estuary ports with excellent harbour and warehousing facilities promoted a brisk seaborne trade with London. Inland commerce centred on a number of thriving market towns, the most important of which was Canterbury, the regional capital; urban institutions, particularly inns, were of paramount importance in the chain of distribution from farm to consumer. The most important roads - Watling Street and the thoroughfare from Canterbury to Whitstable - were turnpiked in this period. Communications overland were generally good although, as in other areas, costs for road carriage

remained much higher than those for trade by water.

A major conclusion relates to the growing efficiency of the market - the development of what might be termed "high marketing", the commercial counterpart of "high farming". We have seen that marketing organization grew in complexity with the proliferation of middlemen who were integrating manufacturing and distribution processes under one management as they extended their activities in an attempt to maximize incomes. Cost-reducing integrations in marketing were really the commercial counterpart of farmers' cost-reducing innovations: the symbiosis of arable and livestock husbandry was matched by the closer integration of processing and marketing functions. The farmers of north-east Kent were beneficiaries of these dual-sectoral advances.

High levels of business acumen have been observed, not only among the farmers but also throughout the marketing sector. The Kentish hoymen played a distinctive role as factors in the corn trade to Bear Key, while in the Southwark Hop Market, where Kentish hops arrived daily by the hoy-load, there grew up a sophisticated structure co-ordinated by a new business class of hop factors. The exchange function of inns grew apace; the Kentish Post embarked on an illustrious career; both served as indispensable catalysts in the substantial commercial changes of this period.

The farmers of our region thus combined a broad range of agricultural adjustments with a highly developed and widening spectrum of market opportunities. Their competitive edge brought them an impressive increase in wealth and well-being. How far their lead was consciously imitated by others will perhaps never be known. But it seems likely that beyond the region there were many farmers who were unwilling to vegetate in the backwaters of the stream of progress and it may be that some of them, at any rate, paused to reflect on the modus operandi of agriculture in north-east Kent.

APPENDIX I

A LETTER TO ONE OF THE EDITORS, BEING A DESCRIPTION OF THE MANNER IN WHICH CANARY SEED IS RAISED IN THE NEIGHBOURHOOD OF MARGATE IN KENT¹

GENTLEMEN,

... I propose spending the summer at this place, which is situated in an island that will furnish many materials for future letters as the methods of husbandry practised here are, in many respects, peculiar to the place ... I am now sat down to give you a few scattered observations on the culture of canary seed. These I have collected from some occasional conversations with the farmers in the neighbourhood; they are a good sensible set of men and know more of the world than farmers in general do.²

I find they generally chuse to sow it on fresh land, that is such as has only borne grass. After ploughing up the lay and bringing the land into tolerable rough tilth, they sow it with peas; these are kept clean hoed as usual and yield a good crop. The next year the land is well plowed and planted with horse-beans, which thrive well in this island. These two crops effectually kill the greensward or grass and take off the rankness of the soil; and the frequent hoeings which are necessary to keep the weeds under bring the land into fine tilth. After the beans

¹Printed in Museum Rusticum et Commerciale: or Select Papers on Agriculture, Commerce, Arts and Manufactures, by Members of the Society of Arts (6 Vols. 1764-6), I, 22-5. Punctuation has been modernized, and brief explanatory notes added where necessary.

²Ed. (orig.): This may easily be accounted for, as there is such a constant intercourse betwixt the Island of Thanet and the metropolis; and perhaps it may be partly owing to the genteel company which resorts to Margate, that the farmers in that neighbourhood are more civilised than their brethren in many parts of England. There are not probably any set of men so attached to old, though senseless, customs as the farmers; and they seem to be nearly of the same disposition in other parts of Europe, particularly in France of which Monsieur du Hamel constantly and loudly complains.

are off, the land gets a thorough plowing and is then left till spring. About the beginning of March, if the weather is fine and the season is dry, the land gets its last plowing, immediately after which the canary seed is sown.

In this neighbourhood the farmers used formerly to sow canary seed with the broad-cast, spreading it all over the land; but, when this was their practice, they found it very difficult to hoe and keep clean from weeds. At present they sow it on furrows made across the land, constantly taking care to make the ridges betwixt the furrows as sharp as possible; by this means the seed, which is sown by hand, slips from the sides and tops of the ridges into the furrows, and the plants come up in regular rows.¹

The plants must be kept very clear of weeds by means of the hoe, weeding hook, &c. and if it is a wet summer it must be hoed several times; but of this the intelligent farmer is the best judge.

Three pecks of seed are in general enough to sow an acre, sometimes more and often less. The canary harvest seldom comes on till the wheat harvest is entirely over and the corn housed. But I must observe that the wheat harvest is generally very early in this island. Canary is reaped with a hook and as fast as it is cut the reapers lay it on the land in wads, as they call them, or parcels about the quantity of half a sheaf of wheat unbound. In this manner, if the weather is favourable, it is left a fortnight, at the end of which time the wads must be turned, that the other side may be dried. If the weather is very wet they must be turned oftener, to prevent the seed from sprouting.

The price of reaping canary in this part of the world, is from six

¹Ed. (orig.): This is a faint imitation of the new method of husbandry invented by Mr Tull, the crop of canary coming up in rows. It were to be wished that the new husbandry had a fair trial in England, especially as it may, in some degree, be executed with the instruments commonly used ... Horse-beans or peas may be sown instead of turneps if the land is strong.

to eleven shillings per acre, and the price of threshing and dressing it is five or six shillings a quarter. According to the goodness of the land, and the tillage that has been bestowed on it, the farmers here expect their return to be from twenty-five to fifty bushels per acre, but the common crop is from thirty to thirty-four. Observe, however, that the farmers never pay so much as ten or eleven shillings an acre for reaping the corn, unless the canary be very much lodged and tangled, which it often is, owing to the land on which it grows being fresh, rich and rank, and to the high winds to which this island is subject.

They sow successive crops of it on the same land for eight or ten years; and sowing canary would be a very good improvement in lands which lie convenient for water-carriage to the London markets, was it not a crop the farmer ought by no means to depend on, not only because the return or quantity it yields varies greatly, but also on account of the fluctuation in the price of this seed in the London markets, where the greatest and almost only demand is.¹ I am

GENTLEMEN

Your most humble servant,

RUSTICUS.

Margate, August 25 1763.

¹A correspondent writing on 1 November 1763 refers to canary seed (*Gramen phalaroides*) and mentions that "great quantities of it are annually used in London". Museum Rusticum, op. cit., I, 186-7.

APPENDIX II

A LETTER TO THE EDITORS, ON THE MANNER OF IMPROVING POOR LANDS IN THANET,
AT SOME DISTANCE FROM THE SEA, BY SOWING SAINTFOIN, &c.¹

GENTLEMEN,

Though the lands in general here are very rich and fruitful, owing to the good tillage and the quantity of manure they enjoy, yet at some distance from the sea they have land which is very barren and thin by nature; nevertheless, even this indifferent land they farm to the greatest advantage. In these soils the farmers sow saintfoin or French grass with great success, having sometimes two loads of hay on an acre.

This grass thrives best, in these parts, on a thin coat of earth with a chalky bottom; it pushes its long tap-root deep into the chalk, and extracts thence a nourishment which is out of reach of almost any other plant.

The land must always be exceedingly well prepared, before they attempt to put the seed in the ground. It has frequent plowings and every the least appearance of a weed or root of grass is diligently picked off; grass in particular is a very great enemy to this plant and without the utmost care it soon chokes and destroys it. They sow this seed in April ... dry weather is best, provided it does not long continue. However, a little rain in these light soils does no great hurt.

The quantity of seed they allow to an acre is five bushels; of course it is sown very thick. It does not lie any great length of time in the ground. When it is come up, they carefully hoe and weed it, to keep down the roguery and grass. This puts the plants forward, and makes them so vigorous and strong that they will of themselves keep down

¹Printed in Museum Rusticum et Commerciale: or Select Papers on Agriculture, Commerce, Arts and Manufactures, by Members of the Society of Arts (6 Vols. 1764-6), I, 108-113. Punctuation has been modernized, and brief explanatory notes added where necessary.

the grass, especially in these chalky bottoms, where grass does not thrive well and is not apt to coat land with turf.

Saintfoin used formerly to hold good in these parts for twenty years together, but it does not now of late years last so long; this is probably owing to their want of care in chusing their seed, which surprises me, considering what good farmers they in general are. They get, it is true, when they can, the best seed the island affords. But it would certainly be a much better way were they now and then to procure some of a finer growth from France, for it was from that country, as far as I can understand, it first came hither about, the latter end of Charles the Second's reign; and I do not hear from the inhabitants that they ever remember the importing any more since ... Where this crop takes, it is very advantageous to the farmer; it yields him for many years plenty of excellent fodder, and that upon land which would otherwise, perhaps, scarcely yield him any profit at all. When the saintfoin begins to fail, if proper care is taken, the land when broke up will be found greatly refreshed, and in a better condition to bear tillage and a succession of other crops.

The farmers here, when they intend breaking up a saintfoin lay, feed it¹ the last three or four years. Mowing it at this time, they think, hurts and exhausts the land too much; and besides, the dung and urine of the cattle are of great service.

They observe here, as well as in other places where saintfoin is cultivated, that after land has been once sown with it, it will not for some years, to any advantage, bear saintfoin again.

They sow also in these parts trefoil² and clover. The first in

¹i.e. stock the land with cattle or sheep, usually the latter.

²Ed. (orig.): Trefoil is particularly well adapted to a chalky soil, on which the common red clover will not thrive near so well.

particular is of very great use, as affording plenty of seed for their sheep, and besides prepares the land excellently well for sowing wheat.

The farmers hereabout commonly let their land lie three or four years in trefoil, in which time they either mow it, or feed it with sheep, but more generally the latter. The last season they feed the grass off very clean, and lay a coat of dung upon the land.

They begin plowing about the first week in November, continuing so that the wheat season¹ may be over by the end of the month. In the spring, if the wheat is rank and the weather dry, they feed it down with their sheep which they think makes the wheat branch more, and settles the earth about the roots of the plants.² Experience has convinced them that this method of sowing wheat after trefoil is better than sowing it on a fallow, for the land hereabout is naturally very light and hover, and the wheat on that account very much subject to be root fallen.³ To prevent this, it is no uncommon thing for them, as soon as they have sown their wheat, to drive a flock of sheep over the land to settle the earth close to the seed.

Their crops of wheat here are generally three, four or five quarters on an acre, which last is, indeed, a very large crop when it is considered that the land is in general by nature poor and barren. It is almost entirely owing to the industry and good husbandry of the farmers that it is all brought to bear wheat. In fact, they are an assiduous people, and spare neither cost nor labour to improve their land.

¹i.e. the winter sowing season.

²Ed. (orig.): Were the Isle of Thanet farmers to roll their wheat in the spring, it would much better answer the purpose of settling the earth about the roots of the plants, than turning their sheep on it, which is a practice in general not to be approved of, for it very seldom does any good and often a great deal of hurt to the crop.

³Ed. (orig.): Hover land swells, and quitting the root of the plant it is apt to fall.

On the light land here they for the most part sow about fourteen pecks [of wheat] on an acre, but on the richer lands they allow four bushels.

The farmers here never sow the seed produced by their own land: they find their wheat succeeds much better by change; for which reason the seed which they sow on the light hover land they chuse to procure from a gravel or deep cledge, or clay land, taking care that the soil on which the seed has grown should be as different as possible from that on which it is to be sown.

Instead of making artificial steeps with great parade, they make use of that which providence has put in their way, wetting their seed with salt water which they fetch from the sea; and they afterwards sprinkle it with lime to prevent the smut. They are also particularly careful to clear their seed from wild oats, cockle etc.

I know no part of England where there are better farmers, for though they keep their lands constantly cropped without fallow, which they call sowing a round tilth, yet do they so manage matters as to keep them still in good heart.

They reap their wheat very high here leaving as much straw as possible in the field; this they say they do to save barn-room.¹ Some farmers here have a practice of sowing rye to make bands for their sheaves, the straw being longer, and as they think tougher, than that of wheat. The reaper makes the bands, which he cuts as low as he well can, and binds the sheaves.

The wheat stubble ... is left very long [and] is generally mown for the maltsters, as they burn it in their kilns to dry their pale malts for

¹An earlier note records: "In the Isle of Thanet ... they leave their stubbles very long, as the sheaves are by that means shorter, and take up less room in the barn, but their reason for being thus negligent of their straw is because they have a much better manure near at hand, that is sea-waure [seaweed] of which they lay great quantities on their land". Museum Rusticum, op. cit., I, 18.

the London market. The greatest part of this island is a light, chalky soil so that wet summers in general agree best with it, and it is by this means the farmers here get so much money; for when the crops fail in other parts of the kingdom, they are almost sure here to be very large; and they have the great convenience of water-carriage to the London markets.

It is extremely pleasant, towards the latter end of summer before harvest, to ride over this little island. I don't imagine there is a more improved spot in the kingdom; the fields are all kept so clear from weeds that they resemble a well-kept garden; they grudge no expence in hoeing, weeding, plowing, or manuring; and experience has long ago convinced them that they pursue a right method ... Their practices are, many of them, good and worthy of imitation. I am

GENTLEMEN,

Your humble servant,

RUSTICUS.

Margate, Oct 10 1763

APPENDIX III

A LETTER TO THE EDITORS, ON THE CULTURE OF HORSE-BEANS IN THE ISLAND OF THANET, AND THE USE OF THE SHIM OR KENTISH HORSE-HOE.¹

GENTLEMEN,

I believe I have already informed you that the farmers in this island are an intelligent, sensible, set of men. They are not slaves to old customs, but are always willing to improve their methods of husbandry, by adopting such new practices as are in other places warranted, by experience, to be good.

To this may we, with great justice, ascribe the delightful appearance the face of the country in this neighbourhood wears. The beauty of nature, in itself so charming, is greatly set off by the ornaments of agriculture; a pleasing, varied scene entertains the eye, whilst the understanding is employed in meditating on the great advantages that result from honest industry.

It is not a great number of years since the farmers in these parts have known the use of horse beans in husbandry. They are now, however, fully sensible of the many advantages that result from the culture of them, well knowing that nothing prepares land better for wheat, the tillage they require whilst growing being of great service towards killing the weeds and separating the particles of earth, so as to reduce them to a fine mould.

I must do this justice to the farmers of Thanet, to say that their method of cultivating beans is the most perfect of any I have ever seen. Was Mr Tull living, he would undoubtedly be delighted to see them following, almost literally, his instructions; the spirit of them, at least,

¹Printed in Museum Rusticum et Commerciale: or Select Papers on Agriculture, Commerce, Arts and Manufactures, by Members of the Society of Arts (6 Vols. 1764-6), I, 260-263. Punctuation has been modernized, and brief explanatory notes added where necessary.

they have entirely adopted, and this you will confess, when I describe to you their usages.

The land they intend for horse beans they generally plow as soon as the wheat season¹ is over, perhaps about the beginning of December. At this time some of the occupiers of the richer lands lay on their dung, in order to fit them for a wheat tilth. Others do not lay on their dung till the beans are off, in which case they generally make a maxhill² on some corner of the land. Under this, if they can procure it, they lay some rich mould, and they always contrive to turn it once, if not twice, in the summer, [so] that the dung may be perfectly and regularly rotted;³ by this management it is at hand to lay on the land immediately after harvest.

After the land has got the plowing above mentioned in the beginning of December, they let it lie quiet till about the middle of March when they give it another plowing. After this they furrow the land, as they call it, that is they draw furrows over the whole field, at about the distance of two feet and a half one from the other.

In these furrows the beans are dropped singly by women who are accustomed to the work, and do it very well. But if they cannot get women enough, a seedsman carries them in a box and sprains them thinly out of his hand as he walks by the side of the furrow. The whole is then harrowed over and in this manner the sowing is finished.

By thus sowing their beans in rows, with intervals, they have an

¹i.e. the winter sowing season.

²Ed. (orig.): i.e. a dung-heap.

³Ed. (orig.): Dughills should be frequently turned during the summer season, not only to make them rot equally, but also to destroy the weeds that are apt to grow on them for, if these weeds are suffered to perfect their seeds, they will shed them on the dung, which will then of course do more hurt than good to the land, by stocking it with a variety of weeds very difficult to be extirpated.

opportunity of always keeping their land clear of weeds, and of giving the beans, whilst growing, fresh supplies of nourishment by frequent tillage. Such weeds as grow among the beans in the rows are pulled up by hand. As to the weeds that grow in the intervals they have a much more expeditious way of getting rid of them. This they effect by means of a shim or brake-plow, drawn by one horse, with which a man, and a little boy for a driver, will clear of weeds two acres, or two acres and a half, in a day. They sometimes use two of these shims together, when a man or boy goes between the horses to guide them. In this manner a great deal of work may be done in a short space of time.

The shim consists of a frame of wood, in the two sidepieces of which are mortises to admit the cheeks of the share, which have holes in them to be raised or lowered by means of iron pins, at pleasure. I have herewith sent you a drawing of this shim by which the form of it may be much easier comprehended than by any description I can give in writing.¹

... This then is the instrument they use to keep their beans clear of weeds. It is a kind of horse-hoe, or cultivator, very simple in its construction yet of infinite use. At the same time that it cuts up the weeds, it loosens the earth about the roots of the plants, and gives them every hoeing a fresh supply of wholesome food.

To this we may ascribe the flourishing state of the bean crops in this neighbourhood. The plants have room to spread their roots and branch in their stalks. They enjoy all the benefit they can receive from the influence of the sun and air and, by means of the intervals, they enjoy a frequent and repeated tillage during their growth. Horse beans in general love a stiff soil but, by mere dint of good husbandry, these farmers get large crops of beans on land which a common observer would

¹ Drawings (engravings) of a shim, cutting box (for horse fodder), hink and twibil accompany this letter. These implements are identical with those published in J. Lewis, The History of the Isle of Tenet (1723), 14, 16, which are reproduced for the present study in Plates 1 and 2.

not think capable of bearing scarcely any at all.

When the beans are full podded and ripe, which may easily be known by their appearance, the better sort of farmers cut or reap them in a manner almost peculiar to this part of the kingdom.

The workman has in his left hand a hook of iron called a hink, having a wooden handle like a sickle or reaping hook. With this they gather the beans together which they afterwards cut with an instrument called a twibil which they have in their right hand. In this manner they dispatch a great deal of work in a day.

Some farmers pull the beans up by the roots, but this is when the crop happens to be but thin. When the beans are either cut or pulled they let them lie in rows on the ground till they are dry, when they bind them up in bundles with bonds made of wheat straw, the ears of which have been previously threshed. Of the hink and twibil I have also sent you a drawing by which your readers may readily conceive a proper idea of their use.¹

What I have said respecting the culture of horse beans in Thanet, may possibly induce your readers to entertain a favourable opinion of the principles of the new husbandry to which it very nearly approaches. In fact there seems to be no difference, except that the seed is not sown out of a drill box, which would be perhaps a more regular way of doing it, as well as less expensive, than to have women drop the beans in the furrows. I am

GENTLEMEN,

Your most humble servant,

RUSTICUS

Margate, Nov. 15 1763.

¹Ed. (orig.): The regularity with which these beans are sown makes it much easier to cut them with the twibil and hink than if they were sown at random. Upon the whole, we cannot enough recommend this method of cultivating either horse beans or broad beans.

APPENDIX IV

HOGSHAW FARM, MILSTEAD: ANNUAL CROP ACREAGES, 1729-53

Harvest Year	Arable Crops ¹		Sainfoin		Clover		Fallow		Total acres	Total per cent
	acres	per cent	acres	per cent	acres	per cent	acres	per cent		
1729	103.25	58.5	34.75	19.7	19.75	11.2	18.75	10.6	176.5	100.0
1730	not available									
1731	111.25	63.4	25.5	14.5	17.75	10.1	21.0	12.0	175.5	100.0
1732	101.75	58.9	25.25	14.6	22.0	12.7	23.75	13.7	172.5	99.9
1733	not available									
1734	104.75	59.5	25.5	14.5	18.0	10.2	27.75	15.8	176.0	100.0
1735	89.75	53.1	30.0	17.7	18.0	10.7	31.25	18.5	169.0	100.0
1736	not available									
1737	not available									
1738	91.25	53.9	33.0	19.5	12.5	7.4	32.5	19.2	169.25	100.0
1739	97.5	59.9	21.25	13.1	17.0	10.4	27.0	16.6	162.75	100.0
1740	75.25	46.2	27.25	16.7	15.0	9.2	45.5	27.9	163.0	100.0
1741	88.5	54.3	23.75	14.5	24.25	14.9	26.5	16.3	163.0	100.0
1742	80.25	51.4	32.75	21.0	17.25 ²	11.1	25.75	16.5	156.0	100.0
1743	96.5	58.2	28.0	16.9	18.5 ²	11.2	22.75	13.7	165.75	100.0

¹wheat, barley, oats, beans, peas, tares, woold and turnips.

²includes 5 acres ryegrass.

APPENDIX IV (continued)

Harvest Year	Arable Crops ¹		Sainfoin		Clover		Fallow		Total	
	acres	per cent	acres	per cent	acres	per cent	acres	per cent	acres	per cent
1744	82.75	54.0	28.0	18.3	12.0	7.8	30.5	19.9	153.25	100.0
1745	100.5	59.9	28.0	16.7	15.0 ²	8.9	24.25	14.5	167.75	100.0
1746	96.5	59.2	31.0	19.0	18.25 ³	12.4	15.25	9.4	163.0	100.0
1747	93.75	54.0	31.0	17.8	30.5 ⁴	17.6	18.5	10.6	173.75	100.0
1748	95.0	61.5	19.25	12.4	29.0	18.8	11.25	7.3	154.5	100.0
1749	81.5	54.8	19.5	13.1	21.75	14.6	26.0	17.5	148.75	100.0
1750	108.0	64.6	28.25	16.9	9.5	5.7	21.5	12.8	167.25	100.0
1751	not available									
1752	106.5	63.7	23.25	13.9	14.5	8.7	23.0	13.7	167.25	100.0
1753	104.75	62.9	30.25	18.2	13.0 ⁴	7.8	18.5	11.1	166.5	100.0

Source: KAO U593 A3.

¹wheat, barley, oats, beans, peas, tares, woold and turnips.

²includes 5 acres ryegrass.

³includes 5 $\frac{1}{4}$ acres trefoil.

⁴clover and trefoil.

APPENDIX V

HOGSHAW FARM, MILSTEAD:

CROP YIELDS (BUSHEL PER ACRE), 1722-53

Year	Wheat	Barley	Black Oats	White Oats	Beans	Peas
1722	16.9	17.5			29.1	24.0
1723	16.4	19.3	19.0		13.7	10.7
1724	15.4	18.4	21.9			13.7
1725	15.8	16.7	25.7			
1726	16.3	11.2	19.3			16.0
1727	16.3	19.8	22.5			18.7
1728	13.1	23.1	23.9		22.3	
1729	15.6	12.8	20.5		18.0	
1730	16.9	21.5	25.1			
1731	15.2	12.8	17.7		24.0	
1732	17.1	20.7	21.2			
1733	18.3	23.4	21.9			20.0
1734	18.7	10.2	25.5		47.2	
1735	18.1	18.5	21.9		35.0	
1736	18.4	27.4	22.5		30.4	
1737	19.0	21.6	25.0			
1738	21.5	22.0	18.9	17.1	48.0	
1739	18.1	16.5	20.7	29.4		
1740	14.6	14.9	26.7	18.2		
1741	20.5	25.3	26.7	32.5	54.5	
1742	19.9	20.7	19.7	21.0		
1743	16.6	24.0	23.8	14.7	36.0	
1744	21.3	13.9	15.3		30.5	
1745	15.5	28.0	36.0	40.6		26.0
1746	12.3	25.0	31.2	33.1	16.0	
1747	21.9	23.7	21.4	28.4	17.5	
1748	20.1	24.9	26.3	23.0	21.3	
1749	21.6	16.9	32.0	41.3		
1750	20.9	22.8	19.8	37.7		21.3
1751	14.1	43.1	20.9	26.4		23.1
1752	16.9	27.9	21.2	36.6		15.2
1753	18.8	31.2	15.2	27.2		17.8
Average 1722-37 (16 years)	16.7	18.4	22.2	-		
Average 1738-53 (16 years)	18.4	22.4	23.5	28.5		

Source: KAO U593 A3.

APPENDIX VI

HOGSHAW FARM, MILSTEAD: CROP ROTATIONS (SELECT FIELDS), 1738-53

Abbreviations: ba = barley; be = beans; c = clover; c = clover undersown; f = fallow; o = oats; p = peas; rg = ryegrass; rg = ryegrass undersown; sf = sainfoin; ta = tares; tr = trefoil; tr = trefoil undersown; tu = turnips; w = wheat; wo = woold (alias weld).

FIELD NAME	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753
Acre Field	sf ¹	sf	sf	w	ba	wo	w	o <u>tr</u>	tr	w	o	f	w	f	w	o
Bar Field	f	w	o	f	f	w	o	f	w	f	f	ba ²	w	o <u>c</u>	c	w
Burnt Wood	w	o	f	f	w	o	f	w	sf	sf	sf	sf	sf	sf	sf	sf
Daly Field	w	ba <u>c</u>	c	w	o	f	w	o	f	w	sf	sf	sf	sf	sf	sf
Dewberrys	w	o	f	w	o	f	ba	o <u>c</u>	c	w	ba <u>c</u>	c	w	o	p	w
East Field	c	w	ba <u>c</u>	c	c	w	o	f	tu	ba <u>c</u>	c	w	o <u>c</u>	c	o	c & tr
															<u>c</u> & <u>tr</u>	
Five Acre Leese	w	o	f	o	c & rg	rg	w	rg	w	o <u>c</u>	c	f	w	sf	sf	sf
				<u>c</u> & <u>rg</u>												
Four Acre Leese	sf ³	sf	sf	sf	sf	w	f	tu ⁴	o <u>c</u>	c	w	o	f	ta	f	f

¹Sainfoin ley since at least 1729.

²"Mended with dung and mold mix'd".

³Sainfoin ley since 1735.

⁴"Turneps ... the field above Pondleese lim'd" [viz. Four Acre Leese]

APPENDIX VI (continued)

FIELD NAME	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753
Further Leese	sf ¹	w	<u>o c</u>	c	w	<u>o c</u>	c	w	o	tu	<u>o c</u>	c	sf ²	sf	sf	sf
Great Leeses	f	f	f	w <u>sf</u> ³	sf	sf	sf	sf	sf	sf	sf	sf	sf ⁴	sf	sf	w ⁵
Great Seedcops	w	ba	f	w	<u>o c</u>	c	w	o	f	w	<u>o c</u>	c	ta	f	w	f
Horn Hill	o	f	w	ba	<u>o c</u>	c	w	ba	o	tu ⁶	w	o	o	p	w	ba
Horse Hole	sf ⁷	sf	sf	sf	sf	sf	sf	sf	sf	sf ⁸	tu	ba	p	w	o	c & tr
House Field	o	<u>f</u>	w	o	f	be	w	ba <u>c</u>	c	w	<u>o c</u>	c	w	<u>o c</u>	c	w

¹Sainfoin ley since at least 1729.

²"young S^t foin".

³"Wheat ... with S^t foin". This is a rare example of sainfoin undersown with a cereal crop.

⁴"Great Leeses old and almost wore out - eat off".

⁵"Great Leeses 10 a [cres] about 5a $\frac{1}{2}$ of it mended with dung and mold, y^e rest with lime - a S^t foin lain broke up".

⁶"Hornhil the biggest half mended". [i.e. amended or improved]

⁷"young".

⁸"Horsehole worne out and stock'd".

APPENDIX VI (continued)

FIELD NAME	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753	
Long Acre	sf ¹	sf	sf	w	ba	wo	w	o <u>tr</u>	tr	w	o	f	w	f	w	o	
Martins (Lower)	f	w	o	f	w	o	f	w	o <u>tr</u>	tr ²	w	f	w	o	f	p	
Martins (Upper)	ba <u>c</u>	c	w	ba	f	w	o	c & tr	w	o <u>c</u>	c	w	ba <u>c</u>	c	w	o	
Minchinwood Crofts	f	w	o	f	f	w	o	f	w	f	ta	f	w	o <u>c</u>	c	w	
Oast Field	w ³	ba <u>c</u>	c	w	ba <u>c</u>	c	w	o	f	w	ba <u>c</u> ⁴	c	c	w	ba	o	
Old Cherry Ground (Lower)	w	ba	w	?	?	?	}	be	w	ba	be	w	o	ta & c	ba	be	w
Old Cherry Ground (Upper)	-	-	-	-	w	ba											
Old Hop Ground	-	wo	be	wo	ba	be	w	ba	be	w	be	w	ba <u>c</u>	c	w	ba	

¹Sainfoin since at least 1729.

²"Lower Martins trefoil but very indifferent".

³"S^t foin lains broke up".

⁴"Barley ... the Oastfield and Heither Slowfield now laid in one. This has been mended all over with dung and mold some of the fields twice over, and part of y^e dung and mold was mixt with lime".

APPENDIX VI (continued)

FIELD NAME	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753
Park Croft	o	f	w	f ¹	ba ²	o <u>c</u>	c	w	ba <u>c</u>	c ³	w	o	f	w	ta	f
Pond Field	w	o <u>c</u>	c	c ⁴	w	ba	f	w	o <u>c</u> & tr ⁵	w	o	f	w	o	be & ta	
Pond Leese	f	w	sf	sf	sf	sf	sf	sf	sf	sf ⁶	sf ⁷	w	be	w	o	ta
Robes (Further)	o <u>c</u>	c	w	o	f	w	o	f	w	o <u>c</u>	c	w	o <u>c</u>	c	w	sf ⁸
Robes (Heither)	o <u>c</u>	c	w	o	f	w	o	f	w	o <u>c</u>	c	w	o <u>c</u>	c	w	sf ⁸

¹"will be mended".

²"A Summer Fallow all mended with dung and mold".

³"Parkcraft mow'd for hay and afterwards fed, had but 2 load in the field".

⁴"Old clover 2^d year". Clover was normally treated as a one-year ley on this farm.

⁵"Clover and Triefoil. Pondfield pretty good. Fed off".

⁶"S^t foin ... Pondleese almost worne out".

⁷"Pondleese old S^t foin worne out".

⁸"S^t foin ... The two Robes young and good [7 acres]".

APPENDIX VI (continued)

FIELD NAME	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753
Slow Field (Further)	w	o	f	w	sf	sf	sf	sf	sf	sf	sf	sf	sf	sf	sf	sf ¹
Slow Field (Heither)	w	o	f	w	o	f	w	o	f	w	ba c	c	c	w	ba	o
Spendals	sf	sf	sf	sf	sf	sf	sf	sf	sf	sf ²	tu ³	ba	p	w	o	c & tr <u>c & tr</u>
Stable Field	ba	o	f	w	o c	c	w	o tr	tr	w	o	ta	w	f	w	o
Upper Seedcops	sf ⁴	sf	sf	sf	w	f	w	p	w	o	c ⁵	w	o c	c	w	ba
Well Field	c	w	ba	o c	c	w	ba	be	w	ba c	c	w	o	p	w	be

¹"S^t foin ... Slowfield wore out".

²"S^t foin ... The two Spendals worne out and eat off".

³"Horsehole with the two Spendalls all lim'd and sow'd with Turneps about 8 ac."

⁴Sainfoin since at least 1729.

⁵"Sow'd in Seedcops some tailseed of clover for Sheepkeeping [$6\frac{3}{4}$ acres]".

Source: KAO U593 A3 (Richard Tylden's Farm Accounts).

APPENDIX VII

HOGSHAW FARM, MILSTEAD: SAINFOIN (LONG LEYS) BY FIELD DISTRIBUTION, 1729-53

(Median average ley = 10 years)

FIELD NAME	1729	1730	1731	1732	1733	1734	1735	1736	1737	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753
Upper Seedcops	X	X	X	X	X	X	X	X	X	X	X	X	X												
Burnt Wood	X	X	X	X														X	X	X	X	X	X	X	X
Further Leese	X	X	X	X	X	X	X	X	X	X												X	X	X	X
Oast Field	X	X	X	X	X	X	X	X	X																
Daly Field	X	X	X	X	X	X	X	X	X											X	X	X	X	X	X
Long Acre	X	X	X	X	X	X	X	X	X	X	X	X													
The Acre	X	X	X	X	X	X	X	X	X	X	X	X													
Stable Field (part)	X	X	X	X	X	X	X	X	X	X	X	X													
Garriots					X	X	X	X	X	X															
Four Acre Leese							X	X	X	X	X	X	X	X											
Horse Hole										X	X	X	X	X	X	X	X	X	X						
The Spendals										X	X	X	X	X	X	X	X	X	X						
Pond Leese												X	X	X	X	X	X	X	X	X	X				
Great Leeses															X	X	X	X	X	X	X	X	X	X	X
Further Slowfield														X	X	X	X	X	X	X	X	X	X	X	X
Five Acre Leese																							X	X	X

Source: KAO U593 A3.

APPENDIX VIII

THE HARVEST SEASON AT MILSTEAD (KENT):

RICHARD TYLDEN'S WEATHER COMMENTARIES, 1728-53

July y^e 25th 1728 began to reap wheat ... All the wheat this year had in extraordinary well. Had no rain but upon 5 shock ... Made an end of all my harvest y^e 7 of Sept for this year 1728.

August y^e 13th 1729 begun to cut wheat ... A very fine harvest and hop/ping this year.

[1730 not available]

August y^e 2 1731 began to reap wheat ... No rain all y^e wheat harvest ... [Beans] well got in.

August y^e 7th 1732 begun to reap wheat ... Made an end of wheat harvest y^e 21 of this instant August and a very fine season to get in y^e wheat ... [Barley] all well had in ... [Tares] well harvested and carry'd in ... Made an end of corn harvest y^e 5th of Sept and as fine a harvest as I ever remember ... I am in hopes there will be about two se[m]es of [clover] seed. It was well had in but it was not very well seeded.

July y^e 28th 1733 began to reap wheat ... Made an end of wheat harvest y^e 17 of August and prov'd a very wet harvest and was oblig'd to double all my wheat except about 3 Ac[res] that was standing, but got it in very dry at last.

Began to reap wheat y^e 5th of August 1734 ... Made an end of wheat harvest y^e 22 of August and prov'd pretty showery but not very great raines so that it was all got in tolerable well.

August y^e 18th 1735 began to reap wheat ... Made an end of reaping of wheat y^e 2^d of Sept and carrying y^e 5 [Sept]. It prov'd a pretty showery time for y^e 1 [i.e. first] fortnight but no great rains to occasion opening. The wheat was carry'd in all tolerably well ... [Barley] had a great deal of wett before it was got in ... Made an end of rakeing [barley and oats] y^e 23 of Sept and carrying in y^e 29 [Sept]. Had abundance of rain upon y^e barley and oates.

August y^e 2 1736 begun to cut wheat ... Made an end of reaping wheat y^e 10 of August 1736 ... Made an end of carrying in my wheat y^e 13 of August. It prov'd a most fine wheat harvest as ever was known. Two little showers just to plump y^e clovel and make it free in y^e ear and exceeding fine weather before and after until it was all carry'd in.

July y^e 30th 1737 begun wheat harvest ... Made an end of reaping this year y^e 15 of August 1737 ... Made an end carrying in my wheat y^e 18 of August. There was one very great rain about 3 days after I begun. What wheat was then cut I was oblig'd to open & double. It was very showery all the harvest which caus'd it to be pretty long and troublesom ... It was an exceeding wet barley harvest this year as likewise for y^e oates but the weather was so bad y^e latter end of y^e harvest that it rain'd and was bad weather for above 5 weeks together. There was not above 4 or 5 days that corn cou'd be carry'd in, at any rate in y^t time. Abundance of beans and peas were spoild and what was carry'd in in bad condition. A great deal was hurry'd in y^e beginning of y^e harvest before twas ready so y^t it heated in y^e stack and was spoilt that way. I had about 4 $\frac{1}{2}$ Ac. of barley which lay in y^e field for about a month after it was cut before I cou'd get any of it in. At last I got about 4 Ac. of it in to thrash out immediately for y^e hogs. Y^e remainder some part of it I rak'd and gave it y^e hogs in y^e yard, y^e rest I never rak'd at all but turn'd y^e hogs into it. It has been as bad a harvest from y^e

beginning to y^e end as has happn'd for many years. I made an end of harvest this year y^e 15 of October.

August y^e 4th 1738 began to cut wheat ... Made an end of wheat harvest this year y^e 31 of August ... This year was a long showery harvest and some very heavy rain, insomuch y^t I was obliged to open 180 shock and make 'em into small sheaves. But at y^e last got my wheat in very well ... The harvest for my oates and barley was pretty wet and troublesom but got it in at last in tolerable good order, but it was a long harvest. My beans I got in very well. I made an end of barley harvest y^e 16 of Sept. Made an end of bean harvest y^e 27 of Sept and all matters relateing to harvest.

August y^e 9th 1739 began to reap wheat ... Made an end of wheat harvest this year 1739 the 22 of August ... Had a very fine harvest this year for my wheat. Carry'd it all in very dry and in good order ... A wet season to get my Black oates in but with a good deal of care got them in toller-able well ... Made an end of barley harvest dewrakings and all matters relating thereto y^e 8 of October. It was with a great deal of trouble and care to get what was got in in middling order. About two Ac. and $\frac{1}{2}$ could not be got in for no other use than for the hogs. It was so bad a barley harvest in the north and west of England that the greatest part of the barley was spoilt and not fitting for malt. Barley sells now for about 23s. per se[me] and 'tis thought it will be much dearer.

Sept y^e 1st 1740 began wheat harvest ... Had a showery wet harvest for my wheat this year but got it in pretty well at last ... [Barley] all very well harvested.

August y^e 4th 1741 began to cut wheat ... Had a very fine harvest for my wheat this year. Carry'd it all in in fine order. The whole crop was clear and good wheat ... Made an end of cutting wheat y^e 15 of August ...

eleven days cutting. Made an end of carrying it in y^e 17 ... Barly was very well carry'd in ... The White oates are exceeding well harvested ... Black oates very well carry'd in ... Carry'd in this year about 12 load of S^t foin very good ... [Beans] were carry'd in exceeding well and carry'd them in y^e 2 of Sept.

August y^e 2 1742 began to cut wheat ... Had a very fine harvest for my wheat this year and carry'd it all in, in good order, and the whole crop pretty clear and good wheat ... The White oates are exceeding well harvested but came in two crops so will not yield very well ... A very fine time for my Black oates. Carry'd them in very well ... [Barley] all had rain after it was mow'd but carry'd it in in good order at last and none of it as I saw was grown. My barly this year came in 2 or 3 crops therefore was oblig'd to let it lye a considerable time after it was mow'd before I could take it up.

August y^e 8th 1743 began to cut wheat ... August y^e 13 begun to carry in wheat ... Made an end of cutting wheat y^e 23 of August 1743 and made an end of carrying in y^e 25. The greatest part of my wheat was cut in a great deal of rain but got it in pretty well at last ... About 15 days before I had made an end in cutting and about 18 days before it was all in ... The White oates was very well had in but some were very ordinary upon y^e ground and full of weeds, so will not yield very well ... The Black oates had just rain enough after they were cut and were exceeding well had in ... [Barley] was all carry'd in in very fine order ... [Horse beans] were had in in very good order and are extraordinary good ... Had this year about 27 load fine S^t foin hay very well made and carry'd in. Upon 28 Ac., 20 Ac. good and 8 Ac. but poor ... Made an end of all harvest y^e 7 of Sept 1743.

August y^e 6th 1744 began to cut wheat ... Made an end of cutting wheat the 24 of August and made an end of carrying in y^e 25. It was a very fine harvest for y^e corn tho' there was some let to the harvesters by small raines, but they were such as did y^e corn much service. About 18 days from y^e begining before I had made an end cutting and about 19 days before I had carry'd it all in ... My barley harvest was in general pretty good. Altho' there was some showerie weather yet it was well had in and y^e rain did it but little damage ... My beans were very well carry'd in and very dry and good ... My oates were very well carry'd in. They had rain enough and not to much ... Made an end of all harvest this year 1744 the 26 of Sept.

August y^e 15th 1745 began to cut wheat ... August y^e 23 1745 began to carry in wheat ... Made an end of cutting wheat y^e 29 of August and made an end of carrying August y^e 31. There was some rain at y^e begining but did my wheat no hurt, but had a fine harvest and got it all in exceeding well. About 14 days from the begining before I had made an end of cutting, and 16 days before I had got it all in ... My barley was very well carry'd in the weather proving very good. The House Field had one shower upon it after it was shock'd but was well carry'd in and reced no hurt. The rest had no rain at all ... The 5 Ac. [of Cobham Grey peas] above the cherry ground had 8 load carry'd in very dry and good ... [The White] oates had some rain before they were rak'd which discolour'd them a little but were carry'd in very dry and well at last ... My Black oates had some rain and large dews which did them a great deal of good and were carry'd in in very good order.

August y^e 8th 1746 began to cut wheat and August y^e 23 made an end of cutting wheat and August y^e 28 made an end of carrying wheat ... Had this year a very fine wheat harvest and got it all in extraordinary well ... My barley was very well carry'd in. The old cherryground have a shower

or two upon it but it reced little or no dammage ... My White oates were very well had in and good colour'd ... My Black oates lay a great while out after they were mow'd, I believe 3 weeks or more, and had some rain 2 or 3 times but were carry'd in very well at last ... [Beans] were well had in but poorly corn'd and I am afraid there will not be above 6 se[mes] if so many ... Made an end of all harvest this year the 26 of Sept 1746 and had a very fine time from the begining to the end, there being only some few moderate showers which were of great service to the corn.

July y^e 28th 1747 began to cut wheat ... August y^e 8th 1747 began to carry in wheat ... Had this year a very fine wheat harvest and carry'd in all my wheat exceeding well. Begun and made an end of cuting wheat in 16 days. Made an end of carrying wheat August y^e 15 ... Wellfield barley was carry'd in I think without any rain but Eastfield had a pretty deal and began to grow but was had in dry at last ... The White oates were carry'd in in very fine order ... My Black oates had some rain and large dews and were carry'd in in very good order ... The two old cherrygrounds - the upper one was pretty good beans but the lower ground was very poorly corn'd so that I don't expect above 12 Se[mes] in all ... When I first carry'd beans to my stack they were exceeding dry but when I had got about two load in y^e stack there came a very great shower upon 'em and after y^e stack was finish'd it reced one or two great rains before it was thatch'd. How they will come out I can't tell.

August y^e 4th 1748 began to cut wheat ... Made an end of wheat harvest the 27 of August 1748. There was some rain at the begining but not enough to dammage y^e wheat. It rather did it good and had a fine harvest to the end and got all my wheat in exceeding well ... My barley was had in without having any rain. Only the dewrakes in Oastfield had some after it was rake in rows in the field but receiv'd little or no dammage ... My White oates some of them had rain and some not after they were cut but

they were well had in last with little or no damage by y^e rain ... My Black oates had a great deal of rain the most of 'em after they were shock'd and were carry'd in but indifferent ... These Black oates were pretty much blighted this year, therefore I am afraid they are ordinary and yield poorly ... My Red oates were carry'd in in very good order ... My beans were very well carry'd in and are very hard and dry ... I cut about $\frac{1}{2}$ an acre of tares. They were very well carry'd in and are good and dry. The rest were cut green for the horses. There may be 3 or 4 bushells of 'em which will serve for seed.

August y^e 2^d 1749 began to cut wheat ... Had this year a very fine wheat harvest and got it all in extraordinary well ... Had a fine harvest for barley and all very well carry'd in ... Had a fine harvest for my White oates and all well carry'd in ... Had a fine harvest for my Black oates and all well carry in ... Had a fine harvest for my Red oates and all well carry'd in ... [Tares:] Stablefield about 2a. 2y. Op. Cut about 1 Ac. green for the horses. The rest were harvested and carry'd in very well and I believe there will [be] about 3 se[mes].

July y^e 26th 1750 begun to cut wheat ... Made an end of wheat harvest this year both cutting and carrying the same day viz. y^e 11 of August 1750. ... Had this year a very fine wheat harvest and carry'd it all in in very good order ... My barley was carry'd in in fine order ... Had a fine time for y^e White oates and they were well carry'd in ... [Black and Red] oates had but little rain after they were mow'd but all carry'd in in good order.

1751. Began to cut wheat August y^e 14th ... Had this year a great deal of rain which fell at times all y^e wheat harvest and it generally carry'd in soft and cold. The greatest part of my wheat was weedy and will yield but poorly ... My barley was had in pretty good order but was very near being spoilt. It began to grow and one rain more woud have it very bad,

it being very thick in the swathes. But it pleased God to send 2 or 3 days of very fine weather which dry'd it so that it went in very good order ... My White oates were carry in pretty well. They had some rain but did them little or no damage ... Carry'd in y^e Black oates very well ... [Yellow peas] were pretty well pod/d/ed ... [Tares] were pretty well carry'd in but had a great deal of wet in the field. They went in soft but tollerable dry. I believe there will be about 7 se[m]es ... Sept y^e 28th 1751 made an end of all harvest.

August y^e 6th 1752 begun to cut wheat ... Had this year a very fine wheat harvest and carry'd it in well ... Barly was very well carry'd in ... The greatest part of my White oates were well carry'd in. Some had a shower but they reced but little dammage ... [Black oats] had some rain but not to hurt 'em ... [Yellow peas] all carry'd in very well ... [Tares] were all carry'd in very well ... Made an end of all harvest about y^e 7 of Octo. 1752 N.S. [New Style].

August y^e 9th 1753 began to reap wheat. The first day I begun it rain'd and cut but few sheaves and it continued wet and such bad weather that we cut but very little 'til y^e 20 and then it clear'd up and had very fine weather and as fine a wheat harvest as we cou'd wish or desire ... My barly was all carry'd in very dry and in good order ... My oates were carry'd in in pretty good order ... [Yellow peas] were well carry in and are pretty good ... [Tares] are dry and good ... [Horse beans] were very well carry'd in and laid in a stack.

APPENDIX IX

AN ACCOUNT OF HOPPS

by a Kentish Gentleman¹

There being the greatest plantation of hopps in Kent of any county in England, I shall give you an account of the way and manner of planting and ordering them there.

Choice of ground to plant with hopps

The strongest, richest ground is most proper for them. Choose a warm dry soil that has a good depth of light hazel mould; if it be rocky within two or three foot of the surface they prosper well, but by no means on a stiff clay or spungy wet land. If it may be, choose to plant on a piece of meadow or lay-ground, that has not been tilled or sowed for many years, or on an old decayed orchard, for land that is worn out with long bearing corn will require abundance of dung to bring it into any tolerable condition to bear a crop of hopps.

The situation of the ground

The situation of it, with respect to the points of the compass, is not much material, though an inclination to south or west, no doubt, is preferable where it may be had. But if the ground lie exposed to the north-east or south-west winds, care must be taken that there be, at some distance, a shelter of tall trees or hedges, because the former are apt to nip the tender shoots in spring, and the latter frequently break and blow down the poles and very much endanger the hopps at the latter end of summer.

In the winter before you design to plant, plough the ground and

¹This tract was probably written between 1707 and 1712. It was published as a supplement to John Mortimer, The Whole Art of Husbandry (2nd ed., 2 Vols. 1708-12), II, 222-40. See supra, 489-90. Punctuation has been modernized, ampersands extended, and brief explanatory notes added where necessary.

harrow it even. If it be stony, gather up and carry off the stones, and lay upon it - in heaps - a good quantity of fresh rich earth or well-rot dung and earth mixed together, sufficient to put half a bushel into every hole to plant the hopps in, unless the natural ground be very fresh and good. Then on a straight side of the field, at a convenient distance from the hedge, stretch a line with knots tied in it, at about seven foot distance, the whole length of the ground, and place a sharp pointed stick at every knot. Then lay aside the line and with two forked sticks of about seven foot long, you may from that first row set out the whole ground by applying the two forks to two of the sticks which were first set up. Then placing another row at the ends where the forked sticks meet triangular-wise, dig a hole about a foot and half wide, and fill it very full of the good earth you brought in.

Choice of sets

You ought to be very curious in the choice of your plants and sets as to the kind of hop, for it is a very great damage to the planter when his garden proves a mixture of several sorts of hops, ripening at several times. The two best sorts are the White and the Grey Bind. The latter is a large square hop, more hardy, bears a plentiful crop, and is something later ripe than the former. There is another sort¹ of the White Bind which is ripe a week or ten days before the common, but it is more tender and bears but a thin crop; the only advantage is - it comes first to market. He that plants three grounds, or three distinct parts of his ground, with these three sorts will have the convenience of picking them successively, as they become ripe.

Procure your sets out of the ground that is intirely of the same sort you would have. Let them be five or six inches long, with 3 or more joints or buds on them, all the old bind and hollow part of the set

¹variation

being cut off. If there be a sort of hop you value, and would increase plants or sets from, you may lay down the superfluous binds when you tye your hops, cutting off the tops and burying them in the hill. Or alternatively when you dress your hops, you may save all the cuttings and lay them in rows in a bed of good earth; almost every part will grow and become a good set the next spring.

Experiments have been made of raising a hop garden by sowing the seeds, but it turns to no account because, it is not only a tedious way, but the hops so produced will be of different kinds, and many of them wild and barren.

Season of planting

There are two seasons for planting hops - in October and March - and both succeed very well. Only in October sets are not to be had, unless from a ground that is to be digged up and destroyed. And there is some danger that a wet winter may rot the sets. The most usual time is in March, when hops are cut and dressed.

Manner of planting

You ought to plant five good sets in every hole with a "setting stick". Place one [set] in the middle and the rest round about sloaping, the tops meeting at the center. Let them stand even with the surface of the ground, press them close¹ with your hand, cover them with fine earth, and place a stick on each side the hill to secure it.

After your ground is thus planted, all that you have to do that summer is to keep the hills clean from weeds, dig the ground about the month of May, and gather up the stones. If more [stones] be turned up by digging, raise a small hill round about the plants. Twist the young binds or branches together into a bunch or knot about June, for if you tye them up to small poles the first year - in order to have a few hops

¹firm

from them - it will not countervail¹ the weakening of the plants.

Dunging the ground

Having got ready a mixin of compost or dung for your hop ground, the best time to lay it on is about Michaelmas if the weather be dry [so] that the wheels of the dung cart may not damage your hops nor furrow your ground. Otherwise you must stay² till the frost has hardened the ground so as to bear the dung cart over. This is the time to carry on your new poles and to recruit³ those that decayed and cast out every year.

If you have plenty of dung, the best way is to spread it in the alleys all over the ground, and then dig it in the winter following, which will require 80 or 100 load to an acre, reckoning thirty bushels to the load. If you have not dung enough to cover all your ground in one year, you may lay it on, one part one year and on the rest another, or a third [year], for there is no occasion to dung the ground after this manner more than once in three years.

Those that have but a small quantity of dung usually content themselves with laying on about twenty load upon an acre every year. This they lay only on the hills, either about November or, as some esteem best, in spring when the hops are dressed, [in order] to cover them after they are cut. But then the compost or dung must be very well rotted and fine.

Dressing hops

When you dig your hop ground in January or February, let the earth be taken away with a spade round about the hills, very near them [so] that you may more conveniently come at the stock to cut it. Then, in fair weather towards the end of February, if your hops were planted the spring before - or if your ground be weak - you ought to dress them.

¹ prevent

² wait

³ replace

But if your ground be in perfection and strong, the middle of March is a good time and, if it be apt to produce over-rank binds, the latter end of March or the beginning of April may be soon enough.

Having with an iron picker¹ cleared away all the earth out of the hills, so as to make the stock bare to the principal roots, then with a sharp knife cut off all the shoots which grew up with binds the last year, and also all the young suckers, [so] that none be left to run in the alleys and weaken the hill. And it will do well to cut one part of the stock lower than the other and, the following year, to cut that part low which before you left highest, by which course you may expect stronger binds, and yet keep the hill in order.

In dressing hops that were planted the year before, you ought only to cut off the dead tops and the young suckers that are sprung from the sets. Then with a hough² cover the stocks with fine earth the thickness of your finger.

Poling hops

When the shoots begin to sprout up about the middle of April, you are to set poles to the hills. They must be set deep in the ground with a square iron pitcher or crow [so] that they may endure the winds. Three poles are enough for each hill. Let them be placed as near the hill as may be [possible], with their bending tops turned outwards from the hill to prevent the intangling of the binds. And let a space between two poles be left open to the south to admit the sunbeams.

Your poles ought to be 16 or 20 foot long, more or less, according to the strength of the ground, and take care not to over-pole a young or weak ground, for that will draw the stock too much and weaken it. Neither can you expect a crop from an over-poled ground, for the branches

¹pitcher or peeler

²hoe

which bear the hops grow very little, till the binds have over-reached the pole which, when the pole is too long, it cannot do. Two small poles are sufficient for a young ground.

If you wait till the sprouts or young binds are grown about a foot long, you will the better judge where to place the largest poles. But if you stay till they are so long as to fall into the alleys, it will be a prejudice to them, because they will entangle with one another and not so readily clasp about the pole.

A hop is thought to prosper best on a maple or aspen pole because of their warmth, or because the roughness of the bark furthers the climbing of the hop. But the ashen or willow poles are to be preferred for their lasting and, above all, the chesnut is the most durable.

If, after the hops are grown up, you find any of them under-poled, it will be worth the while to place taller poles near those that are too short, to receive the binds from them.

Tying of hops

When the binds are grown two or three foot high, you must - with your hands - guide them that do not clasp of themselves to the nearest pole, turning them to the sun,¹ whose course they always follow, and bind them with withered rushes - but not so close as to hinder their climbing up the pole. This you must continue to do till all the poles are furnished with binds, of which two or three are enough to a pole, and then pluck up all the sprouts and binds which you have no occasion for; but if it be a young ground, pluck up none of the useless binds, but wrap them up together in the middle of the hill. When the binds are grown beyond the reach of your hands, if they forsake the poles, a stand ladder is very useful in the tying them up again. If the binds be very strong and much over-grow the poles, some advise to strike off their heads with

¹anti-clockwise

a long switch, to encrease their branching below.

Summer digging

When the tying is finished, towards the end of May, you must give your ground the summer digging, casting up with the spade some fine earth into every hill, and about a month after you ought to pare the alleys with a shovel and make up the hills to a convenient bigness.

Watering hops

There is no doubt but in a hot, dry summer a thorough watering would be a very great advantage to hops, but to do that requires so much trouble and charge, that it is scarce practicable unless you have a stream at hand to flow the ground.

When the hops blow,¹ if you find among them any wild or barren hills, mark them by driving a sharpened stick into every such hill [so] that they may be digged up and replanted.

Picking hops

About the middle of July hops begin to blow, and will be ready to gather about Bartholomewtide.² You may judge of their ripeness by their strong scent, by their hardness, and by the brownish colour of their seed. When you find them ripe, pick them with all the expedition you can, for a storm of wind will do them great mischief at this time, by breaking off the branches, and by bruising and discolouring the hops. It is well known that hops picked green and bright will sell for a third part more than those which are discoloured and brown.

The most convenient way of picking them is into a long square frame of wood called a binn, with a cloth hanging on tenterhooks within it, to receive the hops as they are picked. This is composed of four pieces of wood joyned together, supported by four legs, with a prop at each end to

¹burst into flower

²from about 24th August

bear up another long piece of wood placed at a convenient height over the middle of the binn, upon which the poles are laid to be picked. The binn must be 8 foot long and 3 foot broad, six or eight persons may work at it, three or four on each side, and 2 poles may be picked at a time.

If convenient you can begin to pick your hops on the east or north side of your ground, which will prevent the south-west wind from breaking into the garden. Having chosen a plat¹ of the ground containing 11 hills square, place the binn upon the hill which is in the centre, having 5 hills on each side. Having picked them, remove the binn into another piece of ground of the same extent, and so go on till you have finished the whole.

When you draw up the poles to be picked, take care not to cut the binds too near the hills, especially when the hops are green, because it will occasion an excessive flow of the sap. If the poles come up with difficulty, you may raise them with a piece of wood in the nature of a lever which has a forked piece of iron with teeth on the inside, fastened within two foot of the end.²

Take care that the hops be picked clean, that is free from leaves and stalks. Two or three times in a day, if there be occasion, empty the binn into a hop bag made of coarse linen cloth, and carry them immediately to the oast or kiln to be dried for, if they lie long in the binn or bag, they will heat and be discoloured.

If the weather be hot, draw no more poles than may be picked in an hour. If it may be possible choose to gather them in fair weather when the hops are dry, which will save some expence of coals, and will better preserve their colour when they are dried.

¹plot or area

²a hop dog

Drying hops

The best way of drying hops is with a charcoal fire on an oast or kiln covered with a hair cloth,¹ of the same form and fashion which is used to dry malt on, which every carpenter or bricklayer, in countries where hops grow or malt is made, knows how to build. Little need be said of it. The kiln ought to be square and may be of 10, 12, 14, or 16 foot over at the top, where the hops are laid, as your plantation requires and your room will allow. There ought to be a due proportion between the height and breadth of the kiln, and the bigness of the steddle ought to be six foot and a half square, and so proportional in other dimensions.

You ought to spread the hops even upon the oast, a foot thick or more if the depth of the curb will allow it. But take care not to overload the oast if the hops be green or wet.

Let the oast be first warmed with a fire before you lay on the hops, then keep an even steady fire under them, not too fierce at first lest you scorch them. Let not the fire sink or slacken but rather increase till the hops be near dried, lest the moisture or sweat, which the fire has raised, fall back or discolour them. After they have lain about nine hours they must be turned and, in two or three hours more, they may be taken off the oast. When they be well dried is known by the brittleness of the stalks and the easie falling off of the hop leaves.

Bagging hops

They ought not to be bagged up hot from the oast, but laid by in a chamber for a fortnight or more [so] that they may imbibe the air, and so become more soft and tough, which will prevent their being over much broken in treading, and make them capable of being trodden closer, and the harder they be trodden the better they will keep.

¹frequently referred to as an "oast hair" and made of loosely woven horse hair.

The baggs in which hops are packed up are made of coarse linen cloth. Four ells and a half of that which is an ell wide,¹ makes a bagg to contain two hundred and a half weight of hops or more. The manner of bagging them is thus: make a round hole in the chamber near where the hops are laid, large enough to receive the bagg; tye a handful of hopps in each lower corner of the bagg to serve as handles to it, and fasten the mouth of the bagg to a hoop something larger than the mouth of the hole, [so] that the hoop may rest on the edges of the hole; then put in a few hops and let him that is to tread them go down into the bagg, and, going round on every side, let him tread them as hard as he can; keep putting in more hops as fast as there is occasion, till the bagg be full; then release the bagg from the hoop, take it down, and sew up the mouth as fast as you can, leaving the two upper corners of the bagg for handles, as before.

If you lay them up,² let it not be on an earthen floor, but on boards; and take care of rats and mice which will be very apt to harbour in them.

Stacking the poles

Having stripped off the hawm or binds from the poles as you pick them, your last work is to stack them up for their security in winter. This is done by setting up a frame of six poles let into the ground with an iron pitcher or crow in the spaces round about, and at some distance from the hill on which the binn stood when you picked the hopps. Let the poles stand so inclining as to meet and be tied fast together within a yard of the top. Against this frame the poles ought to be speedily set up, for if they be suffered to lie upon the ground, especially in wet weather, they will receive more damage in a fortnight than by standing

¹an ell = 45 inches

²put them in store

all the rest of the year.

As soon as the hawm or binds are withered and dry, burn them on the ground.

Thus you see redit labor actus in orbem.¹ A hop ground requires almost constant labour and attendance throughout the whole year. However, it sufficiently requites² the planter for his pains and trouble. An acre of good hop ground well-managed, yields more profit than many acres of any other kind of husbandry or plantation in this county, fruit excepted. If an acre produces ten hundredweight of hops, communibus annis,³ and these are sold for three pounds per hundred; and that the charge of an acre of hop ground is fifteen pound per annum (viz. allowing £3 for the husbandry, £4 for the wear of the poles, £5 for picking and drying, £1 10s. for dung, £1 for rent, and 10s. for tythe) the clear profit of an acre is £15 per annum.

Two things are indeed a discouragement to the planter: that hops are a very uncertain crop, being subject to so many casualties and accidents from wind, blight, and insects, and when a crop wholly fails it is an intolerable loss; and that if there happens a general crop when the plantation is of late years so very much increased and overgrown, it will not answer the charge.

To the first it may be said that a year of scarcity, sometimes, is for the planters [an] advantage, because it consumes the whole stock of hops, empties the country, and makes room for a good price the year

¹The full quotation, probably in common use among learned men, is: "Redit agricolis labor actus in orbem. Atque in se sua per vestigia volvitur annus". Vergil, Georgics, Bk. II, 1, 401. Work returns to the husbandmen moving in a circle, as the year rolls itself round in its former track.

²rewards

³taking one year with another

following. And to the second, that those who can forbear the money, and lay up their hops in a plentiful year, in a blasting year - which frequently happens - will be well paid for their forbearance.

There is one great advantage made by hop ground which ought to be mentioned. There is no ground so proper to raise an orchard of fruit trees. Its being constantly tilled and mended¹ causes the trees to grow and thrive exceedingly. Some plant their hop ground with apples, some with cherries - and others with apples and cherries mixed together, which is to be preferred. After about ten years, when the cherry trees begin to bear considerably, the hops may be destroyed and replanted in a fresh ground, if you see good. After about thirty years, when the cherry trees are decayed, the apple trees will be in perfection.

¹improved

APPENDIX X

ACCOUNT OF THE STATE OF HOPS IN KENT IN 1725

by John Austen of Canterbury¹

In mid-April, not half the shoots appeared above ground; so that the planters knew not how to pole them to the best advantage.

Upon opening the hills, this defect of the shoot was found to be owing to the multitude and variety of vermin that lay preying upon the roots, and of which the increase was imputed to a long and almost uninterrupted series of dry weather for three months before. Towards the end of April, many of the hop vines were infested with flies [aphids].

About the 20th of May there was a very unequal appearance, some vines being run seven feet, others not above three or four, some just tied to poles, and some not visible; and this disproportionate inequality in their size continued through the whole time of their growth.

The flies now appeared upon the leaves of the forwardest vines, but not in such numbers here as they did in most other places. About the middle of June the flies increased, yet not so as to endanger the crop; but in distant plantations they were exceedingly multiplied, so as to swarm towards the end of the month.

On the 27th of June some specks of fen [a fungus disease] appeared. From this day to the 9th of July the weather was very dry. At this time, when it was said that the hops in most parts of the kingdom looked black and sickly, and seemed past recovery, ours held out pretty well, in the opinion of the most skilful planters. The great leaves were indeed discoloured, and a little withered, and the fen was somewhat increased.

From the 9th of July to the 23rd, the fen increased a great deal;

¹First printed in T. Hales, Treatise of Vegetable Statics (172?); subsequently in J. Mills, A New and Complete System of Practical Husbandry (5 Vols. 1765), IV, 455-6.

but the flies and lice decreased, it raining much daily. In a week more, the fen, which seemed to be almost at a stand, was considerably increased, especially in those lands where it first appeared.

About the middle of August the vines had done growing both in stem and branch, and the forwardest began to be in hop, the rest in bloom: the fen continued spreading where it was not before perceived; and not only the leaves, but many of the burs also were tainted with it.

About the 20th of August some of the hops were infected with the fen, and whole branches were corrupted by it. Half the plantation had escaped pretty well hitherto, and from this time the fen increased but little: but several days of wind and rain in the following week distorted the plants so that many of them began to dwindle, and at last came to nothing; and of those which then remained in bloom, some never turned to hops, whilst many of those which did were so small, that they scarcely exceeded the size of a good large bur.

We did not begin to pick till the 8th of September, which is eighteen days later than we began before. The crop was little above two hundred weight on an acre of ground, and not good. The best hops sold this year at Way-hill Weyhill Fair Hampshire, 12 October for 16 l. the hundred.

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