

**AGRICULTURAL CHANGE IN THE LOWLANDS
OF SOUTH YORKSHIRE
WITH SPECIAL REFERENCE TO
THE MANOR OF HATFIELD
1600 – c.1875**

VOLUME I

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ABSTRACT

This study provides an analysis of agricultural change between about 1600 and 1875 in the extreme south-east of the old West Riding of Yorkshire. Commentators have regarded the area as of little economic value, as easily flooded flatlands whose inhabitants eked out a living as hunters, gatherers and cattle keepers. The adjoining townlands were also seen as poor prospects for farming. One element of this view is that the Dutch drainage of the 1620s led to a transformation of the local economy. The early chapters of the thesis challenge this interpretation by showing how open-field farming had developed since at least as early as Domesday.

Traditionally, the efforts of the 'the great Dutch engineer' Cornelius Vermuyden to drain the meres at the confluence of the rivers Don, Idle and Torme have been seen as successful, but little attempt has been made to measure the impact of drainage on the agricultural system. This thesis aims to make such an analysis, and to argue that the improvements were only moderately successful and that less credit than has been accorded should go to the inexperienced Vermuyden. On many farms, wetness of the soil was so permanent that oats and grass were the only possible activities until the introduction of artificial warping in the mid-eighteenth century. The evidence of change in estate papers and probate inventories (which has received little scholarly attention) indicates gradual agricultural development, over a wide part of the research area, from the seventeenth century.

The study seeks to show how, over some two centuries, insufficient industry and capital investment was directed to the drained flatlands but the more barren townlands of the area gradually became not only a commercially valuable part of the county but also one of the most technically innovative. Reasons for this change are advanced in the later chapters of the study.

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INTRODUCTION

The thesis underlying this study of the extreme south-east of the historic West Riding of Yorkshire is that the view that it was wet, useless and backward until it was brought into the agricultural world by the Dutch drainage of the 1620s ignores the reality of its situation in two major ways. Firstly it completely ignores the fact that the townlands of the area had been organised around open fields and cultivated for centuries before 1626 when the drainage started and secondly that although considerable areas of very wet land were enclosed and cultivated after 1626 much of the drained land continued to be so wet and difficult to cultivate that it was not until nearly a century and a half after the drainage that large parts began to be improved by the new technique of artificial warping. The improvement brought about by warping and a long period of drainage improvement lasting into the twentieth century eventually created the farming conditions that the supporters of drainage were claiming in the seventeenth century. On the poor soils of the townland the relatively early adoption of turnip husbandry c. 1700 and the early adoption of the new fertilizers in the early nineteenth century made the Chase into one of the leaders of agricultural change. This position was partly a result of the close connection of the area with important markets, improving transport facilities and the great rise of prosperity and population in the West Riding.

In 1953, in the very first volume of the newly formed British Agricultural History Society's journal, Dr Joan Thirsk wrote in a footnote to an article on 'The Isle of Axholme before Vermuyden' that 'the oft repeated statement that Hatfield Chase was a useless waste needs to be tested by the facts'.¹ An important intention of this study is to test 'the facts'; firstly, about the period before the Dutch drained the wetlands that the Chase shared with the Isle of Axholme; and then to evaluate the quality of the drainage according to the evidence of agricultural change in the two and a half centuries after 1628 when it was claimed, by Vermuyden, that the drainage was completed.

¹ J. Thirsk, 'The Isle of Axholme before Vermuyden', A H R., Vol I, 1953, p17

An equally important object of the study is to prove the existence and importance of an agricultural economy on the drier townlands to the east of the wetlands and to show the ways in which it responded to the major changes in agricultural practice in the period from c.1600 to 1875.

The area of study is the extreme south-east of the old West Riding of Yorkshire, mainly Hatfield Chase and its purlieus, with special emphasis on the huge Manor of Hatfield which occupied the centre of the Chase and included its most important centres of population: Hatfield, Thorne and Fishlake. The Chase and its purlieus stretch from the river Aire in the north to Bawtry and north Nottinghamshire in the south and from the outskirts of Doncaster in the west to the rivers Don, Torne and Idle which form the boundary of Yorkshire and Lincolnshire.

The early part of the study, chapters I and II, aims to show that the area before the drainage was by no means a useless waste and that the wetlands, like those of Axholme, southern Lincolnshire and East Anglia, made important contributions to an economy that was centred on a mixed agriculture system with both the grazing of cattle and the growing of crops of great importance. This is not a simple task as the West Riding wetlands, like other similar areas, have been the object of much mistaken comment. In the nineteenth century, Samuel Smiles, the famous author on engineering, wrote that the inhabitants of the English fens:

derived a precarious subsistence from fowling and fishing... they must have been an amphibious race largely employed in catching eels.²

The Victorian historian, Lord Macaulay, wrote much the same but added a condemnation of the people:

In that dreary region covered by vast flights of wild fowl, a half savage population led an amphibious life, sometimes wading and sometimes rowing from one islet of firm ground to another.³

Other writers emphasised the poverty of the fenlanders; J. Bygott wrote:

² S. Smiles, *The Early Engineers*, (1864), p16, cited by H.C. Darby, *The Medieval Fenland*, Cambridge (1940), p42

³ Lord Macaulay, *History of England*, ed C H. Firth iii 1349 (1940), cited by H C Darby, *op cit*, p42

... the true fenlander could be called neither an agriculturalist nor a shepherd. He was a fisherman of sorts, a wild fowler and a gatherer of natural resources such as berries and reeds.⁴

The impression given by these quotations is of a primitive and poverty stricken life. This view is supported by B. Metcalfe's M.A. Thesis on Hatfield Chase. He wrote:

Indeed to use the term 'relative prosperity' [to other fenlands] when dealing with the townships of the Chase is to give a false impression, for all were poverty stricken to slightly varying degrees. The waterlogged nature of the land because of the inevitable flooding of large areas... would make arable cultivation a hazardous procedure.⁵

In addition to their poverty and unusual lifestyle, other writers have stressed the inhabitants' individualism and hostility to outsiders. Bygott also wrote [their] 'individualism fostered a peculiar exclusiveness which made the fenmen a race apart'.⁶

It was also believed that fenmen were idle as they did not cultivate the land but only grazed animals and that they were dishonest but prosperous. In the early nineteenth century the historian of South Yorkshire in a section headed 'The Level of Hatfield Chase' condemned them thus:

The peasantry of a country abounding in game will be less civilized and less tractable than where there is not the same temptation to brave the hazards which attend nocturnal depredation... the temptations to marauding and plunder were great in the vicinity of a well stocked chase, in which no owner resided, and the lawless spirit which such a mode of life would generate, is probably to be in part attributed the violence with which the natives of these regions opposed the persons who undertook to reclaim the flooded land.⁷

S. Sketchley, fifty years later, agreed with Hunter, writing 'the land literally overflowed with food and as a consequence the people degenerated into a thriftless race, whose only strong passion was a love of freedom'.⁸

⁴ J. Bygott, *Eastern England*, (1923), p143, cited by H.C. Darby, *op cit*, p43

⁵ B. Metcalfe, 'Geographic Aspects of the reclamation and development of Hatfield Chase', unpublished M.A. Thesis, Leeds University (1960), p26

⁶ J. Bygott, *op cit*, p142, cited by H.C. Darby, *op cit*, p42

⁷ J. Hunter, *South Yorkshire, the History and Topography of the Deanery of Doncaster*, 2 Vols. (1828 and 1831), p157

⁸ S.B.J. Sketchley, *The Geology of the Fenland*, (1877), p17, cited by H.C. Darby, *op cit*, p119

The contrasting themes illustrated in these quotations are poverty on one hand and over abundance on the other but their general tenor is insularity, hostility and idleness. Fenlanders were obviously seen as very unpleasant people. Defoe, on his northern tour, faced with the prospect of visiting the area, rejected the opportunity, and wrote:

the lands were very rich and feed great store of cattle... travelling into those parts being very difficult, and sometimes dangerous, especially for strangers, we contented ourselves with having the country described to us.⁹

These views, though widespread, had little to do with reality and were mainly a result of the belief that floods dominated the whole area most of the time; a belief which helps to explain why townland farming in the Chase has been ignored. Similarly the belief in the violence and hostility of the inhabitants is largely a result of their justifiable opposition to the drainage and enclosure of their commons and the loss of their free use of the wetlands which had made such a valuable contribution to the local economy. The violence was largely in the Isle of Axholme and although there was opposition to the drainers in the Chase it was much smaller in scale and short-lived. The drained land in the Chase was being farmed by 1635, where it was dry enough, but violence went on in the Isle until 1719 by which time many of the claims of the local people were settled in their favour making the post-drainage history of the Chase and the Isle extremely different.

Hence a major object of this study is to assess the results of the drainage in the Chase without considering the situation in the Isle. The justification of this approach is partly that much more has been written about the Isle before and after the drainage, notably by Dr Thirsk,¹⁰ and partly as a result of the confusion which has existed about the boundaries of the area with many making the assumption that the names 'Hatfield Chase' and 'Isle of Axholme' are interchangeable and, as a result, that what was written about one applied to the other.¹¹ Nevertheless, it is clear that the two

⁹ D. Defoe, *A Tour through the Whole Island of Great Britain, 1724-26* (ed.) P. Rogers (1971), p516

¹⁰ *Axholme before Vermuyden*, A.H.R., (1953), *Fenland Farming in the Sixteenth Century*, (1953) and *English Peasant Farming in the Sixteenth Century*, (1953) and *English Peasant Farming*, (1957)

¹¹ For example, G. Jackson, *The Trade and Shipping of Eighteenth Century Hull*, (East Yorks Local History Society) (1957) p48, refers to Hatfield as 'in the Isle of Axholme, whereas C. Taylor, 'Fenlands' in Thirsk (ed.) *Rural England*, (2000), p167 refers to 'The Isle of Axholme in south-east Yorkshire'

areas were so similar before the drainage, and after 1719, though less so, that they are a 'natural region' as Marshall had claimed in 1818:

This Agricultural Department of the kingdom [the Eastern] includes a small portion of *Yorkshire* (namely the marshes and fens, that are situated at the southern base of the Vale of York, and which are inseparably united with the lands of the same general nature, that are included within the political limits of Lincolnshire).

Most modern agricultural historians would agree with Marshall that county boundaries are an irrelevance in the study of agricultural change though it is justifiable in this case because of the different experiences of the two areas in the very important post-drainage period.

The first part of the study, chapters I and II, is aimed at establishing that farming away from the wettest lands was a normal mixed system with the wetlands giving it the boon of ample grazing and winter fodder. Most of the townland did not flood and where it did, on the inglands near the rivers, the floods gave the benefit of natural warping. Chapter I establishes briefly these points in the period from the Conquest to 1600. Chapter II, by providing more detail for the period from 1600 until the completion of the drainage works proves that the occupants of the area were not simply graziers and exploiters of the fens and they were not, therefore, 'transformed ... from marshmen into farmers'¹² by the drainage. This view of the activities of the inhabitants also ignores the facts that after the drainage the farmers on the newly drained land were mostly immigrant Flemings and that the natives continued to farm the townlands.

These chapters also aim to show that far from being 'waste' the undrained lands made an important contribution to the economy of the Chase and the loss of these resources fully justified the opposition that followed although this was brief compared with the strength of the opposition in the Isle of Axholme.

The first two chapters treat the townland and the wetland as an interdependent unit and underline their mutual importance to the Chase economy. Thereafter, until the

¹² C. Caulfield, 'A Reporter at Large: Thorne Moors', *The New Yorker*, Feb 4, 1991, p63

final chapter, they are treated separately. Chapters III and IV consider questions raised by the drainage such as its success or failure and the quality of Vermuyden's contribution. Chapter III is divided into four sections, the first of which examines the reasons for the determination of the Crown to undertake the work. The second section outlines the traditional accounts of the drainage and the well-documented disasters which it produced in the townships near the rivers. Sections three and four take up these themes and show how little hard evidence there is that Vermuyden had any experience in hydraulic engineering before he came to England and that the view that his fame was such that James I sent for him to undertake the work is a myth. Section four also attempts to come to some conclusions on whether he was an unjustly criticised hero figure or an unscrupulous adventurer.

Chapter IV attempts to move the debate on the success or failure of the drainage away from contemporary disagreements and subsequent differing views by examining the evidence presented by the development of farming on the new land up to 1750, the cost of maintaining the works in an efficient state and the value of the lands to the new landlords, the Participants. The conclusion that it was not very successful is supported by the huge cost of maintenance, the lowness of the rentals after the opening enthusiasm and the narrow range of farming activities that the drainage permitted in very large areas.

Chapter V examines evidence for change in the townlands of the Manor of Hatfield from shortly after the drainage until 1811 when the Enclosure Act for the Manor was finally passed. The early period is hampered by the absence of probate inventories until the 1680s but there is important material to illustrate the difficulties of farming the sands in the newly disparked Great Park. There are suggestions of similar problems in the townland generally which led to their solution by the adoption of new crops shown sporadically in inventories and in the tithe case documents of the 1730s. The crucial change was the decision of the Hatfield town court to amend the open fields to permit turnip and clover cultivation. A result of the decision was a widening breach between large and small farmers which led to a long campaign for enclosure. Throughout the period the lords of the Manor attempted to force new farming practices on leaseholders by increasingly detailed leasing agreements.

Chapter VI attempts to cover many of the same topics as chapter V outside the Manor in the greater detail permitted by the long run of inventories in the Peculiar of Snaith although, in the rest of the area as in the Manor of Hatfield, no early inventories survived. Nevertheless there is sufficient evidence to make judgements on the changes in cereal cropping and animal keeping occurring in the area up to the surveys conducted by Arthur Young, the Board of Agriculture's regional reporters and the commentaries on these by William Marshall.

The following two chapters deal with two of the most important changes in the agriculture of the research area. Chapter VII covers the long period of parliamentary enclosure, 1750-1850, which was an important preparation for the changes traditionally regarded as the heyday of the 'agricultural revolution'. Important though these are to the townlands they are not as significant as the changes to the worst drained parts of the east. The changes in the wettest lands adjacent to the rivers were brought about by artificial warping which turned this almost useless land into some of the best farmland in England in the next 150 years. Along with this the improved situation of the farming industry after 1750, as prices rose, encouraged schemes to improve the drainage which had been rejected earlier, because of their cost.

The warping of the wettest lands and the adoption of bone culture and other new fertilizers on the light townlands made the area an important food producer and a leader in agricultural innovation after the end of the Napoleonic Wars and, although conditions continued to be very different in the drained lands and the townlands, they are dealt with together in Chapter IX. The area was in the forefront of the introduction of new breeds of cattle, sheep and horses. The interest in the growing of non-mainstream crops for industrial use continued and local landlords were involved in improvement, especially by their involvement in the founding and running of agricultural societies at local and national levels. The final chapter is an indication of how far the research area had developed since the time when it had been either ignored or the butt of contempt or had suffered from the inadequate and mismanaged drainage scheme of the seventeenth century.

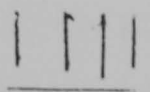
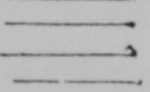
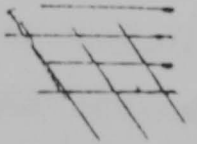
THE HUMBERHEAD LEVELS



A Section taken from an Early Seventeenth Map of Yorkshire

THE AREA OF RESEARCH



-  Manor of Hatfield
-  The Parish and Peculiar of Snaith
-  Other Parishes within the Peculiar

CHAPTER I

THE ECONOMY OF THE CHASE IN THE MEDIEVAL AND EARLY MODERN PERIOD

Hatfield Chase was a private hunting ground created by William de Warenne, a loyal supporter of William the Conqueror. In the fifteenth century it became a Royal Forest but retained the name 'chase'. The centre of the Chase was Hatfield where there was a royal hunting lodge. The Manor Court was also held there after the jurisdiction of the Conisbrough Court was reduced. In 1541 Henry VIII added the former monastic properties of Armthorpe and Crowle (Lincs.) to the Chase. The Manor was very large and included Dunscroft, Tudworth and Hatfield Woodhouse in addition to Hatfield and its Chapelry of Stainforth. Fishlake also had a developing settlement at Sykehouse (earlier called Dowsthorpe), which became a chapelry, and some small settlements such as Fosterhouses. Thorne, because of its location in the midst of the wetlands, had no outliers. All of these settlements except Hatfield Woodhouse, Sykehouse and Fosterhouses were mentioned in Domesday Book. South of the Manor were the Chase townships of Cantley, Finningley, Rossington, Austerfield and Bawtry which was a twelfth century port and market foundation carved out of Austerfield. Outside the Chase were the purlieus in which the Forest Law did not apply although the inhabitants could not interfere with the deer which had to be allowed to run and jump.

The research is concerned with part of a huge area of lowland some of which is below sea level. Large parts were regularly flooded by the Trent and the Yorkshire rivers as they merged with the Ouse in the Humberhead Levels. This name is one used to describe the research area, another is the Vale of York and another, erroneously, the Isle of Axholme. The Isle was cut off from the rest of Lincolnshire by the Trent in the east and from Yorkshire by the Don and its tributaries. In the centre of the Isle, at Epworth, the land rose to 123 feet above sea level which was the highest point in the lowlands east of Doncaster. In the west and north of the Isle about Sandtoft and Crowle the land was barely above sea level. This was the case also across the border into Yorkshire, and at the junction of the Don and its tributaries was a large shallow lake called Thorne Mere; there were also smaller

meres. Thorne was also almost an island as it was often cut off from the rest of the Manor in the winter. Hatfield and Stainforth were, like Thorne, on raised islands but were not cut off from the rest of the Chase and Doncaster, apart from exceptional years such as 1625 when much of the east of England was flooded and Epworth was one of the few places to rise above the floods. A huge area of permanently wet and winter wet land lay to the west and north of the Isle which continued into Yorkshire. Between the higher areas of the townlands of the Manor and the Isle lay two huge areas of raised peat called Thorne and Hatfield Moors. These were constantly swollen with water to a considerable height which varied according to the wetness of the season. The edges of the moors provided turbarry for the townland villages.

In this study the term ‘wetlands’ is used to distinguish the marsh and the fens from the higher sand and claylands (townlands). Marsh and fen are not always easy to distinguish in this area but the main division is described by Reeves and Williamson thus:

Fens were waterlogged low-lying areas of peat soils from which a variety of resources were harvested – marsh hay, reeds, saw sedge, rushes and peat – but which were grazed for part of the year.

Marshes, in contrast, were much more tamed and settled landscapes. They too were watery lands - most were found beside the coast, and many occupied areas of former estuaries.¹

The fens were mainly, therefore, in the area south of Thorne, surrounding Thorne Mere and stretching to the Isle of Axholme in Lincolnshire. The marshes are distinguished by their names: north of Thorne and stretching almost to the river Aire was Marshland and, to its west Dykesmarsh, which was bounded by Turnbridge Dyke. South of Thorne and east of Hatfield was an area of flat and wet land separated into Thorne Levels and Hatfield Levels. To the west and north of Barnby Dun was another marsh called Thorpe Marsh. There were also numerous carrlands which were hardly distinguishable from marsh, but possibly a little drier. Around Hatfield there was Remple Carr, east of Hatfield Woodhouse, Uggin Carr, south of the road to Doncaster, and south of Doncaster itself, Potteric Carr and Bessacarr. The terms ‘lowlands’ or Hatfield Chase refer to the whole research area though some parts were outside the Chase.

¹ A Reeves and F Williamson, ‘Marshes’ in Thirsk (ed), *Rural England*, (2000), p130

The ings of the townlands were often flooded by the rivers which cut through them. Hatfield and Stainforth were flooded by the Don which was their northern boundary. The villages higher up the river also flooded as did Doncaster in the area called Marshgate. Fishlake was flooded from two sides, from the Don in the south and Turnbridge Dyke in the east, and so was Sykehouse from Turnbridge Dyke in the east and the river Went in the north. Turnbridge Dyke was an artificial course to the Aire of unknown date; it was possibly a monastic attempt to reduce flooding to the north of Thorne. On the whole the riverside floods were in winter at times when heavy rains in the Pennines coincided with high Humber tides. The winter floods were, of course, an advantage on the light lands of the townships and improved the pastures by natural warp. In the northern purlieu of the Chase was the huge parish of Snaith, with its twelve townships, and the Peculiar of Snaith, which included the parishes of Whitgift and Adlingfleet; these were flooded by the Aire and the Ouse after they merged at Airmyn which was also an advantage to the western townships. Some of the western townships of the Peculiar were post-Domesday and were protected by a high bank probably built by Selby Abbey. To the south of Doncaster the Torne created the wetlands known as Potteric Carr and caused flooding in Rossington and other southern purlieus. The Idle flooded the lowlands of Bawtry and Austerfield. The Don, on its way to Hatfield, created Thorpe Marsh which was the pasturage of Barnby Dun and surrounding villages. From this marsh severe floods moved north towards Owston where the water turned south and flooded Arksey and Bentley from the north. On the Don's westerly route to Trent Falls it flooded Crowle and the border townships of Eastoft, Garthorpe and Fockerby. The riverside lands were occasionally flooded in summer but 'they rarely covered the ground for more than a fortnight and only affected a limited area'² and most of the riverside villages had embankments to reduce flooding.

The townland soils varied a great deal even over a small area, though they were dominated by sand which was often of great depth. In the twentieth century some of the deeper areas were quarried for sand and gravel leaving huge holes, as in the Old Mill Field of Hatfield, in Dunsville adjacent to the Great Park and in various places in the Parish of Finningley. Not only were there outcrops of clay among the sands

² K. Lindley, *Fenland Riots and the English Revolution*, (1982), p11

and of sand among the clay but the sands themselves varied greatly. The Soil Survey of Armthorpe showed 14 different varieties of sand in narrow strips round the small raised area on which the village stands.³ The outcrops could be of importance in the locality: for instance, among the many closes shown on the 1811 pre-enclosure map of Hatfield are two named Great and Little Sherwood indicating two sandy areas among the mainly heavier soil on the slope towards the marshes. On the map they were marked in green as were the sandy open fields. The Fishlake-Sykehouse pre-enclosure map also of 1811 shows, in the north of Sykehouse adjacent to the Went, in an area of heavy wet soil, one of Sykehouse's two small fields called Eskham, which indicates that it was sandy gravel and easier to plough than the rest of the closes with which it was surrounded. The sand land drained quickly and was easy to work though it was weed infested and when compacted and not ploughed it became hard and impervious as it was on the main road from Doncaster to Hatfield. In some areas, like Rossington, the underlying gravel impacted and caused springs which made the ground soggy.

Geologists have explained the soil variations in several ways. The underlying rock is bunter sandstone which extended from Nottingham in the south up through the Vale of York. Charnock, writing in the mid-nineteenth century, described the bunter as 'the New Red Sandstone' which, he wrote, entered the West Riding from Lincolnshire in a fairly narrow strip between Bawtry and Thorne to the east of Doncaster.⁴ In fact it runs beyond Doncaster and outcrops to the west of Doncaster station by the railway line. Nor is the sandstone, which is a northern extension of the Sherwood Forest sand, very narrow. It has been suggested that the distribution of the different qualities of sand and clay is a result of the North Sea Basin with 'morainic materials, outcrop gravels, lacustrine clays, alluvium and peat'.⁵ Garnett describes the settlements as 'very low islands of Keuper and Bunter Sandstone [which] break through the surfaces as at Thorne.'⁶ It has also been suggested that the soils were deposited by Lake Humber and that the distribution was a result of water movement.

³ D.M. Carroll, R. Hartnup and R. A. Jarvis, *Soils of South and West Yorkshire*, (1979)

⁴ J.H. Charnock, 'Farming in the West Riding of Yorkshire', *Journal of the Royal Agricultural Society of England*, (1848), Vol X, p298

⁵ B.E. Coates and G. M. Lewis, *The Doncaster Area, British Landscapes through Maps*, (1966), p8

⁶ A. Garnett, 'From Pennine High Peak to the Humber' in J.B. Mitchell (ed), *Great Britain, Geographical Essays*, (1962), p35

The existence of Lake Humber has been questioned but Palmer claims that 'the beach gravels and deltaic deposits recognised both in the east and west sides of the Vale [of York] as far north as York seem conclusive evidence' for the existence of the Lake.⁷

The study touches on the northern part of Nottinghamshire, especially Finningley, as the post-drainage conditions both agriculturally and socially were similar. The village of Finningley is in Nottinghamshire but two of the townships of the parish, Blaxton and Auckley, are in Yorkshire. The county boundary is also complicated by the presence of the Yorkshire chapelries of Bawtry and Austerfield in the Nottinghamshire parish of Blyth. The Yorkshire parish of Rossington was also in the Nottinghamshire Deanery of Retford. The Yorkshire area of the study was all in West Riding until the 1970s but the name 'West Riding' is no longer appropriate as most of it is now in South Yorkshire and the northern and eastern parts of the old West Riding, including the purlieus of the Chase and much of the Marshland, were included in the new county of Humberside which is now dismantled; they are now part of North Yorkshire and the East Riding.

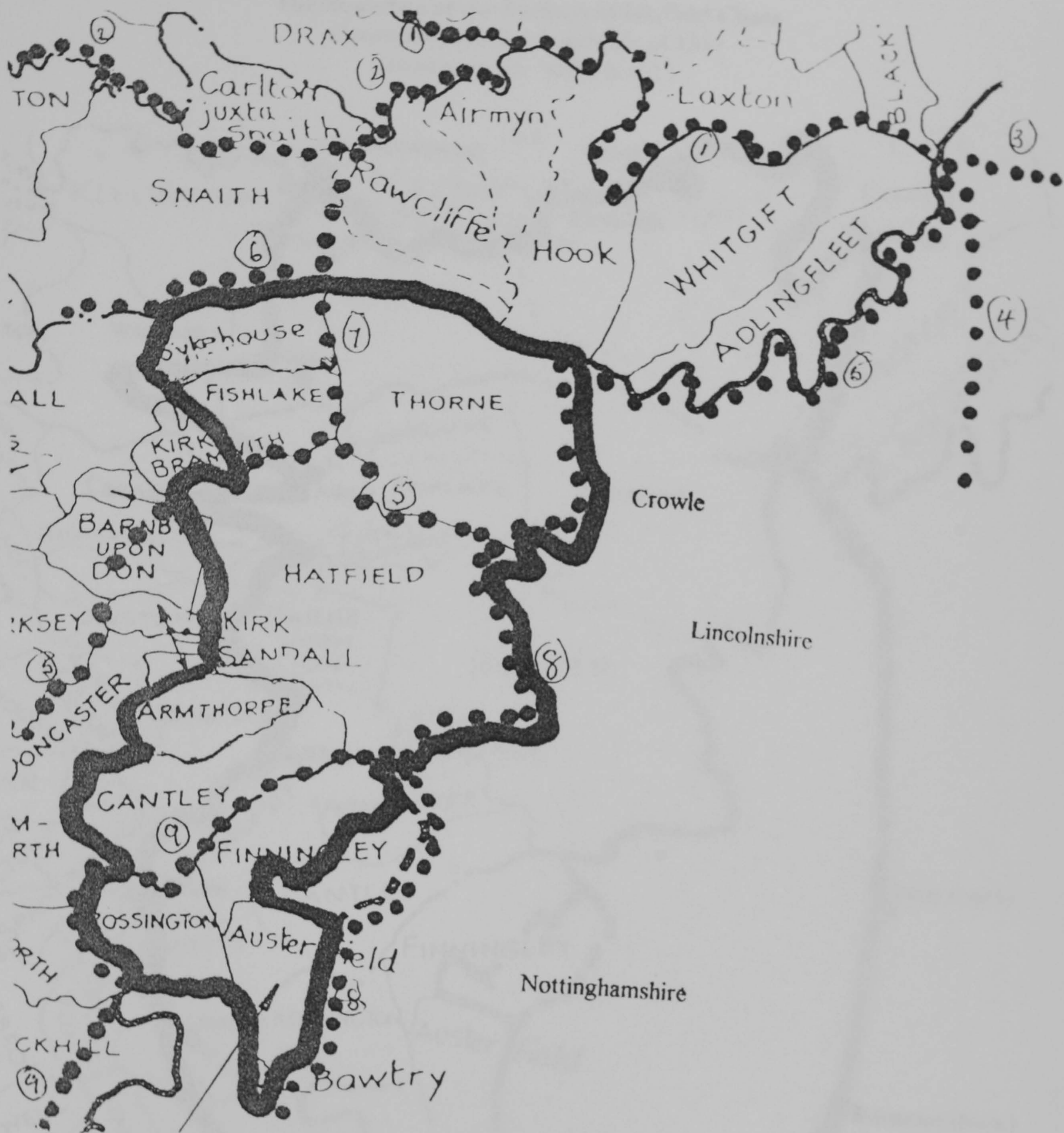
Since the publication in 1940 of Darby's book on the fens in the medieval period, the view that traditional accounts of the fen and marsh gave 'a distorted picture of life in the fens' and that writers concentrated on 'what is peculiar about fen life and describe it as characteristic'⁸ has been generally accepted and reinforced, though it has had little impact on views of the situation in Hatfield Chase. Ravensdale wrote of the necessity of understanding different fen and marshland regions and the effect of the differences on life and agriculture within them. Of particular relevance to this study is his work on the fen edge villages of Cambridgeshire which have many similarities with the villages of Hatfield Chase and the purlieus. Ravensdale wrote:

In each [village] the arable base was well matched by ample pasture and hay for winter feed. By its return in manure the abundance of fodder gave field systems of the midlands type a much better chance than average to work well.⁹

⁷ J. Palmer, 'Landforms, drainage and settlement in the Vale of York' in S R Eyre and G R J Jones (eds), *Geography as Human Ecology*, (1966), p99

⁸ H C Darby, *The Medieval Fenland*, (1940, 2nd edition 1973), pp 42-43

⁹ J R Ravensdale, *Liable to Floods: Village landscape on the edge of the fens A.D. 450-1850* (1974), chapter 2, p151



Drawn from the Perambulation of the Chase Boundaries of 1607
(Hunter op.cit. Vol.I, p 152)

Armthorpe and Crowle (Lincs) were added to the Chase by Henry VIII
in 1539. Crowle was not included in this perambulation

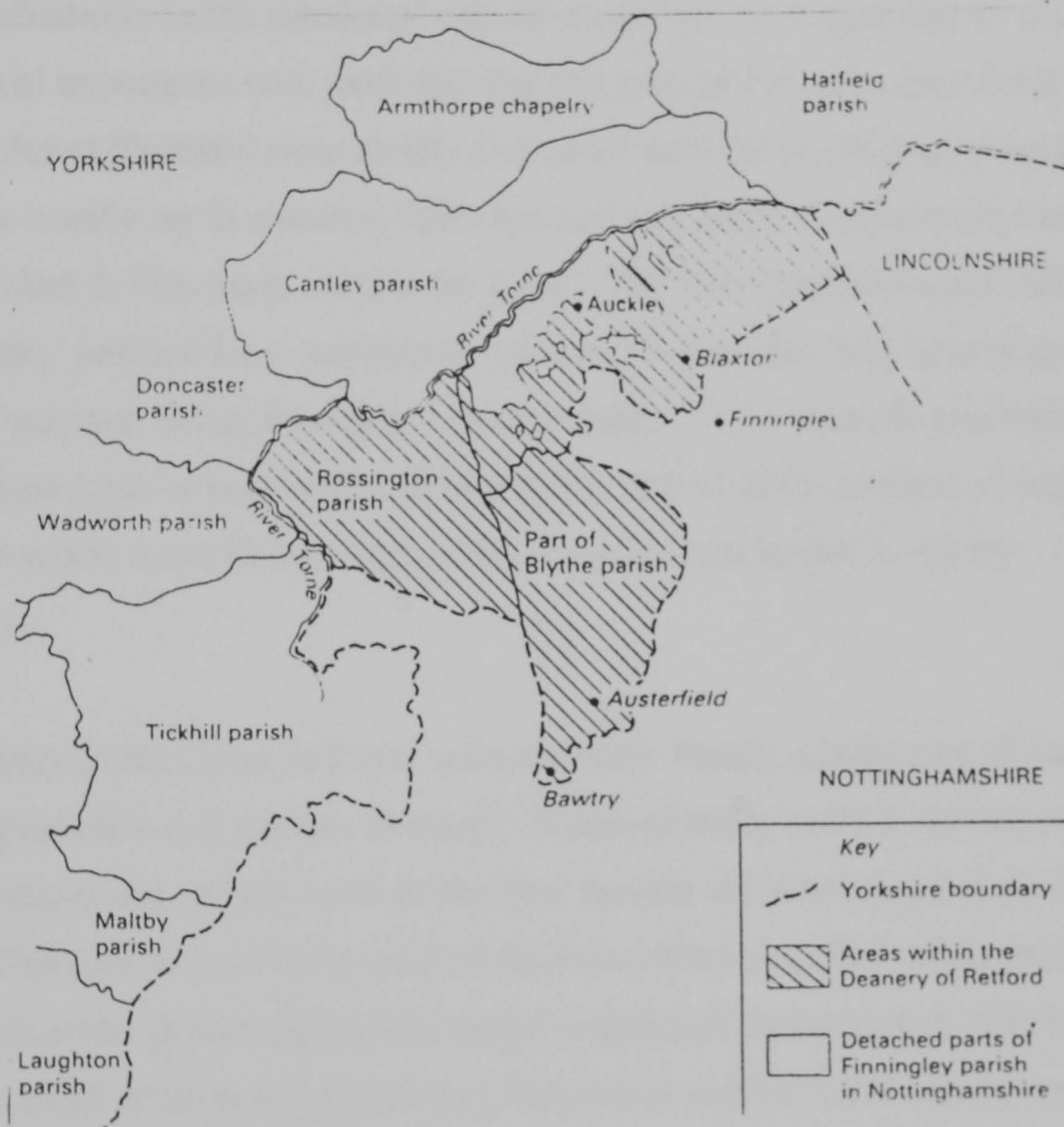
Rivers: 1 Ouse, 2 Aire, 3 Humber, 4 Trent, 5 Don, 6 Went,
7 Turnbridge Dyke, 8 Idle, 9 Torne

The Bounders of the Purlieus of Hatfield Chase
 Drawn from the Perambulation of 1539
 (Hunter op. cit. Vol I, p 151.)



The boundary is an approximation but the places included on the map
 ● are mentioned in the Perambulation.

Yorkshire's South Eastern Boundary
 (copied from David Hey's *Yorkshire from A D 1000*
 by kind permission of the author)



NB Finningley is included in this study though the township is in Notts. Blaxton and Auckley, a large part of the parish of Finningley, were in the West Riding.

This claim is applicable to this area; it is difficult to imagine, given the poverty of the soil in much of the townland and the ravages of the vast number of deer in the Chase an arable system surviving without the contribution of the wetlands.

The research area had a very complex mixture of agricultural conditions. Dr Thirsk in a section on Yorkshire and Lincolnshire in Volume IV of *The Agrarian History of England and Wales, 1500-1640*, has sections on marshland, forest and fen and distinguishes between their agriculture in terms of what was possible in their different situations. In the marshland she concluded the 'Corn growing for the market was of equal importance with stock farming and was carried on in open fields'. In 'the royal forest [farmers] were chiefly concerned with the production of stock... The arable usually lay in common fields but common pastures were much more extensive than in Vale lands outside the forest'. The fens 'practised a pastoral system of husbandry' and had large populations with many poor who 'had little or no arable land' but 'got their living from their common rights'.¹⁰ The research area had all three of these types of land within its boundaries and all of the systems of farming carried on within it but the marshland, forest and fen overlapped as did the agriculture.

The economy of the Chase had four main elements. Firstly, a large area of marshland producing meadow and pasture. Secondly an area of easily worked, but not very fertile sandland and, mostly north of the Don, heavier and wetter land of good fertility. This type of land lying south of the River Went stretched to Campsall, a large parish at the eastern edge of the higher magnesian limestone belt. The land around its small settlements of Moss and Fenwick provided it with meadow and pasture. The third, very important, element was the moor which provided turves for heating and sale, and the fourth, which was of great importance to the poor, was the ample opportunity for poaching fish and fowl in the fen around Thorne Mere, and deer and rabbits in the Chase. The value of the fen is illustrated in the following quotation from a statement opposing fen drainage made by Lord Willoughby in 1597:

¹⁰ J. Thirsk, 'Farming Regions of England' in Thirsk (ed) *The Agrarian History of England and Wales*, Vol IV (1967), pp35-37 (Hereafter A H E W IV)

a poor man will easily get 16s. a week by cutting down of three or four loads of reed for thack and fuel to bake and brew withal, whereof the country hath great want, every load of the same being worth 4s. or 5s. at the least, and likewise 3s. or 4s. a week in fish and fowl serving the next markets... I speak not of hearsay but of mine own knowledge.¹¹

The villages of the area all had their own turbaries and pastures. For Thorne and Hatfield these were adjacent but for the villages to the west and north of the Don they were separate allotments several miles away from the village at the eastern edge of the Chase. Fishlake's pasture, for instance, was across Turnbridge Dyke and animals had to be ferried across the Dyke to use it. Also their pasture was much nearer to Thorne and Thorne stock regularly trespassed on it. The townships outside the Manor also had grazing where their sandlands ran down to the edges of the wetland.

The Domesday Book of 1086 gives a clear indication of the importance of arable farming:

	carucates	ploughs	pasturable wood	tenants
Hatfield	8	6	6x6 furlongs	12 sokeman
Stainford	3	4	1x1 furlong	7 sokemen
Thorne	4	4		5 sokemen 7 villeins
Fishlake	5	4	5x5 furlongs	11 sokemen 6 villeins & 7 villeins with ploughs
Tudworth	1	3		5 sokemen 7 villeins

Tudworth also had 20 fisheries rendering annually 20,000 eels.¹²

¹¹ J. Thirsk, (ed), A.H.E.W. IV, p38 citing HMC lxvi p338

¹² J. Hunter, *op cit*, p157

Of the neighbouring villages or parishes (Kirk) Bramwith had six bovates, Long Sandall one carucate and three bovates, (Kirk) Sandall had two carucates and Streetthorpe (modern Edenthorpe), which was a thorpe of Kirk Sandall, also had two carucates. The Manor of Conisbrough to which they all belonged excluded Doncaster but included 19 other townships to the west of the lowlands and in total amounted to 18 carucates and 15 acres, land for 54 ploughs. The Hatfield area was approximately 39% of the ploughland. Interpretations of the size of land measurements in Domesday vary but Hunter estimates c.2,400 acres of arable in what became the Manor of Hatfield in the fourteenth century which gives an indication that the townland was a significant amount.¹³ More accurate indications of the acreage become possible in the early seventeenth century. However, for the purposes of this section of the study, the actual amount of arable and townland pasture is not important provided that there is sufficient evidence to claim that even in the eleventh century the inhabitants were more than the marshmen of later mythology.

The open field system developed early in the Chase. A Hatfield Court Roll of 1341 refers to the *South Field* which implies that there was a north field also, in which case they would be separated by the main road from Doncaster to Thorne.¹⁴ At enclosure in 1813 the five fields were still divided by this route into three fields to the south and two to the north. The entries in the Domesday Book are notoriously inadequate for Yorkshire, but they clearly show a well developed arable and pasture base on the townlands of the Manor, which was in 1086, a part of the Manor of Conisbrough, the centre of the Warenne fief.

Leland gives some indication of the nature of the farm land in Hatfield in the early modern period. He wrote of a journey from Bawtry to the north of the Chase:

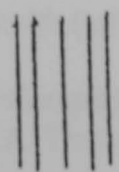
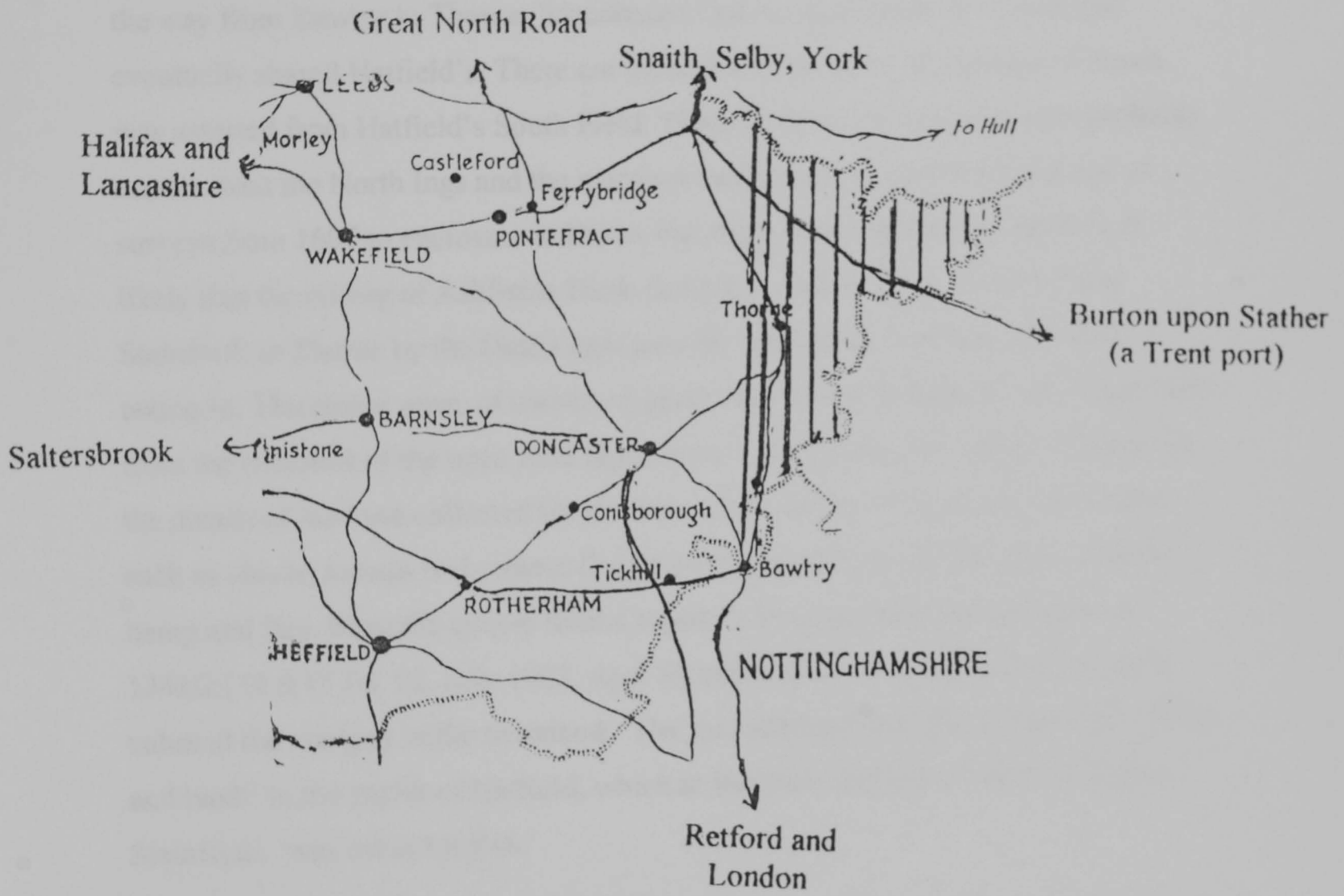
From the west point of Bickerdyke up along to the great mere [Thorne Mere] the soyle by the water is fenny and morishe, and full of carrs. The residue is meately high ground, fertile of pasture and corn.

He also travelled from Bawtry to Doncaster [by the great North Road] and on to Hatfield. He described this journey thus:

¹³ Hunter, *op cit*, p157

¹⁴ R. Brocklesby, 'Hatfield Court Rolls', *National Register of Archives Bulletin*, No. 3, 1960, p43

The South Eastern corner of the old West Riding of Yorkshire
and the main roads of the early modern period



Marshall's 'recluse district'

From Bawtry to Hatfield via Doncaster an vii miles by a great plain called Blithelo by name of Blyth river... From Doncaster to Heathfield [Hatfield] by champayn sandy ground a. v miles... The quarters about Heathfield (sic) be forest ground, and though wood be scars yet there is great plenty of red deer...¹⁵

To the south, north and west of Hatfield's open fields were many closes. The western ones adjoined Stainforth's open fields; those in the south were probably to supply land to Hatfield Woodhouse which was a post-Domesday settlement on both sides of the way from Bawtry to Thorne. Woodhouse had no open fields of its own and eventually shared Hatfield's. There are indications that some of this area of closes was assarted from Hatfield's South Field. Those in the north and west were probably assarts from the North Ings and the marginal land nearer to the Don. Evidence of surveys from 1607 to enclosure indicates that there were hundreds of them. It is likely that the raising of Ashfields Bank along the south bank of the Don from Stainforth to Thorne by the Dutch increased the amount of land that was worth taking in. The closes were, of course, of great value to the farmers as they freed them from the rigidities of the open field regulations. This freedom is clearly indicated in the details of land use collected for the Tithe Case in the 1730s which show crops such as clover, turnips and potatoes being grown in addition to old staples such as hemp and flax. Metcalfe quotes from a report in *The Inquisitiones Novarum* of 1341/2 [14 & 15 Ed. III, pub. 1907, App. S] which gives an early indication of the value of the margins of the townland: 'The jury returned that the ninth of corn fleece and lamb' in the parish of Hatfield, which at that time included Thorne as well as Stainforth, 'was valued at £48.'

... they further say that the lowlands (*Basse terrae*) taken from the waste of the land, have produced abundantly on account of the dryness of the summer and autumn, and that the corn in a rainy season is altogether lost.¹⁶

Metcalfe also gives a clear indication of the value of the fenland grazing quoting from the *Early Yorkshire Charters* Vol. 8, a Warenne licence to the Priory of St Katherine, Lincoln to graze forty beasts on the moor near Thorne which was extended to sixty animals two years later. Beresford clearly indicates the value

¹⁵ L. Toulmin-Smith (ed), *The Itinerary of John Leland in or about the years 1537-1543*, (1964), pp34 and 37

¹⁶ B. Metcalfe, 'Geographic Aspects of the reclamation and development of Hatfield Chase', unpublished M.A. Thesis, Leeds University, (1960), p51

placed on the marshlands in medieval times by tracing the struggles between nobles and abbots for control of various parts. Abbot de Gadesby (1341-67) of Selby Abbey, who was said to have regained control of Inklesmoor from John of Gaunt by negotiation, was particularly interested in improving the land and is believed to have drained part of Inclesmore by the Mardyke in the Marshland and an area called Haines which belonged to Thorne and Hatfield. St Mary's Abbey, York, was so keen to regain control of the marshland from the de Lacy Lords of Snaith that it forged documents to prove the Abbey's rights to it.¹⁷

Apart from indicating the early existence of open fields in Hatfield, Brocklesby's article on the Hatfield Court Rolls showed that a normal range of agricultural activities was carried on. The article aimed at showing a sample of the information on rolls in entries from 1338-43 in the very early days of the existence of the Manor Court out of the 500 years which the Court rolls covered. Farming cases included debts for wheat and corn, for animals and for wool. One court included 25 fines for non-ringing of swine. Manorial offences included a fine for allowing a dog to kill a sheep and for several cases of trespass: in corn with pigs, and in hemp and pasture with beasts. In the last case in addition to the trespass the offender had cut the grass and carried it away. Examples of land transactions involving heriots gave sizes of land holdings; one involved a messuage and three and a half acres of land, another a third of a cottage and six acres, a third a messuage and eight acres and there were cases involving smaller amounts. These entries probably did not always represent the whole holdings of the peasant, though one possibly did. The entry for Robert Bolt, who had 'recently died', included a messuage and eight acres and one and a half roods, half a plot in Thwayt, three acres and two parts of a rood of meadow and three acres one rood of moor. A list of fines for illegal transfers of land included a messuage and 16 acres in Dowsthorpe (Sykehouse) and another messuage with 14 acres and 16 acres in Fishlake; another similar entry for Dowsthorpe involved 31 acres.¹⁸ These acreages are possible a reflection of the recent clearance and settlement of Dowsthorpe. The examples indicate the normality of holdings and

¹⁷ M W Beresford, 'Inclesmoor, West Riding of Yorkshire, c 1407', in R A Skelton and P D Harvey (eds) *Local Maps and Plans from Medieval England*, (1986), p155

¹⁸ Brocklesby, *op cit*, pp 30-45



of the
ISLE OF AXHOLME
 Before the Drainage
 by
 Bermuden,
 1753
 A.D. MDCCLIII.

From Domesday Book, Saxton, Leland & other
 Ancient Authorities



Axholme, in Lincolnshire, is the eastern part of this map beyond the rivers Idle and Don which marked the boundary between Yorkshire and Lincolnshire. About half the area of the map is the Yorkshire wetland

activities in the Manor and show that in terms of medieval agriculture it was not an oddity for, as Hilton has written, 'Wherever we look we find standing out from the ordinary run of tenants with 15 or 20 acre holdings small groups holding 100 acres or more.'¹⁹

In addition to open fields, closes and pastures on the townlands from early modern times were three parks. The largest was Hatfield Great Park which was paled for the containment of roe deer. It survived as a source of grazing, rabbits and coppice until the drainage when it was disparked at the same time as the Chase was abandoned. The two smaller parks, Ashfields and the Haye, were disparked from the middle of the fourteenth century and the area called the Lings was separated from the Great Park.²⁰ The smaller parks became agricultural land for Thorne and Fishlake and a source of rent for the Warenne Lords.

The absence of probate inventories for the Deanery of Doncaster before the 1680s makes any attempt to give a more solid impression of townland agriculture futile. An odd survivor from the sixteenth century was printed in Sheardown's history of the Doncaster markets. It relates to William Atkinson of Hatfield Woodhouse, is dated 1586, and gives the following information on his agriculture:

hemp and line crackled and uncrackled	0-3-4
two kine and two stirks	4-0-0
hay and corn in the lath	0-18-0
corn growing upon the ground	0-13-4
four geese younger and older	0-4-0
four hens and a cock	0-1-8

The total value for all his goods was £12-7-4. He also had debts for rye and peas, probably to his neighbours, and was obviously a very small husbandman but the

¹⁹ R.H. Hilton, 'Peasant Movements in England before 1381', *Econ Hist Rev*, 2nd series II, (1949), p130

²⁰ This information was kindly provided by Ms Lynne Fox, late of Sheffield University, citing *Inq Post Mortem*, Vol XII. Ed. III, pp 434-5. Ms Fox wrote that although a haye is an enclosure it had all the aspects of a park.

inventory shows a fair range of crops and he was probably typical of the many copyholders and sub-tenants in the townships of the Chase.²¹

Peculiar of Snaith inventories are used in Chapter II to indicate the range of crops and animals in the many townships of the northern purlieu, from the sands of the west to the heavier and wetter lands of the east, in the 26 years before the drainage started. The three following inventories chosen at random, give an impression of the farming situation in the early years of Elizabeth I's reign. The inventory of William Cantlaye of Hensall in the sandy west of the Peculiar had the following farming information: a quie, four oxen, two kine and a calfe, four young beasts, a white horse, five swine, corn and hay in the lathe, corn on the ground, manure, eight old sheep and four lambs and hens and geese. The total value was £37-17-4 of which crops accounted for £5-5-0 and stock for £15-15-4.²² Robert Brod of Carlton in the centre of the Peculiar, but across the Aire from the rest of it, had at his death in 1573, two queys and a calfe, three mares, one sheep, swine and poultry, and corn in the house and fields. Total value £7-9-8, arable value £1-6-8 and stock £4-0-0.²³ In the wet east of the Peculiar but at an entirely different economic level was Thomas Eastoft of Reedness, whose name suggests a small gentry connection; his inventory of 1568 included the following: 137 sheep, six (illegible), 12 horses and mares, four foals, eight oxen and 15 kine, nine yearling calves, six young beasts, 25 swine, three geese and three ducks, 13 poultry, two ploughs and four harrows, turves, 22 acres of summer sowing barley, 24 acres of beans, 14 acres in East Fields, 19 acres in East Moor Fields, 23 acres of meadow, four acres of wheat and rye. Total value £169-16-6, arable worth £44-14-8, stock valued at £79-4-4.²⁴ This is a range of wealth and agricultural produce which could have been found in many regions of England in this period and shows, with the two other examples, that the occupants of the area covered a normal range of wealth and poverty but with the advantages of the marshland, which did not appear on inventories, in addition.

²¹ W. Sheardown, *The Marts and Markets of Doncaster: Their Rise, Progress and Sources of Supply*. (1872, reprinted 1979) pp16 and 17

²² University of York, Borthwick Institute of Historical Research, Wills and Inventories, (Hereafter, Borthwick Institute, Wills and Inventories). Peculiar of Snaith, Inventory of William Cantlaye of Hensall, Parish of Snaith, 1571

²³ *Loc cit*, Inventory of Robert Brod of Carlton, Parish of Snaith, 1573

²⁴ *Loc cit*, Inventory of Thomas Eastoft of Reedness, Parish of Whitgift, 1568

Quite clearly there is ample support in these sources to claim that arable and pastoral farming were an important staple of the fenland economy in the pre-drainage townlands and marshes. The value of the undrained moors to the medieval economy is amply illustrated in Beresford's work on Inclesmoor. This land was so valuable that the map of c. 1407 which was one of the earliest of English maps and was made to settle rival claims to ownership between religious houses and wealthy laymen. The map shows the importance and extent of pasture on the moor and Beresford indicates that with the disappearance of much woodland in the twelfth and thirteenth centuries peat turves from the moors became very important as a source of domestic fuel and for heat-requiring industrial processes such as pottery, dyeing, tile-making and brewing. These trades led to the transport and sale of huge numbers of turves from the fourteenth century.²⁵ The benefit of this trade to the local economy is obvious: 'Thorne boatmen... worked their way up the Ouse with turfs to fuel the fires of York'.²⁶

By 1460 when the private Chase became a royal forest, forest administration had become very lax. Hatfield Chase, therefore, never suffered the full rigours of the Forest Law. The Eyre, an inspection of the efficiency of the local administration, ordered by Thomas Cromwell in 1538 was probably the only one ever held for the Chase. They were increasingly infrequent in other forests also. Consequently forest officials from the highest, usually absentee gentry, to the lowest, local men, were more interested in enjoying the perquisites of their offices than serving the Crown and mostly took a benevolent view of the poaching of the locals. De la Pryme, writing at the end of the seventeenth century claimed that in Hatfield 'venison was no greater rarity on the poor man's table than mutton is now'.²⁷ More realistically, it was claimed that the poor of Hatfield 'almost lived off the abundance of rabbits breeding on the commons'.²⁸ When James I was attempting to force the commoners to agree to his drainage plans he asserted that they had 'forfeited their favour of common by building new houses on the waste, jointing beasts [fawns usually],

²⁵ Beresford, *op cit*, p154

²⁶ D. Hey, *The Making of South Yorkshire*, (1979) p60

²⁷ A. De la Pryme, Lansdown M.S., p51

²⁸ J. Thirsk, (ed), *A.H.E. W. IV*, A. Everitt 'Farm Labourers', p405

cutting down trees, destroying game and c.²⁹ It is clear that poaching and other illegal forest activities were important enough to be considered a major part of the economy of the Chase.

The early existence of the turf trade from Thorne to York underlines another inaccuracy about fenlanders. Their 'uncivilized' reputation was believed to be a result of their isolation from the more civilized upland men whom they were said to despise. The truth was rather different as the following quotation from Ravensdale indicates:

From the earliest times of which we have detailed records the waterways [of the fenlands] opened up [a wide range of] markets and made this a favoured area until the railways brought still wider markets with wider competition.³⁰

This is also true of Hatfield Chase. The rivers which cut through it and often flooded the lower parts were not high quality waterways; indeed few rivers could be described as such before the late seventeenth century, but the Chase rivers were adequate in medieval and early modern times when water was the only economical means of moving heavy goods of low value. Water transport could be seriously affected by winter floods and summer droughts, but roads were not without problems arising from the weather. The Chase and its purlieus had four river routes with many small ports conveniently spread about them. In the south, Bawtry was a thirteenth-century new town built specifically as a market town and river port on the border with Nottinghamshire. It only had a small area of land which the county boundary indicates was possibly taken from Blyth in Nottinghamshire and the adjacent West Riding parish of Austerfield. It was served by the small river Idle which joined the Don on its way to Trent Falls, the Humber and the Hull coastal trade. Bawtry was very important in the early development of the Sheffield trades. Cutlery was sent to London via the Idle and this required packhorse carriage to Bawtry nearly 20 miles away. Even very heavy grindstones were carted by land from Derbyshire and the region round Sheffield. Derbyshire lead, limestone from Derbyshire and Nottinghamshire, Sherwood Forest timber, and cast and wrought iron were all sent to

²⁹ J. Hunter, *op cit*, Vol I, p507

³⁰ Ravensdale, *op cit*, p151

Hull. The chief imports in the early period were groceries, hemp, flax, deals, iron ore and steel, copper and tin.³¹

The centre and north of the Chase were served by the rivers Don and Aire which were navigable in favourable seasons for Humber boats as far as Doncaster and Knottingley which were both on the Great North Road. Small boats could reach Leeds via the Aire. The rivers served the two most important markets of the south-east of the West Riding, Doncaster and Pontefract, which was three miles from Knottingley. The early history of these two rivers is rather obscure; Willan, for instance, does not include either of them on his map of navigable rivers from 1600-1660 in his book on early river traffic, yet it is known that stone from the Doncaster area was carried on the Don in the fourteenth and fifteenth centuries to build York Minster³² and the Aire was part of the Ouse system which was dominated by York. In the mid-fifteenth century York river interests were attempting to improve river navigation which suffered from the activities of riparian owners, particularly the church which wanted to build weirs and fish garths which hindered traffic. In 1462 Edward IV was persuaded to give the City of York supervision of the Ouse system which was said to include, 'The Humber, Wharfe (to Tadcaster Bridge), Derwent (to Sutton Bridge), Aire (to Knottingley) and Don (to Doncaster Mills)'.³³

The Don and Aire had important trade with both York and with London via Hull; and like Thorne the purlieu villages supplied turves to York by boat in the medieval period. Both Doncaster and Thorne were important to London's leather trade, importing hides to be tanned and exporting bark from trees used in the early metal trade to the west. Grain, particularly wheat, was imported from East Anglia, the East Riding and Lincolnshire to both Doncaster and Pontefract en route to the developing industrial area to the west. A letter from Sir Edward Stanhope of Edlington to the Doncaster Magistrates in 1592 well illustrates the importance of the trade and the value and difficulties of early river transport.

³¹ D Holland, *Bawtry and the Idle River Trade* (1976), pp1-7 (hereafter Bawtry)

³² C Hadfield, *The Canals of Yorkshire and North East England*, Vol I, (1972) p64

³³ B F Duckham, *The Yorkshire Ouse*, (1967), p30

I have heard of late yeres at divers tymes when I have been at Edlington, that the country towards Barnesley and further west, wch were used to be relieved with corne transported out of Lincolnshire and Yorkshire up the river of Donne to Doncaster, and soe to have come unto them, both by their own fetching and by badgers, better cheape, by reason it came so farre by water, than that which came by horse carriage out of Nottinghamshire and those parts have greatly complayned that now of late yeres itt hath not come up in any such quantitye by water as heretofore, or at leastwayes not so far by reason they have beene many tymes to fetch the same at Stainforth much more to their trouble and chardges, whereupon I have inquired the reason of itt, and am informed that itt groweth by means of a foard which the Townsmen of Barnbye Dunne have forced of late yeres in their river stopping up the same on both sides the river where the channell had wont to be of reasonable depth... they have layed stones called stepping stones [and] drive their sheep to and from their commons that waye drye for the most part... to the prejudice of all the West parts of the country.³⁴

The more important cargoes from Hull were mostly carried on keels, which were single-masted craft with a shallow draft very similar to the craft used by the Anglo-Saxons and the Vikings. Although small, they were much larger than the bulk of the river boats which were rowed or punted on the rivers and the wetter parts of the fenland and carried goods between the minor ports and to the heads of navigation when the keels could not reach them because of sand shoals or lack of water. Transshipment could occur more than once as goods reaching Hull by coasting traders were moved onto keels and then onto small river boats for the final part of the journey, especially to Leeds from Knottingley. Keels were in use from at least the sixteenth century and continued into the twentieth. On the Ouse system they could carry up to forty tons. Many families owned a small boat to use as they would a horse and cart to take goods to market, to bring crops from fields and marsh near the riverside to the barns and to collect turves dug by the small channels which connected the moors to the rivers. They were also used, of course, for fishing in the rivers which had not yet been polluted. Evidence of large and small boat ownership and use occurs in wills and inventories in the riverside villages.

The importance of river transport to the Chase and the fens is obvious but it was of little use to the region without adequate road connections to bring goods to the riverside and to distribute imports. The early history of Bawtry and Doncaster

³⁴ J. Hunter, *op cit*, p 208

illustrates this point very well. Bawtry's importance to Derbyshire and the north midlands was paralleled by Doncaster's importance over an even greater distance. Salt from Cheshire was carried by packhorses via Saltersbrook over the Pennines to Doncaster to be taken by water to London and in the seventeenth century cheese came by this route also. That this long and costly journey was considered economically viable is probably explained by the relatively short and safe east coast route compared to the long and dangerous one down the west coast via the Lizard. The high value to weight ratio of the goods was also an important consideration. Traffic was, of course, not just east-west; both towns were on the Great North Road and Pontefract was very near it. Pontefract also had important east-west interests and linked West Riding towns and Pennine routes to the Trent. All three towns were important crossroads. For the Chase the important route was an extension of Saltersbrook which ran through Streetthorpe and Hatfield to Thorne. Another ancient route went from Bawtry through the sands of Finningley and the wetlands further north where it skirted the fen and joined the Thorne road north of Hatfield Woodhouse which had grown up on either side of it. Also through the fens were raised tracks linking the townlands with their pastures, turbaries and other settlements.

The map of the Isle of Axholme prepared for Read's history of the Isle before Vermuyden shows a track connecting Thorne to Turnbridge and a causeway in the isle from Crowle to the Trent but no others. One important pre-drainage route through the moors from Thorne to Rawcliffe is still known as John a Moor Long probably because of a local story of Charles I being guided along it. However Beresford's detailed study of the two medieval maps of Inclesmore shows how important the many tracks and roads about the moor were to the fenland economy. The major road due east from Pontefract went through some of the purlieu villages, crossed Turnbridge at Cowick and took a more southerly route away from the Ouse into Lincolnshire by a bridge over the Don. Along its route it had several names, Moorgate, Moreham Lane, King's Causeway, and from it ran other roads and numerous routes into turbaries and pastures most of which belonged to ecclesiastical institutions. Rickbridge Causeway acting as a land boundary is mentioned in a Thorne will of 1611 and there are others mentioned on inventories. Beresford's research shows how the dykes and tracks were created. The tracks were necessary as only on

the wider dykes could boats be used. About 1300 St Peter's Hospital, York, was given a large turbary which stretched for ten miles, the whole length of the moor, its breadth was 'everywhere 20 perches and 8 feet, together with 3 perches running from the moor to the Ouse for access and common pasture'. The Hospital was later given another seven feet of land on one side of the strip to make a dyke and seven feet on the other side presumably to make a cartway.³⁵ The townlands were, of course, covered with roads and tracks between settlements and from settlements to ings and commons. In Hatfield and Fishlake some of these are still important routes to the fields. In times of flood the fen routes could be very dangerous and even local men needed expert guidance. Timothy Moore a local sub-agent for Lord Irwin wrote to Robert Hopkinson at Temple Newsam a hundred years after the drainage as follows:

I went to Sandtoft [only four miles from the main Hatfield-Thorne road] last Fryday with a guide to walk before me ye bank being overflown with water. I gott pretty well thither but at my return my horse foundered in a hole I could not be nimble enough to get off he got my leg under him in ye stirrup but that I had One with me I had suffered I have not been well since being starved at lying in ye water and coming home in that pickle.³⁶

By 'bank' Moore probably meant the land between the two dykes which are on the roadside of the Sandtoft-Tudworth road though it might have been a raised causeway. This incident and the existence of Lindholme, a farm in the middle of Hatfield Moor, along with areas in the Levels called Middlings and the Severals designated as Thorne copyhold in the Royal Survey of 1607 (as were a large number of 'lands', 'pastures' and 'turbaries' 'beyond the mere') indicates that whatever the difficulties the marshlands were not isolated from the townland but were an important auxiliary to it.

Dr Thirsk suggests that fen, marsh and forest areas were all well populated and this appears to be so in the research area.³⁷ At Domesday only Hatfield is recorded as having a church but by c.1500 Fishlake and Thorne had large and imposing churches and Hatfield had a large perpendicular addition to the existing Norman building

³⁵ Beresford, *op cit*, p153

³⁶ West Yorkshire Archive Services, Leeds (hereafter W Y A S) WYL100, TN HC/C1, Correspondence

³⁷ J. Thirsk, (ed) A H F W IV pp35-39

Domesday Book is generally considered an unsatisfactory basis for population estimates but Darby and Maxwell have produced estimates of population density from it. In the West Riding they suggest that the two highest densities were in the central area of the Vale of York and that the magnesian limestone belt and the future Hatfield Chase had the third highest at 3.8 per square mile.³⁸ Given the fact that a large part of the latter area was totally unoccupied the figure suggests that the sandland area was probably as populous as the central Vale. There is independent support for this view as the Warenne fee of Conisbrough, which included the Hatfield area, totally escaped the devastation of the Harrying of the North in 1070.³⁹ This, and the good management of the estate, with which Sir William Warenne is credited resulted in an increase in the value of it from £18 in 1066 to £30 twenty years later.

After Domesday it is generally agreed that population rose nationally until between 1280 and the Black Death in 1349. Dyer wrote that 'the majority [of historians] opt for some intermediate period such as the great famine of 1315-17' when dating the levelling of the increase.⁴⁰ The effect on the population of the lowlands is not known but in a period when villages were being abandoned the marshland areas are said to be unaffected. Beresford wrote that 'Forest villages were relatively immune to depopulation' and that Marshland settlements 'were equally immune'.⁴¹ In the Manor of Hatfield during the period when many villages declined or disappeared, including some on the magnesian limestone, new settlements were growing by assarting at Dowsthorpe (Sykehouse), to the north of Fishlake, and Hatfield Woodhouse between the open fields of Hatfield and Remple Carr. Assarting was a common activity in the twelfth and thirteenth centuries.⁴² The end of the population decline nationally possibly coincided with the Peasants' Revolt of 1381 though afterwards population seems to have stagnated until the early sixteenth century.

³⁸ H.C. Darby and I.S. Maxwell, *A Domesday Geography of Northern England*, (1971), pp 36-40

³⁹ T.A.M. Bishop, 'The Norman Settlement of Yorkshire' (1948), reprinted in Carus-Wilson, *Essays in Economic History*, Vol II (1962), p8

⁴⁰ C. Dyer, *Everyday Life in Medieval England*, (1994), p13

⁴¹ M.W. Beresford, *The Lost Villages of England*, (1954), p428, footnote 21

⁴² Dyer, *op cit*, p22

The Poll Tax of 1379 which was one of the causes of the Revolt provides information for the comparison of the wetland with the rest of the Doncaster area which was defined in an article in the *South Yorkshire Historian* as the 1834 Doncaster Poor Law Union and, therefore, omitted Thorne which was a separate union. The returns list the number of married couples and the number of single persons over sixteen. They also give some idea of township prosperity by giving the amount of tax paid by individuals. The returns show that the Manor townships and other areas of the lowlands compare in both population and wealth with the supposedly more prosperous magnesian limestone belt, with the exception of places with special features such as an important family like the Fitzwilliams at Sprotborough and the Crescres at Barnburgh. Places such as Bawtry and Bentley to the east of the limestone were also populous and wealthy, presumably because of their importance in river and road trade. Hatfield's population was the same as that of Bawtry but it was taxed at a much lower rate. The largest purely rural populations in the list were Fishlake, 375, Campsall, 352 and Hatfield, 285.⁴³

Another major source to indicate relative prosperity, though not population, is the Lay Subsidy. Figures for the lowlands in Henry VIII's Lay Subsidy of 1524⁴⁴ indicate some changes in the hierarchy of wealth since 1379. Bentley with Arksey still appears to be the most prosperous with 51 persons paying £10-4-6 (well over half the Doncaster total of £17-5-2) followed closely by Tickhill with 53 paying £9-11-2. The villages of the Manor of Hatfield were fourth, fifth and sixth in the order of payment locally. Fishlake was still the wealthiest with 27 persons paying £6-5-4. At Thorne 20 persons paid £5-16-0, at Hatfield 32 persons paid £4-9-4 and at Stainforth 29 paid £4-6-4, a parish total of £8-17-8. At the late developing Dowsthorpe 15 persons paid £1-1-10. The Manor of Hatfield, therefore, paid £21-18-10 which was £4-13-4 more than Doncaster.

This chapter has shown that eking a living out of the assets of the fen and Chase, important though they were, was of less importance than normal agricultural

⁴³ A. Twibell, 'Doncaster and District in the Poll Tax Returns of 1379', in *The South Yorkshire Historian*, No 3, (1976), pp 1-8

⁴⁴ PRO/E179/200/105

activities. The fen and Chase were more important to the poor than to the wealthier inhabitants who had more arable land but, because of the inheritance system of gavelkind which led to the break up of family holdings, many small plots were available for rent by the poorer classes. This chapter has dealt with these issues in a general way but in Chapter II the documents available for the period immediately before the drainage will show more clearly the range of agricultural activities practised in the area and the way in which the townships managed farming activities. It also shows the determination of the population, led by the parish gentry, to oppose royal attempts to remove their privileges until they were blackmailed into agreeing to the drainage in 1624.

CHAPTER II

AGRICULTURE IN HATFIELD CHASE AND THE NORTHERN PURLIEUS IMMEDIATELY PRIOR TO THE DRAINAGE

The evidence in chapter I is sufficient to justify the claim that the inhabitants of the Chase and its surrounds were mainly farmers who enjoyed the additional benefits which the Chase and, especially its wetlands, gave them. Much of the evidence for agriculture in chapter I comes from secondary sources but in the first quarter of the seventeenth century there are four important documentary sources which make clear the centrality of agriculture, arable as well as pasture, to the region. Firstly, the probate inventories for the northern purlieus of the Chase show a large range of agricultural activities and a considerable variation in the size of farms, along with some slight indication of agricultural change in the relatively short period of 1599-1626. Secondly, and possibly more important, is the Fishlake Bye-Law Book which exists from 1568 to the mid-eighteenth century with a five-year break from 1626 when the activities of the Dutch drainers turned the parish into a disaster area. In the period before the drainage the Bye-Law Book gives details of the open-field and pasture farming of the parish and the way they were managed by the Bye-Law Court. The Court also supervised the maintenance of the banks and drains which rescued the parish from the tides of the Don and Turnbridge Dyke. There is also some indication in the Book that the other townships of the Manor had similar courts. The third source is the Royal Survey of 1607 commissioned by the Earl of Salisbury in an attempt to increase royal income from the Chase. The Survey shows the absurdly low rents of copyhold and other land and the value of it according to the surveyors. It also indicates the amount of assarting which had gone on over the years and the amount of marginal land which had been taken into agricultural use. The fourth source, of 1634, belongs to the period after the drainage but deals only with the townlands of the Manor of Hatfield, which were unaffected by the drainage and enclosure of the wetlands. It gives details of houses, and acreages of various types of land. The proof, therefore is abundant, that drainage did not create a race of farmers out of fowlers, fishers and poachers. Those farmers who were created by the drainage were almost

all immigrants. It was many years before English tenants began to move into the new land.

The main part of the northern purlieu was the huge parish of Snaith with the addition of the smaller parishes of Whitgift and Swinefleet in the far east. This area was all part of the Peculiar of Snaith which kept its probate inventories from their earliest use in the sixteenth century unlike the Deanery of Doncaster where inventories only survive after the 1680s. The 11 townships of the Peculiar all had their own open fields. Their northern boundary was the rivers Aire and Ouse and they stretched from Kellingley in the west to the mouth of the Trent. One Snaith township, Carlton, was to the north of the Aire. Their southern boundary was the river Went and the line of the river was continued in the direction of Burton Stather. This line was the northern boundary of the Chase. The townships in the west were relatively poor sand turning in the central area around Snaith and Cowick into good quality soil and in the east the townships had wetter soil but they were protected by a high bank from the waters of the Ouse/Aire. To the south, from Snaith eastwards, was an area called Marshland, which was shared with Thorne. There are sufficient similarities between the Peculiar and the Chase to claim that the agriculture shown in the inventories was very similar to that in the Chase.

Eighty probate inventories have been studied covering just over a quarter of a century before Vermuyden began his drainage work in 1626.¹ The analysis shows that well over half the wealth in stock was invested in cattle with almost every inventory indicating ownership of at least one head. 65.6% of them owned horses representing approximately two-fifths of the wealth invested in cattle. A similar proportion owned swine though the total wealth involved was small. Surprisingly, only a quarter of the inventories referred to sheep. If these figures are near a true representation of the parish stock it is clear that fattening sheep on the marsh was not widespread. The biggest flock belonged to Mathew Batman of Swinefleet (inventory dated 12.6.1622), one of the townships sheltering behind the Ouse banks and with a large marshy hinterland. Even though Batman's was the biggest flock it only consisted of '3 score and 2 sheep and 30 of the lambes' worth £16-11-6. There were

¹ Borthwick Institute, Will and Inventories, Peculiar of Snaith, 1599-1626

smaller flocks in the other Ouse/Humber townships, Whitgift, Goole and Airmyn, but the majority were in the sandland townships to the west of the parish, here six out of the nine sheep owners had flocks varying between 20 and 47, these flocks were associated with sheep bars in townships with a considerable amount of light sandy soil and it can be assumed that the flocks were used for the sheep fold.

A more detailed analysis of the cattle makes it clear that dairying was the most important branch of pasture farming within the parish. Almost every inventory has a reference to 'kine' or 'milk cows'. The typical husbandman kept four and apart from their obvious dairy and breeding purposes these would be used as plough animals also. The inventories contain references to cheese 'fatts' and presses and 'chirnes' as would be expected in such an area. There are, however, relatively few references to cheese or butter and where they do occur the amount involved is small. Dorothy Anby of Hensall whose undated inventory was proved in 1601 kept nine kine worth £22 and butter and cheese worth 20/-. John Moore of Airmyn (inventory dated 18.11.1601) had ten 'milke kine' worth £13-13-4 and 28 cheeses worth 14/- and Henry Whyteside of Rawcliffe (inventory dated 10.2.1620) had seven 'kynes and calves' worth £17 and four stone of butter and 26 cheeses worth (with one stone of wool and five bacon flitches) 33/4. The other references were of very small amounts and many inventories over the whole range of ownership contain no reference to dairy products. It is likely that this is accounted for by a marketing system for dairy products which was usually on a weekly basis at local markets and gave little time for considerable stocks to mount up. Small stocks of butter and cheese for household use are likely to have been ignored by appraisers. Another possibility is that the amount of dairy products surplus to household requirements was small. A member of the parish gentry in Hatfield in the eighteenth century claimed that six kine were necessary to satisfy household needs. The smaller households of husbandmen (i.e. with fewer servants) would probably account for the median figure of four and suggests that only a few households would have a regular saleable surplus, those households where the children had left home or where the number of milk cattle was above the average. The inventories give a slight indication that this might be so and that widows were more likely to have butter or cheese recorded than other heads of households.

As would be expected in a primarily dairying area, young animals form an important part of the stock of farmers. Sixty-six out of the 80 inventories refer to young beasts in some form or other and the £536-4-4 which they were worth compares with £609-9-11 of kine. The median average of five (only one above the median average of kine) suggests that most small farmers only bred to keep their kine in milk and to keep the milk herd replenished with young stock as older kine were dried off and slaughtered for meat. The average of nine head also implies that many of the bigger graziers were concerned with breeding for sale. These are, of course, tentative statements which, given the lack of firmer evidence than that provided by inventories, cannot be substantiated. What is quite clear from the inventories is that fattening was only of minor importance, surprising though this might be in a marshland area with supposedly ample stocks of common, hay and pasture land. It is possible that some of the 56 oxen were beasts being fattened but 56 is a small total considering the number of inventories and the references to 'draught oxen' in some cases leaves no doubt as to their purpose. The fact that most of the others were in pairs or fours implies that they too were the draught animals of farmers on the heavier soils additional to or instead of the draught mares or cows that provided the bulk of the draught power of the parish.

The references to 'stotts' or 'stears', i.e. animals destined for fattening was the smallest number and value and many of these would be destined to be draught animals. Clearly the analysis of probate inventories, however valuable it is in providing a general picture of the farming of an area, tends also to obscure variations in wealth among individual farmers and in farming practices. In small, one township parishes this is unimportant as differences are likely to be few, but in large parishes with many townships some attempt at differentiation between townships and areas in the parish must be made to convey the full flavour of cattle husbandry, or, indeed of other kinds of farming. Of the owners of cattle only eight owned one milk cow and six of these owned no other cattle. The majority of these owners are in the decade up to 1610. At the other extreme were owners with considerable herds. Dorothy Anby whose undated inventory has been previously cited (p.47) owned at her death, ten oxen, nine kine, seven steers, six queys and seven calves; a herd of 39 animals worth £66-10-0. John Moore of Airmyn also previously cited (p.47) owned a 'bull wth. other 8 fatt beast; 10 milk kine, one 'other cowe', 5 calves, 25 young beasts, 2 kine

and 3 'avals'; a herd of 55 cattle worth £41-11-5. Nicholas Riccard of Snaith (inventory dated 16.6.1614) had 44 head worth £79 and the biggest herd belonged to Christopher Lonsdale of Cowick whose inventory dated March 1625/6 shows 93 cattle worth £161. It also included two bulls which appear to be rare in the parish, and 60 'sturkes' worth £100-6-8. There seems little doubt that whatever the unimportance of fattening in the parish, Lonsdale was heavily involved in it as the total for stirks represents almost one third of the inventory total. In spite of the wide differences between the cottager with one animal grazing on the common and the wealthy graziers the median figures do, in fact, present a reasonably fair picture of the 'average' grazier in the parish with a herd consisting of four kine, four young beasts and without oxen, bulls or fat beasts.

Given the size of the parish and the range of soils from the sandlands and clay of the western townships through the good soils of the central townships to the wetter lands of the townships in the triangle between the Ouse/Humber and the old Dun it might be expected that some variation in the types of pastoral farming would exist, though the pattern of cattle holding is fairly consistent from east to west. The only difference of any significance is the indication of a higher number of large herds on the abundant marshland pastures of the east. Though the absence of a very large herd in the western townships might be equally significant.

Sixty five per cent of the inventories refer to horses which is a clear indication that oxen had been almost completely replaced as draught animals. The wealthier farmers were most likely to keep a team or two of oxen, the poorer ones most likely to use their milk cows. As with cattle it was the dual purpose beast that was most important. The number of horses shows that breeding was a fairly important activity. The pattern of horse ownership in the three regions of the parish also shows a similarity between the western and central areas and a tendency in the eastern region for ownership to be on a larger scale. Fewer inventories indicated horse ownership in the Humber/old Don parishes but where they did it was on a larger scale with a clear indication of a considerable amount of horse breeding. For instance John Moore of Airmyn who has already been cited as holding at his death in November 1601 a considerable herd of cattle also had '27 yonge horses and maires at 26/8 a piece', '4 ould outcast maires', '5 yonge foles', '1 ston'd horse' and '9 maires and horses

whereof 4 of the best be at 46/8 a peice other fower at 33/4 and one at 40/-' at a total value of £61-6-8. Mathew Batman, yeoman of Swinefleet (inventory dated 12.6.1622) also had 'In the yard 8 mares and 3 foales, 1 ston'd horse, 2 coultes, 3 young foales' and also '2 sucking foals wch was of 2 mares' assessed at £31-10-0. Batman was a stockman on a fair scale having in addition to his horses a herd of 26 head of cattle (of which only 2 were kine) worth £14.10.0 and made up largely of young stock. However in spite of the clear evidence of the importance of breeding in the eastern region (e.g. the possession of stallions) for most of the horseowners of these townships the mares appear to have been primarily for draught. Francis Empson of Goole (inventory dated 11.2.1622/3) had 14 horses of various types but the eight mares were described as 'draught mares' worth £18-6-8.

Only twelve of the inventories belonged to poor men who owned only a milk cow or two or three sheep or a couple of swine. Of the other 68, 13 could be described as graziers on a considerable scale keeping the full range of animals, and some even kept swine or poultry in large numbers. Richard Smythe of Pollington (inventory dated 22.9.1625) had 16 swine worth £6-13-4 and 'geese, ducks and hens' to the unusually large value of £26-8-0 in addition to a herd of 38 cattle worth £83 and 11 horses worth £20. John Moore of Airmyn apart from the previously mentioned cattle (55 head worth £41-11-5) and horses (46 worth £61-6-8) had 31 sheep worth £2-6-8 and 21 swine worth £5-8-0. Six of these graziers lived in the Humber/Old Don townships and only two in the western townships of the parish where there were also only two whose inventories suggests their poverty. There is, therefore, an indication that from west to east in the parish the pastoral pattern varies from the keeping of a wider range of animals but in smaller numbers in the west to the eastern marshland area which had some considerable graziers who kept a wide range of animals and tended to specialise in breeding but where the smaller farmers kept only cattle, a pig and a few poultry.

The interdependence of animals and crops before the second half of the nineteenth century is now well established among agricultural historians. Although many farmers tended to specialise in one way or another no arable farmer could farm without the dung (and labour) of his animals and few graziers cared to risk the high prices and uncertain supply of an agricultural economy almost chronically short of

fodder. It is, therefore, unsurprising that arable farming played an important part in the economy of Snaith parish in the early seventeenth century and the question which arises is how important was arable farming – was it merely an adjunct to a primarily pastoral economy or did it make an independent contribution to the income of farmers? A wide range of crops was grown and their total inventory value of £704-10-5 is over half the worth of the cattle that formed the main value of farming in the parish and more than the total value of all other animals. An average crop value of £8-16-0 compares with an average animal value of £26-2-2, a difference which appears to give a clear indication of the pastoral specialisation of the parish. This conclusion is not, however, as straightforward as it appears as, whereas crops are all produce of the farming activity, animals are a combination of produce and capital stock which increases in value by decreasing the value of crops. It would, therefore be possible to compare the relative importance of crops and animals only by analysing inventories drawn up at harvest time, the time of maximum crop value which is, as work on the seasonal distribution of mortality has shown, a time when few inventories are available. Most inventories refer to the early spring when crop value is low.²

A range of crops was grown with barley and rye being the most important, followed by wheat. Oats were the most important of the smaller crops followed by beans, skegs, peas, vetches and bigg. Hemp was more important than flax.

It appears from the crop range on the inventories that arable farming was more developed than the traditional pastoral view of a marshland area would suggest. And although rye, the traditional bread corn of the 'backward' north, is more widely grown than wheat, the higher quality breadcorn, their values only differ by £13-14-10. Barley which was the most grown cereal in the country as a whole at this time has slightly fewer references on the inventories than rye but a slightly higher value. This needs little explanation as the versatility of barley as food crop, source of

² L. Bradley, 'An Enquiry into Seasonality in Baptisms, Marriages and Burials. Part 3 Burial Seasonality' *Local Population Studies* No. 6 Spring 1971, p18

malt and animal fodder³ was added to its suitability as a light land, spring-sown crop on land with a tendency to winter flooding. It is possibly more in need of explanation that barley was not more dominant in the cropping pattern. The explanation might lie in the very poor quality of the sands of the western townships where skegg or skegs were moderately important. These bearded or rough oats 'are for the most barrenest Heath of forrest ground that may be as in Darbishiere'⁴ and 'were grown where nothing else succeeded'.⁵ The assumption of poor conditions in the western townships is strengthened by the one reference to big or beer, the northern winter barley which was hardier than other varieties.

It has been suggested that references to 'corn' rather than individual cereals on inventories is an indication that cereal growing is an unimportant subsidiary to pastoral farming⁶ and whilst there are 27 references to corn representing a higher total value than any single cereal at £179-8-8, it is nevertheless difficult to draw the conclusion from this that cereals were unimportant. Only in seven inventories is corn mentioned along with specified cereals and the specifically mentioned cereals amount in value to £428-15-4 and there is a total of 140 references to them. This seems to indicate that cereals were sufficiently important to warrant specific mention. Only in the eastern townships does this appear to be unlikely. The ten references to corn in this region are only marginally more than in the two western regions but the value of £110-2-0 is almost as high as the total of all the specified cereals in the townships (£128-13-4) and it is much bigger than the value of corn in either of the other two regions (£32-16-8 in the western townships and £36-10-0 in the central townships). Nevertheless, the largest acreage of cereal growing mentioned in the parish is 33 acres of corn in the eastern township of Swinefleet and whilst it is possible to draw the conclusion that in the marshland of the east where pasture was most important there was a corresponding lessening of interest in arable crops, this is by no means certain. There is some indication in the inventories that there is a tendency to refer to growing crops as 'corn' and to specify them when they had been harvested.

³ J. Thirsk, 'Farming Techniques' in Thirsk (ed) *A.H.E.W.* IV, p170

⁴ R. Fitzherbert, cited in the *Oxford Dictionary*

⁵ Thirsk, 'The Farming Regions of England: The East Midlands', in Thirsk, *A.H.E.W.* IV, p95

⁶ D.G. Hey, *An English Rural Community: Myddle under the Tudors and Stuarts*, p68

A surprising feature of the analysis is the relative unimportance of oats, for which it is often assumed much of the marshland was only fit. Although the 22 references make it almost as widespread as wheat, the value at £53-15-6 is far less than any other major cereal and even when skegs are added to the value of oats the total of £90-15-4 is still smaller. Peas and beans were grown but are insignificant in both spread and value. The other traditional marshland crops, hemp and flax, are also of little value in total.

It is clear that in the early seventeenth century hemp was the more important of the two industrial crops with 35 references compared with the 19 for flax. The total of references to industrial crops (54) shows that growing such crops was more widespread than any cereal but the value of £35-15-8 is less than oats, the least in value of the major cereals. This accords with the claim that small hemp crofts were attached to many of the houses.⁷ It is possible that the number of hemp and flax growers is much under-represented in the figures as many inventories refer to 'lineteare' and 'hempteare' which is flax and hemp in process of being prepared for spinning, but as both these commodities were frequently elements of commerce their appearance on inventories was not taken as evidence of growing them though in many cases it was.

The most important marshland crop was hay. The inventories contain 34 references to it. The smallness of this figure illustrates very well the under-recording of crops that is a special problem of inventory analysis. It can be safely assumed that every marshland animal keeper had some meadowland and the quantity of the crop was crucial in determining how many animals he could keep alive through the winter and spring until the new pasture was available. Except in years of abundant hay harvest it can be assumed that few inventories will refer to hay after April or May. In this case almost all the references are on inventories made between September and April. Four appraisers in May and one in August refer to hay. References to meadow are also infrequent. The inventory of Jane Empson of Goole appraised in June 1624 makes no mention of hay but she had 24 acres of meadow and Richard Lund of Reedness (April 1625) had 'certaine old hay and straw' worth 40/- and 20 acres of meadow.

⁷ J. Thirsk, 'The Farming Regions of England' in Thirsk (ed) *A.H.F.W* IV, p40

The eight other references to meadowland vary from '2 doles of hay' worth 18/- to the many references in the inventory of Nicholas Riccard of Snaith who was, like Empson and Lund, a substantial farmer. In June 1614 he had one and half acres of 'meddow in Oxney' worth 9/-, ten acres in South Field worth 20/-, four acres in Snaith Ings worth 16/- and 'In the Hags 5 acres' worth 10/-. Most of these refer to the value of the lease of a few acres.

As with animal ownership the inventory analysis obscures differences between the different soil regions of the parish, the wide differences in arable values between farmers and the changes in the importance of crops over time. The west to east differentiation of the parish from the sandlands of the west to the marshlands of the Humber indicate slight but significant differences like those to which references have already been made in the case of skegs and corn. Crop analysis by region makes clear that there are significant differences in spite of the rough approximation between the three regions in terms of number of crop references and values. On the basis of this analysis the western townships appear to be more backward as this area grows the greatest amount of rye and continues to grow the inferior grains, skegs and bigg and is a likely reflection of the poorer soils of the area and the tendency of holdings to be smaller. The eastern townships grow the smallest amounts of the major food crops, wheat and rye, but the largest amounts of the food and fodder crops, barley and oats, and, in spite of a smaller number of references to crops than in either of the other areas, the overall value is greater – largely because of the high value ascribed to 'corn'. As in the case of the analysis of animal holdings this situation is a result of the eastern marshland area having the greatest number of substantial farmers in the parish. The central townships show the clearest balance between crops and grow a greater amount of wheat than rye presumably for sale. Of the fodder and industrial crops the references to peas and beans are fewer than would be expected in areas such as the midlands where hay was less plentiful but they are still of some importance with peas just predominating in the sandier western townships and with beans clearly predominant in the heavier and wetter soils of the central and marshland townships; 'beans required a strong soil if they were to do well, peas were the usual alternative for lighter land'.⁸ Oats, as would be expected,

⁸ J. Thirsk, 'Farming Techniques' in Thirsk (ed) *A.H.E.W.* IV, p171

was of the greatest value in the marshland, as were hemp and flax both of which were 'hungry' crops and required dykes or streams in which to soak during their preparation for spinning.

It is difficult to come to conclusions about changes in cropping patterns from a small number of inventories over a short time. These inventories tend to be concentrated at the beginning and the end of the period 1599-1626 and it is possible to detect some increase in the value of wheat, barley and oats. There appears to be some increase in growing pulses especially beans and the old crops skeg and bigg declined. The population rise of the second half of the sixteenth century and the consequent rise in agricultural prices may have accounted for the increase in the more expensive grains but there were other factors such as the increase in leaseholding and rack-renting. J.T. Cliffe has shown that 'in the century preceding the Civil War a high proportion of customary land was being converted into leasehold property as the Yorkshire gentry sought to improve the revenue from their estates.'⁹ The parish of Snaith was affected by this movement at least in the townships of Airmyn and Rawcliffe. At a Rawcliffe inn between 27th September and the middle of October 1607 John Matteson, servant to David Waterhouse of Halifax and Lincoln's Inn, London, Jonas Waterhouse, a Mr Wormald and a Mr Rayner persuaded the copyholders to accept leasehold tenancies.¹⁰ Whilst there is no clear evidence of this happening in the rest of the parish, and indeed the copyholders of Hatfield fought successfully for decades to maintain their fixed rents, it is a reasonable inference from the occasional reference to rent debts on inventories that this process was going on. The inventory of John Abbott of Goole (dated 8.11.1604) bears the note 'Leases-the farme holden of Mr Thomas Armitage we find worth the rent and no more £3.) Robert Lund of Reedness had on his inventory (dated 28.4.1625) 'Reversion of the years unexpired in the leas £250' and the 'tacks and leases' of Anthony Atkinson of Snaith were valued on 16.11.1601 at £8. In addition many marshland farmers frequently rented small amounts of land from several owners as sub-tenants and it can be assumed that the rents of these closely reflected market value. It seems likely, therefore, that local farmers were under the pressure of rack renting to improve their methods.

⁹ J.T. Cliffe, *The Yorkshire Gentry from the Reformation to the Civil War*, (1969) p43, London

¹⁰ A.F. Upton, *Sir Arthur Ingram*, (1961) p 406, London

About the year 1610 Waterhouse's marshland estate passed into the hands of Sir Arthur Ingram as a consequence of debts contracted by Waterhouse, and John Matteson became Ingram's servant not just for Airmyn but for Sheriff Hutton in the Forest of Galtres and eventually for the Manor of Hatfield. Matteson's surviving accounts show that at least on the Ingram estates improvements were being made which are consonant with the impression of a period of change before 1626 and with the assumption that higher rents were a pressure for improved output.¹¹ In the autumn of 1607, significantly at the time when the negotiations for transfer from copyhold to freehold rents were taking place, and before Ingram came into possession of the estate, disbursements were being made to 'the dyckers' for making a bridge and several dykes including one on the common and another of '741 rood at 7½ pence per rood and for 166 at six pence, a rood which comes to in all £25-15-6'. In the winter of 1622 disbursements were made for 'hedging sevrall places about ye moore' and in the following summer there were other payments for 'felling thornes in ye parke to hedge'. Payments for 'plowing ye pasture for Barley and for plowing 4½ acres of moorland were made and Nicholas Riccard put ten acres of Snaith Field down to hay, so that in spite of the inferential nature of some of the evidence there is sufficient firmer evidence to show that the parish was not static before 1626 and that a simple description of it as a marshland pastoral economy is to ignore the importance of arable farming and the variations in farming practice that differences in soil, altitude and forms of tenure made.

The townships of Snaith parish tend to be treated as outside the drainage history of the Chase and, like the parish of Fishlake, it is only the serious effect that Vermuyden's first works had on them that brought them into the story. The loud, and justified, complaints at the effects of Vermuyden's scheme to force all the Don waters into the northern arm has exaggerated the tendency to believe that, although liable to periodic flooding from the rivers Aire, Went and Don, these townships were nevertheless completely different from the Chase. It seems likely, however, that there was great similarity between the two areas and that this analysis of changes from sandland to marshland over the last 26 pre-Vermuyden years would probably be replicated in the Chase if the early inventories were available.

¹¹ W.Y.A.S. (WYL100) TN/EA/10/8

Without inventories it is impossible to make similar analyses of farming in the Chase. There are, however, three important sources which compensate by showing the extent and mixture of farmland in the Manor. Firstly the Fishlake Bye-Law Book¹² shows that a traditional open field system existed and was controlled, not by the Manor Court, but by a parish court.

Fishlake is a parish of small settlements which is reflected in the organisation of the Bye-Law Court. Every year representatives were chosen from all the settlements. The main settlement around the church, referred to as Kirktown, had four representatives: Thorninghurst, Fosterhouse(s), Fleethouse and Westend, which was sometimes called Morehouse and Westend, had two each. Also chosen yearly were three grassmen and four banksmen. The duties of the grassmen were to oversee the grazing of the commons, especially the control of illegal grazing and the collection of fees from outsiders who sent animals to be pastured. The banksmen inspected and maintained the low bank which kept the high waters of the Don to the south and Turnbridge Dyke to the east off the townlands. Fishlake (and Sykehouse), unlike most other settlements of the Manor, were on alluvium; the other townlands were on islands which raised them above normal flooding. The court also appointed a paid 'pynder and nowter' (a herdman or neatherd) who protected the animals grazing on the commons. At various times the Court reiterated that the pinder should remove both stray and tethered animals from the fields and fine their owners fourpence and also 'kepp the wheat and peys fields'. In 1610 and 1611 the offices of the pinder and herdsman were separated and their duties laid down in detail giving a good idea of the effort required to make an open field system work:

... the said Pynder... shall walke and viewe the 2 sowne feilds twice and the said by lawe Ynge evry daye once betwixt lady day [25 March] and michallms [29 September] and when he findeth defalte in the fences or gates he shall give warning to the p[ar]ty to make and rep[ai]r the same presently... [he] shall suffer none to get pescale but the owner The Newteherd for this yeare shall [take?] from May day till the usall tyme daly to and from the pasture such kine as shalbe put thither and shall allso tak notice of and look into all such geiste [joyste, gist or gisted] horses or cattle as shall [be] taken by the grassmen the yeare pylt and flay [skin] all morte falling in the Common for the year and be at all dryftes both at home and abroad as nede shall require

¹² Doncaster Archives PR/FISH/ADD1, Bye-Law Book (p110)

The agisting (pasturing at a cost) of animals on Fishlake commons from outside the township indicated that the commons in the pre-drainage period were more than the local graziers needed. They were an important source of village income. In 1591 'gyst' money was 36s. Od, in 1610 it was 54s. 6d. In the latter year the outsiders paying for grazing included Watson of Wadworth 6s. Od for three foals and Cocker of Rotherham for a grey nag 2s. 6d. The following year Mr Godfrey Copley of 'Sprotburghe' paid 3s. 4d for three sows and four swine and George Byngley, also of Sprotbrough, paid 21s. Od for four beasts, two horses and fourteen swine. Animals from as far away as Carlton and Wakefield were also agisted. Parts of the commons were also let to inhabitants and others for their sole use. The income was used for many purposes: repairing the town boat and replacing its ropes, repairing bridges over dykes and paying the pinder and herdman. Once the poor law had become a parish responsibility by the Acts of 1598 and 1601 the income from the commons was used to reduce the poor rate although it had been used to help the poor before 1598. Another form of income from the commons raised by the Bye-Law Court involved the granting of common rights to the builders of new houses:

The townshippe doe agree... that Thomas Wayte of ffosterhouses and those who sall [sic] have right after him in one new builded house whereon he now dwelleth or which shall hereafter dwelleth on the same shal for ever... have free ab[ili]ty to put their goods... upon the common... without paing giste for which he is contented to pay to the use of the towne XXs.

Robert Bladworth paid 6s. 8d for a similar right on the same date, 18 September 1615.

The regulation of the open fields produced constant problems for the Court. Individuals who wished to ignore the fallowing routine or to put their animals onto stubble before others had finished reaping created situations which it was the Court's job to prevent. In 1603 the bye-lawmen agreed that 'no man shall gyve leave to anye to gleane ye come of anye land before such tyme as the come be l[lea]d awaye of it'. A century later gleaning was still creating problems and more detailed orders were issued to regulate it:

... Yt is unanimously agreed and Allso a By law by us whose names are hereunto subscribed that noe pson shall glean or gather Corn as gleaners Except any pson tolerate or Give leave to them in ye time of Shearing Untill

such time as the white corn be all led away out of the Common ffields and ye ffields of ye white corn be kept unbroken for the gleaners 12 days.

It is clear from these examples that before the drainage Fishlake was an agricultural community with many similarities to the Midland open field villages with the addition of commons so extensive that they could be used to contribute to village expenses. One of the problems of Midlands open field farming was a tendency to a shortage of pasture.

The drainage and the subsequent drowning of Fishlake produced a five year gap in the Bye-Law Court records.

Two other large sources show the extent of agricultural land in the Manor as a whole. The first is the Survey of the Manor of Hatfield ordered by Salisbury in 1607 as part of his attempt to improve royal income.¹³ The survey is limited to those parts of the Manor for which rents were paid to the Crown. The agistment of Hatfield Great Park is mentioned but, naturally, the commons were not as they were unrented. One of the most important aspects of the Survey is that it includes rents and acreages of land which would be classified as waste at some earlier time and which had been brought into use by assarting and legitimised by the payments of copyhold rents. The Survey shows that the whole range of farming activity was practised – open field arable meadow, pasture – much of the latter on the edges of the Mere and outside the area of the townland. The rents paid show how far royal lands had fallen behind the rent increases of the late sixteenth century and the Survey gives the rent paid and the surveyor's new valuation.

The Survey contains hundreds of names (many several times) who shared 5,456 acres, often in very small quantities. In Hatfield arable predominated at 609 acres followed by 398 acres of pasture, 254 acres of meadow and 372 acres of multiple use, arable, meadow and pasture. Fishlake and Sykehouse were dominated by pasture with 1,311 acres, and meadow 525 acres, along with 671 acres of arable or pasture. These figures are insignificant when compared to the c.38,000 acres of the Manor but there is no disguising the fact that agriculture was very important to the inhabitants.

¹³ P.R.O., DL, LR/2/193 SJI Survey of the Manor of Hatfield

This is made particularly clear when the amount of marginal land in use is considered. Some 230 inhabitants of all social groups used the marginal lands. The most common use was of moor held by 213 tenants, 13 held marsh and 45 had holdings 'beyond the mere', several of these occupiers had a building on the land. Most of the marsh and land 'beyond the Mere' was meadow or pasture but there were 19 turbaries with buildings on them, including two barns, a copyhold cottage and 'a lodge' with $3\frac{1}{4}$ roods of land. Six others had holdings referred to as 'lands', possibly arable. Thorne men, reflecting the shortage of land in the township, occupied most of the marginal lands and moors.

Surprisingly the Survey shows that rents throughout the Manor, whether arable, meadow, pasture or moor were similar. Fourpence an acre was the usual rent, with minor variations. The arable range was from fourpence to eightpence but in three townships the norm was fourpence. Meadow varied from one and halfpence in Hatfield to 1/- in Fishlake. The Fishlake norm was eightpence, in Stainforth it was sixpence and the rest it was fourpence or four and halfpence. Pasture varied from twopence to eightpence but only Ashfields land averaged six to eightpence, other areas averaged about fourpence. The same variation appears in the multiple use lands.

How undervalued these lands were is shown by the Surveyor's revaluation. Arable rents were mostly increased by six times with the Hatfield rents ranging from 1s 2d to 2s 6d and Sykehouse from 2s 8d to 3s 4d. Similar increases were made on every other land use. Meadow averaged 3s in Stainforth and the Fishlake range was 2s to 4s 6d. The largest increases were of pasture in Ashfields up to 5s $6\frac{1}{4}$ d, and of meadow or pasture varied from 3s $1\frac{1}{2}$ d to 9s 6d. Thorne moorland rose from 1s 8d to 6s 8d, though the norm was 3s.

The considerable increases suggested by the Surveyor are a reflection of their absurdly low rents – unaltered, probably, for a century or more, but also of the Crown's need for greater income in the post-Spanish war period. It is clear that some of the increase came from the fact that the minute amounts of land listed in the rental were as outdated as the rents. The enlarging of plots was part of a process by which a few feet or yards were added to plots, often annually. This is shown by the

occasional use of the term 'tack', meaning intake or extension of boundaries. Often this was accepted by the manor or court and the rent paid reflected growth over time. A good example of this is the entry on Thomas Riccard of Hatfield, gent, who paid '34s 9½ and a groat, half a groat and two parts of a groat'. Riccard as a gentleman held a considerable amount of land but other entries refer to the addition to smallholdings of as little as five feet. The understating of the acreage of land held was one of the chief complaints of Sir Arthur Ingram in the 1640s. Ingram's irritation arose from his inability to persuade the copyholders to change to leasehold tenure which would have enabled him to increase rents and entry fines above the one penny per rood which was still in force as the revaluation of 1607 had not been adopted. The community of the Manor had resisted the increased rents on the grounds that they held their 'copy hold lands and moors without admeasurement'. Ingram claimed that this had resulted in 'holdings being sixe times, in some, tenn times so much more... than are mentioned and contained in their copies'.¹⁴

This situation is also an explanation of the opening up and cultivating of Thorne Moor. The rents paid on a rood or half a rood referred to the width of the plot at the edge of the moor but in practice the tenant regarded all the land over the moor behind the moorend towards Crowle as his to enlarge by removing the turf and cultivating the rich clay underneath. The result of this process is still shown on modern maps and in 1669 Cornelius Prole's map simply stated that the moor 'lies for meadow or come'.¹⁵

Much of this information is repeated with more detail in the Survey of 1634. The Survey was ordered by Sir Edward Osborne, Vice President of the Council of the North, who had bought the Manor from Edward Gibbon who in turn had bought it from Vermuyden. The Survey is enormously long as it gives details of every house in the Manor townships, every land in the open fields and every close. The list of owners illustrates clearly that the Crown had not owned all the land in the Manor. In Hatfield, for example, out of 475 lands and butts 122 were copyhold, 22 were

¹⁴ W. Y. A. S. (WYL100), TN/HC/B9. Dispute between Sir Arthur Ingram and the Commoners of Hatfield.

¹⁵ B.M. Eg 3160, 13674, MSS 13674, 'Map of the Bounders of Hatfield Rectorie' (a tithe map), 1669

demesne, two were freeholds and five belonged to St John of Jerusalem.¹⁶ In the Manor as a whole, 1,051 lands belonged to individuals out of 1,529. The Survey was not concerned with the drained land, the distribution of which was still unfinished, but carrs and moors and marshes unaffected by the drainage were included. The Survey gives, therefore, a firm idea of the land available for agriculture before 1626.

The document gives the following figures for open field agriculture: Hatfield had four open fields with a total of 525 acres three roods; Stainforth and Fishlake had three open fields amounting to 370 and 264 acres respectively. Thorne had two fields amounting to 202 acres, Sykehouse had one small field of 40 acres and several closes referred to as 'fields'. These were on sandy patches surrounded by the heavier soils of the township. Hatfield also had two small areas called Sherwood and Great Sherwood covering only ten acres three roods but divided into 43 lands which were still marked as open field on the 1811 Pre-Enclosure Map. They were surrounded by the heavier soils to the south of the Mill Field and presumably were sandy like the open fields.

The most significant indication of the importance of agriculture in the Survey is the very large number of closes listed: Hatfield had 322 amounting to 670 acres, Fishlake had 420 totalling 1,226 acres, Sykehouse 408 amounting to 1,488 acres, Stainforth had 254 amounting to 728 acres. Thorne, once again, illustrating the smallness of its townland, had only 91 closes; these totalled 140 acres, but many close entries did not indicate their size. To consider, as many have done, that the inhabitants of the Manor were merely fishers, poachers and reed gatherers before the drainage clearly cannot be accepted.

There was, therefore, ample land available for farming, possibly too much of it was poor sand, but the Chase had another disadvantage as it was under Forest Law. However, by the time the Warrenne's Chase became Royal Forest at the accession of Edward IV in 1460 the most intense period of royal interest in hunting and the consequent control of the Forests by royal officials was over. Henry VIII, a great hunting enthusiast, showed some interest in the Chase and extended it after the

¹⁶ In other parts of the Manor some were still listed as belonging to Roche Abbey

Dissolution of the monasteries by adding the ecclesiastical properties of Armthorpe and Crowle in Lincolnshire to it. Before his fall Thomas Cromwell, who briefly held the office of Chief Forester and Chief Justice North of the Trent had attempted to bring some vigour into Forest administration. One of the results of this was the holding of an Eyre for the Chase in 1538. An eyre was a periodical examination by the Chief Justice of the efficiency of the manor officers who normally enforced the Forest Law. This reflected Cromwell's efficiency and Henry VIII's interest, but Henry's intention of hunting in the Chase was not fulfilled and after Cromwell's execution the exercise of Forest Law became even more lax. As a result the poaching of deer and rabbits and other Forest offences were rife. Rabbits, like deer, were a great nuisance to farmers, and as they are notoriously difficult to confine they did serious damage to crops. They were not, of course, reduced by the dischisement and in August 1670 Francis Simpson, the tenant of Hatfield Park, wrote to his creditors that he could not meet his debts. One reason he gave was that he had '9 acres of bad barley in high park [the former site of the warren] a great deal spoyled with rabbits.'¹⁷

Deer were also very numerous. A return of 1538-9 estimated 700 in the Chase. An estimation in 1607 suggested 1,000. These estimates are probably extremely low. Leland wrote that 'there is a great plentie of red deer [which] haunt the fennes and great mores thereabout'.¹⁸ De la Pryme claimed in his manuscript History of Hatfield that he had heard old people say that if you walked into any part of the Chase 'you would have found Deer in as great Numbers together as sheep upon ye Hills of most places in England.' In 1615 after a very severe winter Hatfield deer were sent to replace stocks in other forests.¹⁹ Following the 1615 decimation of deer all over the country a count of dead and surviving animals was taken. The Hatfield Chase figures, if they can be accepted, make earlier estimates absurd. In the Chase red deer were said to number 677 living and 534 dead, fallow deer 1,755 living and 1,365 dead.²⁰ If it is accurate the count underlines why the men of Fishlake went to such time and trouble in the fencing and guarding of their fields and closes. It was claimed

¹⁷ Sheffield Archives WMM BR 75

¹⁸ L. Toulmin-Smith (ed) *op cit*, p36

¹⁹ C.S.P.D., Jas I clxxxvii p45

²⁰ York City Archives, ACC 104 0/20, I thank Mr D.J. Hughes for this reference

by Vermuyden that the drainage caused a rapid decline in numbers as the workmen frightened them away.²¹ Nevertheless on April 7th 1629 the King wrote to the Attorney-general Sir Robert Heath, Vermuyden's chief source of influence at Court:

Having for great and valuable consideration granted to Sir Cornelius Vermuyden the lordship of Hatfield Chase, Co. York, the King will use his best endeavours to remove the deer before November I next and whatsoever of them shall not be desposed of by that day the said Sir Cornelius may take at his pleasure.²²

It is unlikely that the King kept his word and that the subsequent decline in deer numbers was a result of Vermuyden's freedom to make a profit from them. Deer and rabbits remained troublesome for many years and small herds of deer can still occasionally be seen on the former marshes on the sides of the M18 as it goes from Hatfield to the M62.

Clearly there were drawbacks to pre-drainage farming in the Chase apart from much poor sandy soil, occasional floods and permanently wet marshes but these were problems which the inhabitants had learnt to cope with. They had compensations in the advantages offered by the freedom to exploit the wettest lands but these disappeared as the partial drainage and enclosure of a large part of the area went on after 1626. The drainage was seen by the inhabitants, therefore, as an attack on their ancient rights, as it was in the Isle of Axholme. The ancient rights of the Chase mostly depended on a long period of royal laxity but in the Isle there was firm documentary evidence of them dating from a fourteenth century grant which the Islonians carefully preserved. Hence the opposition to the drainage died out quickly in the Chase in spite of the support of some of the principal inhabitants whereas in the Isle the rebellion against the deprivation of their land continued, with great violence, for nearly a century and resulted in an almost complete victory for the rebels.²³

²¹ V C H Yorks I, Vol I (1907) p508

²² C S P.D. Ch I, 4, 1629-31, p515

²³ Lindley, *op cit*, p259

CHAPTER III

THE DRAINAGE OF HATFIELD CHASE AND THE CAREER OF SIR CORNELIUS VERMUYDEN

PART 1: THE PRELIMINARIES TO THE DRAINAGE

Whatever reservations are held about the agricultural necessity of draining the marshlands on the borders of the West Riding, Lincolnshire and Nottinghamshire and no matter how far these reservations are supported by the limited success of the operations, there can be no doubt that the drainage scheme of 1626 and the accompanying changes in the Chase and Manor of Hatfield brought about a transformation. In the lowlands outside the Manor there was, ostensibly, little change, but nowhere from beyond Doncaster in the west, to the river Trent in the east and from the rivers Aire and Ouse in the north to the claylands of north Nottinghamshire in the south, was completely unaffected. In order to come to any conclusions on agricultural change in the wetlands it is essential to attempt some assessment of the impact of the 1626 scheme and of the career and reputation of the man whose name has become synonymous with it, Cornelius Vermuyden.

The background to the 1626 scheme

The precarious balance of royal finance under Elizabeth I was eventually destroyed in the 1590s by the continued cost of the war against Spain. In an age when the monarch was expected to 'to live of her own', and when parliament was showing an increasing readiness to use royal financial need as a lever to prize recognition of its own claims out of her, Elizabeth was reluctant to approach it for aid. In the short term, there was no way that the Crown could meet its need for increased income other than by land sales. These reached great heights during the last years of the reign and, of course, they made the long-term position worse by reducing the annual income from land. During the long period of inflation which started before Elizabeth came to the throne, many landlords were able to keep pace with inflation by increasing rents and/or by increasing entry fines¹, but by and large royal income from

¹ E. Kerridge, 'The Movement of Rent, 1540-1640', *Ec. H.R.* 2nd Series, VI (1953), I. Reprinted in Carus-Wilson, (ed.) *Essays in Economic History* Vol. II, pp 209-222

land did not keep pace with inflation because the royal policy of granting favourable leases for political reasons continued and because of the inefficiency or dishonesty of royal officials.² One way of increasing royal income from land was to improve it by drainage and suggestions for such improvement increased in the later years of Elizabeth I. As early as 1563 an Italian refugee had drained and enclosed 2,000 acres of Erith and Plumstead marshes in Essex.³ In 1576 and 1593 abortive schemes to drain part or all of the Fens were proposed and in 1585 a General Drainage Bill to ease the procedure for draining the Fens was submitted to the Commons but it did not become law until 1600.⁴ It was in this last period of Elizabeth's reign that de la Pryme claimed that the Queen approached a member of the local Laverock family and his partners to improve Hatfield Chase, 'but', he wrote, 'they not been able to effect it, were forced to let so good a work fall.'⁵

It was in the reign of James I and the early years of Charles I, however, that interest in drainage really grew. Once more royal interest was mainly stimulated by financial necessity. Even the ending of the Spanish war had made little difference and land sales continued to eat away the royal income. Under the cautious Elizabeth sales resulted in a decrease in annual value of £24,808, but James made no serious attempt to keep the Crown's landed inheritance intact. He made large gifts to favourites and between 1603 and 1609 sold lands worth £426,151 which was just over half of the value of lands sold by his predecessor during the whole of her long reign.⁶

Salisbury's attempt to increase income from land by better management included the 1607 Survey of Hatfield Chase and although this attempt had no positive result similar attempts elsewhere were more productive and entry fines were frequently increased, though whether much more money came into royal hands is doubtful. Interest in drainage also sprang from the growing concern for the improvement of meadows and pastures which had spread among agriculturalists since about 1500.⁷ There grew up in London, also in the early Stuart years, a Dutch colony with access

² L. Stone, 'The Fruits of Office: The Case of Robert Cecil, First Earl of Salisbury', Fisher, F J., (ed) *Essays in the Economic and Social History of Tudor and Stuart England* (1961), pp 89-116

³ J.W. Gough, *The Rise of the Entrepreneur* (1969), p249

⁴ L.E. Harris, *Vermuyden and the Fens* (1953), p22

⁵ B.M. Lansdowne MSS, 897, p189

⁶ G. Batho, 'Landlords in England', Thirsk J. (ed) *A.H.E.W* vol IV, (1967), p768

⁷ C. Lane, 'The Development of Pastures and Meadows during the Sixteenth and Seventeenth Centuries', *A.H.R.*, 28 Part 1, 1980

to the court which became a pressure group urging on James drainage schemes that would be to their mutual benefit. One of the group, Cornelius Liens, offered to drain part of the Fens as early as 1606,⁸ but their pressure really increased after the end of the Twelve Years' Truce in 1621, the year in which Cornelius Vermuyden settled in England.⁹

There were also plenty of Englishmen interested in drainage and other forms of hydraulic engineering. A Welshman, Hugh Myddleton, who was a citizen of London and a businessman, supplied London with water by a new river in the early years of James's reign.¹⁰ In 1605 Sir John Popham led a project to reclaim 300,000 acres on the river Nene near Upwell which largely failed. Another group headed by Alderman Cockayne completed a smaller, short-lived scheme in the same area. In 1619/20 Sir William Aylofffe and Anthony Thomas pushed a large scheme which foundered on Privy Council and local opposition. This failure led the king to declare that he would act as undertaker but he had no money to do so.¹¹ Great play has been made of the experience of the Dutch with hydraulic engineering but in the early seventeenth century it was their wealth as much as their expertise which made them attractive to the chronically penurious Stuart kings.

In the twenty years before the attempt to drain Hatfield Chase began at least three attempts had been made to increase royal income from it. The 1607 Survey and revaluation had shown that rents should have been increased by anything up to tenfold but the increase in rents did not occur. The subsequent attempt to increase entry fines failed on the tenants' successful claim that their fines were fixed. The grazing dispute that produced the Saxton Map of 1615 (PRO MR 408) arose out of an attempt to control abuse of agistment of the commons and wastes. Before he finally handed the improvement of the Chase over to the Dutch James made a last attempt to improve it by traditional methods. A commission was issued to several local gentlemen headed by the Bowbearer of the Chase, Sir Robert Swyft, to inquire into the state of the Chase, whether it was possible to drain it, and whether the

⁸ Gough, *op cit*, p 252

⁹ Harris, *op cit*, p 33

¹⁰ J.W. Gough, *Sir Hugh Myddleton* (1964), pp 34-58

¹¹ Gough, *op cit*, p 253

tenants had not forfeited their favour of common by their many abuses of the Forest law.¹² The Commission reported in 1622 that drainage was impracticable and that indeed the tenants had abused their privileges. It seems highly likely that this was not a serious drainage enquiry but part of a softening up process aimed at frightening the inhabitants into accepting the possibility of the drainage and distribution of their commons and waste, which they did in 1624.¹³ Korthals-Altes's judgement of the motives of the commissioners in deciding that drainage was not feasible is that they were more interested in retaining their Forest perquisites than in serving their king.¹⁴ He might, of course, be correct in this belief but it is very likely that local men had a better appreciation of the difficulties involved in draining the Chase than the Dutchmen who were centred in London. Their reluctance to recommend a scheme, given the hydraulic skills available at this period, seems in the light of the limited success of the Dutch attempt and the difficulties and expense of maintaining their works, to be a tribute to their sense as much as an indication of their desire to continue to exploit the Chase.

Nevertheless, local opposition to drainage and distribution hampered several early drainage schemes, as it was to do in Hatfield and, especially, in the Isle of Axholme.¹⁵ Consequently, the agreement of 1624 between James I and the commoners of the Manor of Hatfield was an important step towards the agreement between the Crown and Vermuyden. The commoners were promised that they would receive a fair proportion of the drained lands, but, surprisingly, there was no similar agreement with the commoners of the Isle, nor, apparently, was any attempt at agreement made. It seems as if the Crown officials and Vermuyden in their ignorance of the locality assumed that the Chase agreement included the Isle of Axholme. The making of the final concord between Charles I and Vermuyden raises the problem of the relationship between Vermuyden and those who provided the money for the Hatfield work. Harris wrote as if throughout the final period of

¹² Hunter, *op cit*, pp 159-160

¹³ V.C.H. *Yorkshire*, Vol I, p507

¹⁴ J. Korthals-Altes, *Sir Cornelius Vermuyden* (1925), p29

¹⁵ Gough, (1969), *op cit*, pp 251-2 Drainage, like other forms of enclosure and disturbance of traditional rights, was unpopular and drainers rapidly acquired a reputation as tricksters and villains of the scheming Meercraft in Jonson's *The Devil is an Ass*.

negotiation Vermuyden was the sole negotiator,¹⁶ no mention was made of any of those who were later known as the ‘participants’ in the contract of 1626. Even Vermuyden’s relations the Liens family who had been pressing drainage schemes on James since 1606 and who, Harris assumed, brought Vermuyden to England, were not mentioned. The Lienses were not participants either although it is possible that Vermuyden represented them as the spokesman of a family partnership. Certainly, as will be seen, Johannes Liens played a part in the Hatfield work and possibly a very important part in the planning and execution of the hydraulic work for which Vermuyden is usually solely credited. In the contract Vermuyden was solely responsible for financing and executing the work, and he did not appear to have been the spokesman for Dutch financial interests.

PART 2: 1626-1628, THE BEGINNING OF THE DRAINAGE AND ITS IMMEDIATE RESULTS

Charles I and Vermuyden signed the agreement to drain Hatfield Chase on 24 May 1626. Vermuyden’s main promise was to make ‘his best endeavour... to drain and lay dry the... drowned and surrounded grounds... to make the same fit for tillage or pasture’. Secondly, he promised to set to work on the drainage within three months after the King ‘shall have agreed and concluded with such person or persons as shall have claim to drain any estate, interest, or common of or in the said grounds’. Thirdly, he was to finish the work ‘with as much convenient expedition as may be’.¹⁷ Other parts of the agreement become important in the context of the argument of the next chapter and are mentioned there.

There are many accounts of the Hatfield drainage and briefly they agree as follows.¹⁸ The main causes of the flooding were the twisting, slow courses of the rivers Don, Torne and Idle which could not cope with heavy rains in their western catchment areas. Consequently much of the land near the rivers was permanently

¹⁶ Harris, *op cit*, pp 42-3

¹⁷ Harris, *op cit*, p44

¹⁸ Korthals-Altes, *op cit*, G. Dunston, *The Rivers of Axholme* (1909), W Peck, *History of Bawtry and Thorne* (1813), Tomlinson, *op cit*, Hunter, *op cit*

under water and some was occasionally flooded, especially in winter. In addition, the Trent, the main outlet for the rivers, and the Don were strongly tidal and the tides also caused the rivers to overflow, as much of the land was below the level of high tides. When heavy rains in the west coincided with high tides, severe flooding ensued. To the north of Hatfield the tidal rivers Ouse and Aire and the smaller river Went similarly affected the parish of Snaith, Sykehouse (within the Manor of Hatfield) and the villages further east. The problem was exacerbated by the fact that the tides carried silt up river and its deposition raised the level of the river bottoms and made flooding more frequent.

To stop the flooding to the east of Hatfield and south of Thorne in the vicinity of Thorne Mere, Vermuyden stopped the southern arm of the Don, which bifurcated between Stainforth and Thorne, and forced all the Don waters into the Don's northern course. Another bifurcation at Thorne was stopped by a sluice. To prevent the increased flow of the river flooding the north of Hatfield township, Vermuyden built Ashfields Bank between Stainforth and Thorne and carried it on to Turnbridge in the north. Thorne Mere was also supplied by the two twisty tributaries of the Don, the Idle and the Torne which were the main causes of flooding in the southernmost parts of Yorkshire and the adjacent areas of Notts, and Lincs. These rivers had their links with the Don severed; the Idle was diverted into Bykersdike, which was probably a medieval drain and ran into the Trent at West Stockwith. A new drain was cut along the northerly route of the old river Idle until it turned sharply east near Dirtness to flow into the Trent near Althorpe. The river Torne was straightened and it too turned sharply east to the Trent outflow at Althorpe. Another cut to drain the area south of Thorne Mere was made from near Tudworth via Dirtness to Althorpe. To deal with the problems of tides, sluices were placed on the Trent outfalls to prevent tidal water flowing up the new cuts. This together with increased speed of flow resulting from the straightening and deepening of the river courses would, it was believed, provide a scour to prevent the deposition of silt in the streams.

The accounts stress the energy and brilliant organisation of Vermuyden who, it was claimed, brought an army of experienced workmen over from the Netherlands and was able to state that the work was finished late in 1627, only eighteen months after it was started. Shortly afterwards a commission met to allocate the drained lands in

equal thirds between the Crown, Vermuyden and the commoners. It soon became clear however that his claim to have completed the drainage was premature. It appeared that all he had done was to redistribute the flood waters. Again the drastic immediate results are well chronicled. The three cuts which had been made from near Dirtness to Althorpe had to go across the rock which links the main part of the Isle of Axholme in the south to its most northerly part, Crowle, and the cuts were too shallow. Consequently the Isle was flooded from a completely new direction. Ashfields Bank and Thorne sluice on the Don raised the water level higher up stream and caused flooding in areas such as Kirk Bramwith previously relatively unaffected. The forcing of all the Don waters into the Turnbridge Dyke caused the greatest outcry as Fishlake, Sykehouse and many of the townships of Snaith parish were flooded not only by the raised Don but by the Aire and the Went also which were raised by the Don's increased flow. So great was the outcry that Vermuyden was forced by the Council of the North to relieve the Aire by the digging of a new cut from Turnbridge to Goole on the Ouse. He was also forced to raise the Fishlake Bank although the inhabitants had to pay for it. In fact the immediate results of the work raised questions about Vermuyden's competence to undertake it both at the time and ever since. Apart from the social dislocation which is possibly inevitable in any large scale alteration of land use, the scheme left a legacy of high cost maintenance which adversely affected the agricultural development of the new land and of inadequate drainage of large parts of them. Vermuyden and his Hatfield work have been the subject of some excessive praise and much vilification which makes arrival at a balanced judgement difficult. Nevertheless the 1626 drainage and its attendant changes in the Chase and Manor are so important in agricultural terms that some attempt must be made to assess Vermuyden's career and to separate the legends that have grown up around it from what actually happened in Hatfield between 1626 and about 1640.

PART 3: THE CAREER OF SIR CORNELIUS VERMUYDEN¹⁹

Vermuyden was born in 1590 at St Maartensdijk, in the Isle of Tholen, Province of Zeeland in the Netherlands. In this province the practice of land reclamation by poldering was centuries old. The Vermuyden family was important in St Maartensdijk's history and it was connected by marriage to another important family, the Lienses. Both families had long been connected with land reclamation (poldering) and for this reason it is assumed that Cornelius Vermuyden was educated in hydraulic engineering. There is no evidence that he had any experience of engineering before he came to England. Harris was unable to unearth any confirmation about his early career beyond the fact that he was a tax collector in Tholen. Harris speculated that this work might have been to fill in during an interruption to a career in hydraulic engineering brought about by the end of the Twelve Years' Truce with Spain which stopped land reclamation in the Netherlands.²⁰ It might also be a significant pointer to an early career in finance not in engineering. Whatever the truth about his early career, Harris wrote that 'in the Netherlands today Cornelius Vermuyden is known for what he did in England, and for that alone'.²¹

The increasing interest in draining the Great Fen in James I's reign was referred to in part 1 of this chapter. By the last years of the reign rival pressure groups of English and Dutch were jockeying to take over the work in the hope of making profit out of it. From the earliest part of the reign a member of the Liens family had been at court urging the king to undertake drainage. In 1606 it was Cornelius Liens who was one of the so-called 'French contractors' who offered to drain the Fens. In 1618 the Dutch were reinforced by another of Vermuyden's relatives, Joachim Liens, who came over as a commissioner for the Dutch government but he joined in the pressure on James to come to a decision on the draining of the Great Fens and it is likely that it was at Joachim's invitation that Vermuyden came to England in 1621.²² The year

¹⁹ This section relies heavily on Harris, *op cit*.

²⁰ *Ibid.*, p33

²¹ *Ibid.*, p28. Modern Dutch economic historians agree with this view as does Prof. Jan Bieleman of Wageningen, Netherlands, an agricultural historian who was questioned in 2003

²² *Ibid.*

in which Vermuyden came to England is also significant as the year in which James I decided that he would become the undertaker for the Great Fen drainage. This is often seen as the reason why James sent for Vermuyden, 'the great Dutch engineer', but Vermuyden had no reputation as an engineer either in England or in the Netherlands to justify the title. He wrote in 1638 of being 'invited' to work on the Great Level but he did not say who invited him.²³

In the five years before Vermuyden started work in Hatfield Chase he married into a Dutch family settled in England, he became a naturalised Englishman and he undertook two small hydraulic engineering projects. In 1622 he contracted with the Essex Commissioners of Sewers to repair a breach in the Thames bank at Dagenham. The Commissioners stated in the following year that Vermuyden had 'not only... accomplished very little hitherto, but by his delays and the want of durability in the works he has accomplished, the land is in worse condition than it was before'.²⁴ Nevertheless in the same year, 1623, he was employed by James I to carry out minor draining work in Windsor Park. The king later granted him lands at Dagenham in payment.²⁵ It is possible, therefore, but unlikely, that when he contracted with Charles I to drain Hatfield Chase, Vermuyden had behind him only one failed scheme on the Thames and a minor piece of work at Windsor in addition to an assumed but unproved education in the principles of drainage acquired in his youth.

After his rapid 'completion' of the Hatfield Chase scheme in 1627/8 and the subsequent division of the drained lands into thirds Vermuyden's career became embroiled in the legal disputes which occupied much of his life though he always managed to begin new and often profitable schemes and to prosper. Vermuyden had promised Charles I that he would begin to work on the Chase within three months of the King's agreement with the inhabitants of the areas to be affected. James I had already procured the agreement of the inhabitants of the Manor of Hatfield in 1624

²³ C. Vermuyden, 'Discourse Touching the Draining of the Great Fennes'. Reprinted as an appendix to S. Wells, *The History of the Drainage of the Great Level of the Fens called Bedford Level with the Constitution and Laws of the Bedford Level Corporation* 2 vols (1830) p341

²⁴ Harris, *op cit*, p37

²⁵ *Ibid.*, p38

but no similar agreement was made outside the Manor. From the beginning, therefore, the inhabitants of the Isle of Axholme regarded the drainage operations as an illegal destruction of their ancient rights of common and their system of husbandry which Dr Thirsk claimed 'had come to terms with nature, and made good use of the existing resources'.²⁶ The physical destruction of the drainage works, the occupation of drained land by force and the legal battles consequent upon the dispute lasted until 1719, but while they form an important part of the history of the Isle of Axholme and they affected parts of the drainage of the Chase they were not of major significance for the South Yorkshire wetlands. On the whole the rights of the inhabitants of the Manor of Hatfield were respected, although one of the first disputes to be settled by the Council of the North was over the inhabitants' claim that the 'condition of a fair proportion of the drained lands being assigned them' agreed in 1624 had not been met.²⁷ Indeed disputes between the Lords of the Manor and the inhabitants on the interpretation of the Council's settlement were frequent, from the acquisition of the Manor by Sir Arthur Ingram in 1639, to 1825 when enclosure of the commons was finally achieved. In addition to the complaint of the commoners that they had been given 'only the lowest and worst of the lands' for their common, the Council of the North had to deal with the complaints of the people of the parishes of Fishlake and Snaith at the flooding which followed Vermuyden's attempt to make all the Don waters flow north to the Aire. On both issues, the Council decided in favour of the inhabitants. Additional commons were awarded to the commoners and the Council ordered the digging of a new cut on the remaining arm of the Don from near Turnbridge to the Ouse at Goole. The settlement with the Fishlake parishioners also produced a long dispute between them and Vermuyden's heirs, the participants, on the non-fulfilment of its terms. The hostility of Wentworth, President of the Council of the North, was said to have disillusioned Vermuyden and the cost of the new cut to have ensured the financial failure of the whole undertaking as well as driving many of the participants to withdraw. Certainly Vermuyden began to withdraw from Hatfield from about 1630 but it is clear that other interpretations can be put upon his actions than response to official hostility. Among them was the desire to be able to profit from the developments in the plans to drain the Great Fen

²⁶ J. Thirsk, 'Axholme', p17, *A.H.R.*, 1, 1953

²⁷ *C.S.P.D.*, Jas, IXCII, 58, 9 p433 and *V.C.H. Yorkshire I* p807

which had been brewing for at least thirty years and for which the Hatfield scheme can be seen as a rehearsal. The Dutch river between Turnbridge and Goole was claimed to be completed in 1633 after Wentworth had forced Vermuyden to pay for it by a short spell of imprisonment. Nevertheless after 1628 and his 'successful' drainage work his reputation was at its height. His power was increased by his acquisition of the Manor of Hatfield and the royal share of the drained land as security for a loan of £10,000 to the King and a fee farm rent of £425 a year.²⁸ Soon after Vermuyden was knighted. Thus by the time the disputes over commons and the flooding of the northern parishes came to a head Vermuyden's prestige was much greater. He was now a knight as well as lord of the manor in Hatfield and owner of the King's third of the drained lands and the 4,554 acres allotted to him of the drainers' part. This possibly explains the increase in violence towards the inhabitants which has been attributed to Vermuyden in his attempts to persuade them to abandon their complaints to the Council of the North and the disruption of the new works. Vermuyden gradually withdrew from the Chase and, as the King had not repaid the loan, much of the drained land became his. By 1635 he had sold the Manor and a large part of his drained land to John Gibbon who became one of the leaders of the attempt to crush the commoners in the Isle of Axholme.²⁹

Vermuyden's acquisition of the King's interest in Hatfield was not his only large outlay in this period of his life. In 1630 he purchased 4,000 acres of Sedgemoor in the Somerset Levels for £12,000 and Malvern Chase in Worcestershire for £5,000.³⁰ In the following year he entered into a partnership with Sir Robert Heath to acquire a lead mine in Derbyshire and subsequently he bought others on his own.³¹ In view of the accusations later made against him of malversation of the funds invested in the drainage of Hatfield Chase this spending is possibly significant. There is no suggestion that he was a wealthy man when he came to England and although he sold drained land in 1630 his expenses on Hatfield were large and he was already acquiring a considerable debt for drainage scotts. The new acquisitions, like the work in Hatfield Chase, were to involve him in legal and other disputes for many years to

²⁸ Harris, *op cit*, p51

²⁹ Hunter, *op cit*, p165

³⁰ Harris, *op cit*, p53

³¹ Gough, *op cit*, pp 141-143

come. 1630 was also an important year in Vermuyden's life as it was the year in which the Earl of Bedford engaged him as the engineer for the drainage of the Great Level of the Fens and it was this project which was the most important work of his life.³² It occupied him for the next twenty-five years and it is this rather than Hatfield Chase on which his reputation as an engineer stands or falls.

However, when he was appointed by Bedford to the Great Fen project the Hatfield work was still a long way from being finished. His appointment, added to the difficulties he had with the inhabitants in Hatfield, the Isle, the Council of the North and the participants, might explain his rapid loss of interest in the Hatfield scheme although he was unable to escape its consequences for many years to come. Not only did the Council of the North continue to protect the interests of the local people and to press him to complete the work satisfactorily but the largely Dutch interests which had lent him money added their complaints at the slowness of the drainage work and the failure to distribute the drained land. These complaints led to litigation which lent credence to Vermuyden's contemporary critics of the Hatfield scheme and shows that the financial and administrative arrangements were inadequate also.

The Fourth Earl of Bedford, Vermuyden's new employer and partner, had emerged in January 1630, by an agreement known as the Lynn Law,³³ as the victor in the long struggle between Dutch and English interests to secure the approval and support of the Crown for the drainage of the Great Fen. In 1631 a partnership was concluded between the Earl and thirteen others to finance the work. The partners included Vermuyden and thus he had a financial as well as an engineering interest in the scheme, Sir Robert Heath, who was Vermuyden's partner in lead mining and, as Attorney-General, Vermuyden's voice at court, and Philibert Vernatti, a financier of the Hatfield scheme. Vermuyden had been asked in 1629 by the Privy Council to take over the Great Fen work but although an agreement was made it was not proceeded with.³⁴ Nevertheless his influence on the new scheme was tremendous, '... not only was Vermuyden to be the Director of Works, but he was also an

³² Harris, *op cit*, p53

³³ Harris, *op cit*, p64; Gough, *op cit*, pp 259-260

³⁴ Harris, *op cit*, pp 60-61

“adventurer” sharing in the proportion of his investment in the hazards and profits of the undertaking’.³⁵

Although on a larger scale, the problem in the Great Fen was seen to be similar to that in Hatfield Chase; too much water being carried too slowly by tortuously twisting rivers over low ground to the sea. Vermuyden’s solution was, therefore, also similar – to straighten rivers to increase their speed of flow and thereby the scouring effect to stop the deposition of silt. The chief cut was the widening and straightening of the Bedford river which was also given sluices at both ends of the cut, at Earith and Downham Market, to control the tides. In 1637 the Commissioners of Sewers declared the work completed in accordance with Lynn Law and the 95,000 acres, the undertakers’ share of the drained land, was allotted. Immediately disputes broke out among the Commissioners, among the undertakers themselves and between them and the inhabitants. The issues in contention were: the quality of the work, the allocation of the 95,000 acres, and, most importantly, whether the intention of the Lynn Law was to produce ‘winter ground’ i.e., land free from flooding completely, or ‘summer ground’, flood free in summer only. Vermuyden argued that he had been asked to do only the latter but his opponents argued that unless the ground could be safely ploughed the scheme was not worth the expense.³⁶

The controversies brought the intervention of the King who decided that the works were unfinished and that he was prepared to take over as undertaker. The Earl of Bedford’s partnership was compensated with 40,000 acres and their obligations were ended. The compensation could be seen as reasonable as the land, which the undertakers claimed was worth thirty shillings per acre per year, would bring a yearly income of £60,000 for an outlay of £100,000. Vermuyden remained in charge of the works but before the Civil War broke out little more was done owing, it was said, to local opposition and damage.³⁷ The parliamentary government renewed the work in 1646 with Vermuyden maintaining his position as engineer.³⁸ Charles’s interference of 1638 was set aside and a return was made to the Lynn Law of 1630 as

³⁵ *Ibid.*, p64

³⁶ Gough, *op cit*, pp 161-162

³⁷ *Ibid.*, pp 262-263

³⁸ Harris, *op cit*, pp 80-81

the basis of operations. The Fifth Earl of Bedford inherited his father's controlling interest. Local opposition continued and Vermuyden's position weakened as the undertakers consulted a rival Dutch engineer, Westerdyke, who had earlier suggested a cheaper scheme than Vermuyden's. However it was Vermuyden's plans that were completed as a result of the 1649 Act for the draining of the Great Level of the fens. A New Bedford River was cut with a wash between it and the 'Old' Bedford River to take sudden flashes of water and more sluices were built. The work was said to be completed in March 1653 and the Earl of Bedford and his partners received their 95,000 acres.

Vermuyden's association with the Great Fen ended in 1655 when he was 65 and, as in Hatfield, the ending of his association was surrounded by controversy; was he now simply more interested in new projects, mainly the drainage of Sedgemoor? Was he disenchanted as new discussions with Westerdyke indicated the Earl's dissatisfaction with his work? Or was he opting out, as he did in Hatfield, before the mistakes in the scheme began to be apparent? Whatever the reasons for his withdrawal the controversies surrounding the efficacy of his work have exercised later generations as they did his contemporaries. Over three centuries frequently repeated myth has hardened into fact and extremes of praise and vilification have obscured both his career and its results. The careful biographical research of L.E. Harris has removed much of the myth about his career although the debate on the effectiveness of his work is not settled and probably never will be, especially in Hatfield Chase.

PART 4: THE DEBATE ON VERMUYDEN'S REPUTATION

To come to any firm conclusion on the success or failure of Vermuyden's work in Hatfield, or indeed in the Great Fen, is not easy. It is especially difficult in Hatfield because Vermuyden left no written indications of his intentions whereas in the Great Fen his intentions and principles have survived in the form of his '*Discourse Touching the Draining of the Great Fennes*'.³⁹ Moreover in Hatfield he lost interest

³⁹ *Loc cit*, pp 339-366, The '*Discourse*' was written in 1638 and published in 1642.

and withdrew long before the work was finished, but in the Great Fen he was in control from 1630 until the work was completed in 1653. There is no doubt either that he was the engineer of the Great Fen scheme but even that is in doubt in Hatfield Chase. The Great Fen work produced its quota of local violence and legal disputes but, considering the small scale of the Hatfield work, the troubles arising, especially in the Isle of Axholme, were more violent and much longer lasting. Also the legal disputes, especially with his financial supporters, were probably more troublesome. In this situation, therefore, the evidence tends to come from sources violently in favour of Vermuyden or violently opposed to him; which makes a balanced judgement difficult to achieve. Consequently the real test of the effectiveness of the work in Hatfield Chase must be based on whether or not it permitted a sufficient range of agricultural activities, both pastoral and arable, to allow the new settlers and their successors to make an adequate living. It is to this test that the next chapters will be directed but first it is necessary to review the historiography of Vermuyden's reputation, especially as it concerns his Hatfield work to put the discussion of the agricultural results of the drainage into context.

The early, seventeenth century writing on Vermuyden came, naturally, from writers with some direct stake in his drainage works. An anonymous pamphlet printed in York in 1701 was, according to Hunter,⁴⁰ an attack on Vermuyden's behaviour to the inhabitants of the Chase rather than a critique of his drainage work, though Hunter believes that it was contemporary with the works. The first serious criticism of Vermuyden *as a drainer* seems to be Andrewes Burrell's pamphlets of 1641 and 42. Burrell's criticisms were directed mainly at the inadequacy of the banks erected in the Great Level, criticisms which were largely dismissed by Harris on the grounds that Burrell was a rival for Vermuyden's position in the Great Level and an interested land owner whose land had been included in one of Vermuyden's washes. Burrell's views, therefore, represented, according to Harris, 'the airing of imaginary grievances of a disappointed man who had been "defeated" in his employment in the works of drainage...'⁴¹ Burrell's attack was based partly on Vermuyden's results in Hatfield. He wrote in 1642:

⁴⁰ Hunter, *op cit*, vol I, p163 and vol II p480

⁴¹ Harris, *op cit*, pp 85-89

My resolution is grounded upon the Yorkshire improvement which being raised to the best condition that either the Dutch, French or English ploughs could advance it, being sufficiently drained for tenne or twelve years already past (if the banks had not failed, as some years they did) yet the undertakers part is not now worth a Noble an Acre, one acre with another, as Sir William Russell, Knight and Baronet, and Sir Philiberto Virnate, being both deeply interested in that Levell and divers Dutch and Frenchmen that have plowed and reaped there informe me, many of the Dutch and Frenchmen that were Tenants there, being at this present forced to leave that Level, in regard it is in continuall danger of drowning.

Metcalf considers that this criticism is refuted by a pamphlet of the previous year entitled, *A discourse concerning the Great Benefit of Drayning and embanking...* which was presented to parliament by I.L. whom he assumes to be Joachim Liens. I.L. claimed that the failures of the drainage were a result of the activities of the inhabitants who 'cut down the bankes, damne up, or with cattle tread down, the new draynes, or neglect the scouring and deepening of their old, and repairing of their water-courses...' It is clear that the author is referring mainly to the Isle of Axholme as he cites, by contrast, the dryness of 'Hatfield Levell Marshland and other countries... (which) were always formerly endangered, and oftentimes suffered by such inundations that the force thereof took away several houses and barns, now no waters come to trouble them...' ⁴² Harris states that, in his testimony of 1646 to the parliamentary committee, chaired by Pelham, Burrell retracted his earlier evidence, but adds that it was the critical pamphlets of 1641 and 1642 that 'were the first of a long line of similar publications critical of Vermuyden... continuing down to the nineteenth century...' which have been accepted without question. ⁴³

Whilst Harris is certainly right in believing that criticisms of Vermuyden continued to be made because of the unquestioning acceptance of published views, it seems to be more than likely that the unquestioning acceptance of views favourable to Vermuyden were just as normal; for as Joan Thirsk wrote, 'Vermuyden has held the centre of the stage ever since Dugdale... described his efforts at draining Hatfield Chase and the flooded parts of Axholme, and deplored the opposition he encountered from the islanders... The same story has been told many times since.' ⁴⁴ As Dr Thirsk

⁴² Metcalfe, *op cit*, pp 116-7. I.L. might equally have been Johannes Liens who was closely involved in the Hatfield work and was possibly/probably(?) the engineering expert.

⁴³ Harris, *op cit*, p88

⁴⁴ J. Thirsk, (Axholme) p16, *A.H.R.* I, 1953, p16

states, the main source of these favourable views is Sir William Dugdale's *The History of Imbanking and Draining of divers Fens and Marshes both Foreign and in this Kingdom And of the Improvements thereby*. This famous work was first published in 1662 and it was more important in establishing a view of Vermuyden's work than the opposition pamphlets were for a number of reasons. It was more easily available than the essentially ephemeral works of pamphleteers; its prestige was much greater because it was a work of scholarship which traced the history of drainage up to the present through the documents whereas the pamphlets were obviously contributions to the debate, though this point is probably more significant later than it was in the seventeenth century, Dugdale was employed by the Great Fen undertakers from 1642 and could, therefore, be assumed to know of drainage from first hand. He had no doubts as to the value of Vermuyden's work in Hatfield and as much of his justification of the work was in terms of agricultural improvement and as this view is so frequently the basis of later judgements the extract is worth quoting in full:

And now, that the world may see what an advantage accrued to the public by this noble though chargeable work, I shall here from the before specified deposition, observe, First, that since the draining of Haxey Carr [in the Isle of Axholme], a great part thereof hath been sowed with rape, and other corn, for three years together, and borne plentiful crops.

2. That some part of the said carr, not worth above sixpence an acre *per annum*, was after the said draining worth Xs. the acre.

3. That several houses have been since built and inhabited in sundry places of the said carr, which formerly was drowned land: so likewise in other parts of the level.

4. That, since the draining, the grounds are better worth XIII^s. IV^d. an acre, than they were two shillings an acre before.

5. That of ten acres of drained land, fifty quarters of rape seed have been gotten in one year, and sold at XXX^s. the quarter.

6. That of the said drained grounds, they have usually had three quarters and a half of wheat upon an acre; three quarters or rye upon one acre; and eight quarters of oats upon one acre. And for six years together seven quarters of oats on an acre.

7. That, before this draining, the country thereabouts was full of wondering beggars; but very few afterwards; being set on work in weeding of corn, burning of ground, thrashing, ditching, harvest work, and other husbandry: All wages of labourers, by reason of this great use of them, being then doubled.

Dugdale then added that his source, called *The State of the Case*, told how Vermuyden and his participants and their tenants enjoyed 'quiet and peaceable

possession' until June 1642 when 'some of the inhabitants thereabouts pretending they had right of common... arose in tumults, had broken down the fences and enclosures of 4,000 acres, destroyed all the corn growing and demolished the houses built thereon'. The February following 'they pulled up the floodgates of Snow Sewer which... drowned a great part of Hatfield...'⁴⁵

De la Pryme took a very similar view in his manuscript history of Hatfield⁴⁶ and no doubt much of it came from Dugdale's work of which Pryme, as a Cambridge graduate and antiquary, would probably be aware. Like Dugdale he asserted the success of Vermuyden and saw the beginning of the civil war and the local uprising, ostensibly in support of parliament, with its consequent destruction of the Trent sluices as the reason for Vermuyden's failure. This view is so important subsequently that it is necessary to look at the credentials of Dugdale and de la Pryme both of whom are accepted as sources of special authority. In the case of Dugdale this is justifiable as he was the historian of drainage and engaged in the important Great Fen works personally. It is not, however, entirely possible to accept him as an unbiased witness. In the first place Dugdale was an enthusiast for drainage; to him all schemes were worthwhile and all opponents of such schemes were misguided. Secondly, he held office in the Great Fen with or under Vermuyden and presumably he accepted Vermuyden's version of the troubles and results in Hatfield Chase. Sufficient is known about Vermuyden as a person to discourage the view that to know him was to support him,⁴⁷ even so his record in acquiring influential support in England argues that his charisma was considerable. Given Dugdale's enthusiasm for drainage he would be Vermuyden's supporter. Much of Dugdale's account of the success of the Hatfield scheme does not, however, come from Vermuyden but from the previously mentioned document called *The State of the Case* which was published in London in 1655⁴⁸ during one of the interminable attempts to settle the claims of the Isle of Axholme commoners and was, therefore, a propaganda instrument.

⁴⁵ W. Dugdale, *Embanking and Drainage of the Fens* (2nd ed., 1772) p144

⁴⁶ B M Lansdowne MSS, 879, p190

⁴⁷ Harris, *op cit*, pp 57-8 and 92

⁴⁸ Dugdale, *op cit*, p144

The credibility of de la Pryme is based on his local connections. He has been described as ‘the son of one of the original adventurers in the drainage undertaking who had come from the Netherlands and who, therefore, was well acquainted with Cornelius Vermuyden’.⁴⁹ He was, in fact, the grandson of a Huguenot settler (probably a tenant rather than an ‘adventurer’) who claimed that he had lost hundreds of pounds in the Levels. The grandfather, Charles Pryme, came from near Ypres in French Flanders about 1628 and whether he lost his money because of bad farming conditions or civil disorder his grandson’s diary does not make clear. It is possible that Charles knew Vermuyden but it is extremely unlikely that his son Mathias, who was born in 1645, and his grandson Abraham, born in 1671, would ever have met him. Abraham spent his childhood in the Levels, took a degree at Cambridge and after spells as curate in Lincolnshire, Hatfield and Hull became vicar of Thorne in 1701 the same year as he was elected a Fellow of the Royal Society.⁵⁰ He died in 1704 having spent about eight years collecting material for his history of Hatfield which he left only in manuscript. He wrote several other local histories none of which was published. The Hatfield work is very incomplete, the bulk of it consisted of a history of England from the earliest times with occasional imaginative references to Hatfield. The seventeenth century part is brief and very similar to Dugdale’s account; he refers to the settlers as ‘living like princes’ in the seven years before the Civil War. His firm belief in the villainy of the commoners of the Isle was not, however, entirely a consequence of his relationship to an early settler or of his acceptance of Dugdale’s views, it was part of his deep hatred of all opponents of authority. This hatred permeates both his diary and the Hatfield MS. He had rejected the non-conformity of his forbears and become an Anglican minister at a time when the anglican conscience was troubled by its acquiescence in the Glorious Revolution of 1688. The non-resistance movement in the Church of England which emerged from this guilt had an enthusiastic devotee in de la Pryme. He attacked both presbyterians and quakers in his writings but his extreme ire was reserved for opponents of Charles I and, of course, especially Cromwell, in whose days, he wrote, ‘never any good thing was done’.⁵¹ He regarded the opponents of Vermuyden in the

⁴⁹ Harris, *op cit*, pp 35-36

⁵⁰ D Holland, ‘The Study of Local History - From Abraham de la Pryme to the Present’, *The South Yorkshire Historian No 1*, 1971, pp 35-6

⁵¹ B M Lansdowne, MS 811 pp132-143

same light, as resisters of proper authority and little credence can be given to his opinions on the drainage and its results. Even Korthals-Altes, who felt similarly about Vermuyden's enemies, wrote that de la Pryme 'gave way to his fancy too much, as well as his sympathies, so that I have been unable to accept him as a fully trustworthy historian.'⁵²

In the eighteenth century substantially the same line was followed by another antiquary living in the region, George Stovin, but much of his brief account of the drainage was devoted to the history of Nathaniel Reading who in 1655 became involved in attempts to collect the fee farm rent, which had been due to the Crown under the original loan agreement with Vermuyden and other debts. The income from the free farm rent had been given to Buckingham's heir by Charles I when the royal favourite had been assassinated by Felton in 1629. There was great opposition to paying it, especially during the Civil War and this was another issue arising from the drainage that engendered vast quantities of legal documents. Stovin's account gives a good example of how motives are distorted by the passage of time.

According to him, Charles undertook the drainage 'For the ease of his Tenants (from the destruction made by the Deer in the adjacent enclosures and corn fields) and for the good of all his subjects'.⁵³ De la Pryme had earlier hinted as such an interpretation of Charles I's motives as part of his anti-Cromwellian – 'Good King Charles' theme, but whilst it has been previously suggested that such relief was important to the inhabitants, for Charles the financial advantages to the Crown were much more important.

The nineteenth century writers on the drainage, Peck, Hunter, Stonehouse and Tomlinson were part of the full flood of the antiquarian movement. They included, therefore, much material copied verbatim from earlier writers, often without any acknowledgement. The published tradition on the drainage and the difficulties with the inhabitants is, consequently, central to these accounts and they express a sense of outrage at the behaviour of the men of Axholme who opposed 'so good a work'.

⁵² Korthals-Altes, *op cit*, p49

⁵³ G. Stovin, 'A brief account of the drainage of the Levels of Hatfield Chase' in *Y.A.J.* XXXVII, 1948-51, pp 385-391

Hunter in particular devoted space to the sufferings of the settlers and the participants and showed how rapidly their names disappeared from the Levels as a result of the hostility they received.⁵⁴ Nevertheless, by the nineteenth century, and especially in Tomlinson, there was increased recognition that Vermuyden's scheme had many weaknesses and that the local people had ample provocation for their hostility. The altered perspective was one result of the surveys of the drainage undertaken in the late eighteenth and early nineteenth centuries by famous engineers such as 'Smeaton, Stone, Thackray, Rennie & c.'⁵⁵ These men emphasised the major defects of the seventeenth century scheme – the choice of outfalls too far up the Trent and the cutting off of the Old Don with its outfall near the Ouse. Vermuyden's work had also been attacked by Samuel Wells who wrote with authority as the Registrar of the Corporation of the Bedford Level.⁵⁶ Gough points out that parts of Wells's criticism was repeated by Samuel Smiles in his *Lives of the Great Engineers* and by the most eminent Stuart scholar of the nineteenth century, S.R. Gardiner,⁵⁷ and it is probably in these attacks that the basis of the twentieth century belief that Vermuyden had been unfairly treated can be found.

There were two major studies of Vermuyden and his work in the twentieth century and one to which a discussion of that work is central. They have very different emphases but they have in common a desire to rehabilitate Vermuyden's reputation from what is seen as undeserved and uninformed obloquy. The first study, J. Korthals-Altes's *Sir Cornelius Vermuyden*, was written by a Dutchman but in English and published in London in 1925. The book has little to say about Vermuyden's major work in the Great Fen or on his career after he sold his Hatfield lands. Korthals-Altes's major object was to show that Vermuyden was a great and misunderstood man, a pioneer and man of vision who was overwhelmed by misfortune and, largely undeserved, opposition. It was pointed out earlier in this chapter that Korthals-Altes rejected de la Pryme as a historian because he gave his sympathies too much freedom. The same point can be made about Korthals-Altes. He credited Vermuyden with work he did not do, such as the successful draining of

⁵⁴ Hunter, *op cit*, I, pp 169-170

⁵⁵ Tomlinson, *op cit*, p105

⁵⁶ S. Wells, *op cit*

⁵⁷ Gough, *op cit*, p313

Sedgemoor and Malvern Chase, and he assumed that Vermuyden's fame was recognised before he came to England, hence his summoning by James I to repair Dagenham breach in 1621.⁵⁸ Also, he imagined that James I 'was so pleased with the execution of the Thames dam works... that he entrusted to Vermuyden the drainage of the Royal Park at Windsor',⁵⁹ whereas the Dagenham work proved very unsatisfactory and led, as so much of Vermuyden's work did, to many complaints.

In Hatfield Chase, Korthals-Altes had no doubt that there was a great need for Vermuyden's work. 'These manors,' he wrote of Hatfield, Thorne and Fishlake, 'yielded little else than game and fish, consisting as they did principally of lakes, marshes and wood'. Also he believed that they were totally uncivilised, '... for century after century, were these parks witnesses of nothing but strife, plunder, incendiarism and unrest'.⁶⁰ Just as he failed to question the need for the work it never occurred to him that any Englishmen could have been interested in undertaking it. It was sufficient that the local commission did not believe that drainage was possible for him to conclude that the natives had neither the courage nor the knowledge to do so. When the Hatfield work was found to be unsatisfactory and Korthals-Altes had underlined the mistakes made by Vermuyden, he found part of the reason for this in the failure of the Commission of Sewers to do more than maintenance.⁶¹ Just as he believed that no drainage had been undertaken before Vermuyden, so he believed that there was none after him until the late eighteenth century. The narrowness of Korthals-Altes's approach is difficult to understand considering the research which obviously went into his book. He used much material, often from Dutch manuscript sources, which underlined the technical and administrative weaknesses of much of the Hatfield work yet he still considered Vermuyden to be unjustly used by his critics.

Korthals-Altes was so critical of the drainage work in the Chase that his analysis is worth quoting extensively as it is against this backdrop that he judged Vermuyden.

⁵⁸ Korthals-Altes, *op cit*, p24

⁵⁹ *Ibid.*, p61

⁶⁰ *Ibid.*, p6-7

⁶¹ *Ibid.*, p129

On the forcing of all the Don waters into Turnbridge Dyke and the building of the bank which flooded the parishes of Fishlake and Snaith, he wrote:

Whatever view we may take of the dispute, and considered from a human standpoint, Vermuyden was in the wrong... His theory that he who is troubled by water has to face it, might in those days hold good in Holland and Zealand, but here, in England, the Dutch view was not accepted...

He agreed with Vermuyden's view that the Fishlake banks were unrepaired but added that even in a good state they would have 'proved inadequate to resist the floods caused by Vermuyden's drainage system'. He could have added that as the banks were only three feet high they were obviously not intended to take the sheer quantity of water that the new works entailed.⁶² Korthals-Altes's conclusion on this part of the drainage was, 'Indeed he had evidently failed with his solution for the problem of the Don drainage. The remaining arm of the Don... had not the capacity to carry away the surplus water into the Ayre (sic)'.⁶³

On the problem further south, Korthals-Altes was equally critical. Of the Idle drain, to which Vermuyden gave a 'sharp bend to the eastwards instead of proceeding northwards and, therefore, nearer to the Humber', Korthals-Altes thought that it 'was an error on the part of Vermuyden which it is difficult to excuse'. The existing dykes, Snow Sewer and Heckdyke, had outlets high up the Trent where 'the difference in levels is so slight that it is easy to understand that the drainage of the south of the Isle was inadequate'. Nevertheless, Korthals-Altes thought that Vermuyden made the problem worse by digging Markham Drain from Bull Hassocks to Snow Sewer 'thus further burdening this latter canal'. The route of the river Torne he also considered to be badly chosen 'its outlet into the Trent (near Althorpe especially) proved insufficient when heavy rain had fallen'. His criticisms concluded:

So we have technical difficulties and errors everywhere. It is painful to have to criticise such a man as Vermuyden, as we have nowadays such enumerable (sic) technical means of assistance at our service; nevertheless it should be said that Vermuyden took too little account of the great advantages connected with drainage to the Humber... I will not speak of Bycarrsdyke, which

⁶² York City Library, Archives Dept, M 154, Agar Estates in Yorks, Lincs, and Notts (Hereafter, York City Library Agar Estates) Petition of Inhabitants of Fishlake and Sykehouse, 1698, p61

⁶³ Korthals-Altes, *op cit*, p35

Vermuyden found established as a drainage canal. indeed, he could not dispense with it, but the easterly direction which he gave to the Torne, whereby it enters the Trent miles from that river's mouth and is, therefore, unable to discharge sufficient water is unconceivable. Vermuyden could have followed the course of the Don: great technical difficulties have occurred here (since)... and the question of the Torne and Don, by whatever names one may call that drain, would have been very easily solved had the canal been made to fall into the Humber close to Adlingfleet. Moreover it appears from old data that the river Don was navigable and would, therefore, have remained a navigation canal... Both the Torne and the New Idle... would have had greater capacity as drainage channels and a more rapid discharge... if they had been planned to run in a northerly direction. Vermuyden could have foreseen this, and it is beyond comprehension that he should have neglected it. I can only attribute this mistake to his strong desire to complete the drainage works with all speed and that he considered his system the quickest, cherishing the optimistic view that it would satisfy requirements. The event proved the fallacy of this opinion, though the system certainly proved to be a quick one.⁶⁴

Having thus damned every major part of the scheme and offered a sound and even more damning explanation of the inadequacies of the work, Korthals-Altes went on to quote, with obvious approval, Dugdale's previously cited encomium on the agricultural results of the drainage. In fact, even his belief that Vermuyden's method was quick was wrong.

Apart from Korthals-Altes's analysis of the engineering failures of the scheme, which are presumably based on his reading of the reports of the late eighteenth and early nineteenth centuries, he had other critical comments to make, on Vermuyden's behaviour. He questioned whether Vermuyden had enough time after his other commitments to cope with the Hatfield work. Though he considered that it would have failed anyway because of his 'most costly technical error in draining the Don without possessing or providing sufficient basin to carry off the surplus water of this river'. He described Vermuyden's behaviour as 'ostrich-like' when faced with the complications in Hatfield and he 'consequently plunged his friends and partners from Holland into difficulties, which he himself should have faced'.⁶⁵ The difficulties of these 'friends and partners' are well illustrated by documents which Korthals-Altes translated from the Dutch and although he did not draw such conclusions they make

⁶⁴ *Ibid.*, p36

⁶⁵ *Ibid.*, pp 55-6

it clear that the troubles of the drainage had at least as much to do with Vermuyden's inadequacies as with the opposition of the unruly local people. In spite of his catalogue of the technical, organisational and personal weaknesses of Vermuyden, Korthals-Altes remained convinced that Vermuyden was a wronged hero figure who struggled against an unfair conspiracy of events and opponents; 'despite all,' he wrote, 'one must admire his inventive faculty which always knew a way out of difficulties in his works, varied and distant from each other as they were. While everything worked against [him] civil war set his new fatherland in commotion, and the land of his birth and the land of his adoption became involved in war – he continued to face disaster and opposition and eventually succeeded in enriching England by two valuable granaries'.⁶⁶

L.E. Harris's careful and scholarly work, *Vermuyden and the Fens: A Study of Sir Cornelius Vermuyden and the Great Level* of 1953 had, as the sub-title implies, an entirely different emphasis. His aim was 'to present a critical assessment of Vermuyden's work... based primarily on that work in the Great Level'. But also he aimed to redress what he believed to have been unjustified criticism based on biased sources. He wished to redress the balance for 'during the last two hundred years or so there has been a regrettable, successive, and unquestioning acceptance of so-called facts in connection with the life and work of Vermuyden... the adverse criticisms of the seventeenth century, the unsubstantiated 'facts' of this and succeeding centuries, were repeated so that... there has been an uninterrupted progression of vilification until the judgement of today'.⁶⁷

Like Korthals-Altes, Harris recognised the weaknesses of the Hatfield scheme but he did not go into detail. To Harris, Hatfield was only a prelude to Vermuyden's much more important work in the Great Fen. The Great Fen work was, of course, more important in terms of the size of the area to be drained, cost and prestige and thus was far more important in terms of the assessment of Vermuyden's capacities and achievement. Even so, much of Harris's work on Vermuyden's early career established new information on Vermuyden and is of value in discussing his work in

⁶⁶ *Ibid.*, p104

⁶⁷ Harris, *op cit*, pp 13-14

Hatfield. For instance, it was Harris who drew attention to the fact that there was no evidence of drainage experience in Vermuyden's career prior to his arrival in England. He also established that before he came Vermuyden was employed as a tax collector. Consequently he was prepared to admit that his early work, including Hatfield, was some kind of apprenticeship in which some failures could be expected.⁶⁸ Harris's main interest in Hatfield was to establish the principles on which Vermuyden based his solution to the fen drainage problem and it was at this level that he defended Vermuyden's work. He claimed that, 'it is not true to say that Vermuyden's scheme for the draining of the level of Hatfield was *technically* a failure'.⁶⁹ By this statement, presumably, he meant that the principles of straight cuts, washes and sluices were correct as compared with the cheaper Westerdyke principle of high banks on the existing twisting water courses. Where he could Vermuyden avoided embankments 'which are very chargeable both in their making and maintaining'.⁷⁰ Harris also believed that Vermuyden was right to propose large coherent schemes rather than accept the minor improvements that many local people put forward, especially in the Great Fen.

Nevertheless, to accept Harris's assertion that Vermuyden's solution in Hatfield was 'technically correct' is difficult considering that, probably, as Korthals-Altes suggests, for reasons of speed, he chose the wrong line for his main drains and completely ignored his own basic principle of straight cuts in giving an almost right angle bend to the Idle at Dirtness and to the Torne near Hurst Priory to the Don at Thorne. Additionally the Torne cut was given three other sharp bends. Harris also accepted Vermuyden's claim that he had experimented with washes in Hatfield, writing that Vermuyden aimed 'to supplement the flood plains of the rivers flowing through the Hatfield Level by the provision of 'receptacles for the water in time of extremity to bed upon all occasions of floods, and so to keep the waters at a lesser height by far against the banks'.⁷¹ There seems to be little evidence of this being done in the Levels of Hatfield although Harris claimed that the principle was used on the surviving channel of the river Don with 'the southern bank of the river being

⁶⁸ *Ibid.*, pp 77 and 124

⁶⁹ *Ibid.*, p47. The claim is repeated on pp 54 and 57.

⁷⁰ C. Vermuyden, *Discourse*, *loc cit*, p49

⁷¹ Harris, *op cit*, p45

placed some distance back from the river so that the land between the river and the bank could be used as the agreement stipulated, as receptacles of the sudden downfall of water'.⁷²

Dunston went further than this and claimed that Vermuyden built a high and strong bank on the east side of the Don from Thorne to Turnbridge. He also implied that a dyke from Turnbridge to Goole was dug to relieve the Don of its extra flow. The dyke, finished in 1636 or 7 (the Dutch river), which was forced on the participants by the Council of the North was thus a second dyke resulting from the inadequacy of the earlier one.⁷³ Earlier accounts of the drainage mention neither the bank from Thorne to Turnbridge nor the dyke to Goole and it is possible that Dunston, like so many others, ascribed more to Vermuyden than he actually did.⁷⁴ The dating of the banks on the Don's remaining course is not easy. As Fishlake had its town court for ordering drainage and other matters it is difficult to imagine that the other villages in the Manor of Hatfield did not have their sub-courts. Hatfield possibly, therefore, had a bank to keep the Don out of its northern lands, and although along that boundary the Don had two courses it is also possible that the area between the river courses, Huddle grounds and Stainforth East Ings, acted as a natural wash and made such a bank unnecessary. The cutting off of the southern arm of the river raised its level and made a bank or a higher bank necessary as the natural basin of the river, Thorne Mere and the fens, was cut off. On the north side of the river from Stainforth to Thorne and on both sides from Thorne to Turnbridge there is no doubt that Fishlake maintained its banks; they were only low but adequate until Vermuyden increased the flow. Vermuyden claimed that the banks were inadequately maintained and he might have been right although the Fishlake Bye-Law Book gives plenty of evidence of the administration of their maintenance. It seems clear that Fishlake looked after the banks on both sides of the Dyke as the lands on the eastern side were Fishlake Common and because the joisting of the common land was an important part of the income of the township. A later claim suggested that the cost of maintaining the

⁷² *Ibid.*, pp 49-50

⁷³ G. Dunston, *The Rivers of Axholme with a History of the Navigable Rivers and Canals of the District*, (1909), pp 27 and 33. There seems to be no evidence of Vermuyden's part in either the bank or the dyke

⁷⁴ For example, a map by Hatfield W E A. in *Hatfield in History* (1970) shows every drain in the area as 'Vermuyden's Drains'

banks was eight pounds per year.⁷⁵ That the maintenance of the banks was successful is shown by Gaunt's study. He argued that the northern arm of the Don was artificial and that the area on either side was not liable to flooding in the same way as the older river courses. This was shown by the lack of alluvium 'the implication of this lack of flanking alluvium is that the Don north of Thorne... has been confined within artificial embankments throughout the entire period of its existence'.⁷⁶ It seems possible that the northern arm of the river was cut to relieve flooding to the south of Thorne. The fact that Fishlake was cut off from some of its commons by this course of the Don supports Gaunt's argument that it was an artificial cut, as does the name 'Turnbridge Dike' which it is given on Speed's map of Yorkshire of 1610.

Vermuyden's argument that the banks were inadequately maintained is almost certainly a cover for his ignoring of the interests of those outside the area to be drained. According to the Bye-Law Book three or four men were appointed annually as banksmen and entries for 1609 and 1616 possibly indicate that the duties were not always well conducted. In 1609 the bankmen and 'the whole towne' agreed that the 'bank which have been made by comon hand shall be laide forth to every one a part thereof and that all other which have been laid out by houst [host?].... shall so remaine repaired and mantayned by them from tyme to tyme here after'. In 1616 it was similarly agreed that the 'Banke on Dychmshe side shall att all times for ever hereafter be reprd and made by houseraive [whosoever] as hereafter they have been laid forth and divided'.⁷⁷

There were three maps produced in the seventeenth century after the drainage, two of them were only concerned with the distribution of the new lands. The third, the Cornelius Prole map of 1669, indicates banks but these are mainly in the south of the area.⁷⁸ For the northern arm of the Don it shows that a bank existed on the south and east of the river some distance from it, though oddly, the banks of the Fishlake side are not shown. These banks definitely existed though it would have been easy to ignore them at their pre-Vermuyden height. As a result of the complaints to Vermuyden and the intercession of the Council of the North the inhabitants of

⁷⁵ York City Library, M154 Agar Estates

⁷⁶ G D. Gaunt, 'The Artificial Nature of the River Don North of Thorne, Yorkshire' *YAJ Vol 47, 1975*

⁷⁷ Doncaster Archives, The Fishlake Bye-Law Book, 1580-1674

⁷⁸ B M Egerton MSS 3160 13674

Fishlake paid £200 for their banks to be put into a satisfactory condition (i.e. raised) and they were to pay to the participants £10 per annum for maintenance.

Nevertheless they do not appear on the Prole map. It is possible, therefore, that Vermuyden did experiment with a wash on the northern arm of the Don but that does not make Harris's repeated assertion that the Hatfield work was a 'technical' success any more acceptable given its other engineering weaknesses.

The third twentieth century study of relevance to the historiography of Vermuyden, like Korthals-Altes's, concentrates on Hatfield Chase. This valuable and unpublished thesis, 'Geographic Aspects of the Reclamation and Development of Hatfield Chase', covers a much longer period than the studies of Harris and Korthals-Altes, and is much concerned with agricultural transformation in the area. Like Harris and Korthals-Altes, however, Metcalfe started from the premise that Vermuyden's work in Hatfield had been undervalued. He wrote that most accounts of Vermuyden's drainage 'have given undue emphasis to the troubles which arose between Vermuyden and the commoners in the Isle of Axholme' which 'have resulted in the positive achievement of Vermuyden in Hatfield Chase being obscured'.⁷⁹ Whilst it is difficult to disagree with the first statement, the second is more controversial. It seems to be more likely that it is Vermuyden's inadequacies that have been obscured by the emphasis that has been given to the troubles which his work stimulated. Metcalfe, of course, did not ignore the criticisms of the work but concluded that in spite of its defects 'to deny the overall vast improvement, in Hatfield Chase, particularly, is to ignore the obvious and the fact that the work carried out by Vermuyden has remained in all its essentials the drainage system of the present day is answer in itself to criticisms made too near the event to be objective.'⁸⁰

Metcalfe, like Korthals-Altes, saw the Chase as largely useless before Vermuyden came, although he came to this view after undertaking much more careful research than Korthals-Altes did. Like Hunter, he discussed the pre-Vermuyden agriculture of the Chase but could not believe that agriculture was more significant than the fishing and fowling which have dominated accounts of fenland regions. Consequently, he

⁷⁹ Metcalfe, *op cit*, p93

⁸⁰ *Ibid.*, p123

understated the importance of the wetlands to the system of husbandry, as is the tradition in writing on the area. It was a normal assumption, for instance, that because the Chase was royal Forest there could be no common rights or, alternatively, it was all assumed to be royal demesne. He accepted too that it was the cost of the Dutch river which caused many of the participants to withdraw from the scheme. His serious attempt to analyse agricultural improvement in the post-Vermuyden period was seen almost entirely in terms of the expansion of the area available for agriculture as a result of Vermuyden's drainage. He accepted the late eighteenth century criticisms of the backwardness of the area in agricultural terms and thus confirmed the traditional view of a backward people clinging to unstinted pasture and common fields as they had clung to their old ways when Vermuyden came. Agricultural improvement was, therefore, until warping began about 1750, largely a result of the work of the great Dutchman. That the area could move with the agricultural trends of the seventeenth and eighteenth century independently of Vermuyden he did not appreciate.

Thus the twentieth century writers, although they have all explored Vermuyden's personal and professional failings, have all set out to rehabilitate his reputation. By and large they have done this in the traditional manner, by exaggerating the useless state of the marshland before 1626. Dr Thirsk has suggested that 'It may be that some of the misconceptions about the fenland have persisted because of an error in interpreting contemporary documents. The crown called the fenland 'unprofitable'. This has been taken to mean that the fen was unprofitable in every sense, when in fact, the crown was speaking as a landlord only... It was not concerned with the question whether the fen was profitable to the inhabitants'.⁸¹ They have also blamed the inhabitants for many of Vermuyden's difficulties and failures when quite clearly there were many other factors involved in his difficulties. The image of the 'heroic' entrepreneur and engineer pioneering in a foreign country was thus preserved and a scapegoat for the manifest deficiencies of the drainage could be found in 'an obstinate, ignorant peasantry clinging to a miserable life because they were incapable of grasping the superior benefits of drainage'.⁸² The other factors in the short-term

⁸¹ Thirsk, *Axholme*, p25, footnote

⁸² *Ibid.*, p16, quoting Dugdale's 'official' view of the inhabitants

failure of Vermuyden's work have been explored in more recent work based on some of the myriad legal documents that the drainage produced. These show that Vermuyden was not the lone and towering figure that the traditional accounts of the drainage suggest and also that financial and administrative failings were very important in causing the departure of many of the participants and settlers from the Chase and the Isle. They also show that the traditional chronology of the drainage is completely wrong.

A study of the legal cases which arose between Vermuyden and his financial backers in the Hatfield scheme gives a very different view of the events succeeding the supposed completion of the draining in 1627-8. Most existing accounts of the ensuing troubles stress the flooding of the northern townships, the protests of the commoners of the Manor of Hatfield at their share of the drained land and the louder and more persistent complaints of the Axholme commoners. The hostility of the Council of the North as shown in the compulsion of Vermuyden to give extra lands to the Hatfield commoners and to dig, at great expense, the dyke from Turnbridge to Goole were said to have disillusioned Vermuyden and to have driven him and many of his participants from Hatfield. The legal cases published in N. Curren-Brigg's *English Adventurers and Virginian Settlers*⁸³ show that the concentration on these aspects of the problems of the drainers is a great oversimplification of the situation which places the blame too much on external factors and obscures the responsibility of the internal organisation and planning. Curren-Briggs's book is concerned with the fortunes of the Kirby family in England and Virginia. The family's English inheritance is closely associated with Vermuyden's work both in Hatfield and the Great Fen. The cases which are précised by the author give some idea of the convoluted financial dealings which resulted from Vermuyden's attempt to act as sole financier of the Hatfield scheme. As a result of loans, mortgages and sales of lands already mortgaged or not allocated claims and counter-claims arose which were still causing problems at the end of the seventeenth century. In the case of the Bishop family the cases

⁸³ N. Curren-Briggs, *English Adventurers and Virginian Settlers*, (1969)

have been followed through into the eighteenth century.⁸⁴ Depositions on legal cases cannot be considered as unbiased sources but, fortunately, much of the information they contain about the maladministration of the drainage can be supported from the Cats's correspondence published in Korthals-Altes's study of Vermuyden.

Clearly these depositions alter the traditional accounts of the Hatfield drainage in several ways. Firstly, Vermuyden's role can be clarified. Traditionally Vermuyden's has been the only name associated with the work except for that of Matthew van Valckenburgh often called 'the treasurer' of the participants. Curren-Briggs claims that the cases show that the actual scheme of drainage was not Vermuyden's but 'that Johannes Liens was the hydraulic engineer'⁸⁵, a statement he based on the plaintiff's statement in a Bill of Complaint of Edward Bishop's children versus Timothy Venleteran, John Lamott, John Monncy, Sir Cornelius Vermuyden and John Gibbon. In this, Liens was described as 'the chief artist in the Level'.⁸⁶ This might seem a thin piece of evidence on which to rob Vermuyden of his responsibility for draining Hatfield Chase but it fits in with what little is known about Vermuyden and the Liens family. Various members of the Liens family had been leading figures in the Dutch pressure group at the court of James I and one of them, Joachim, is believed by Harris to have summoned Vermuyden to England as chances of draining the Great Fen appeared to be growing. There is no known record of Vermuyden's reputation as a drainer before his coming to England and Curren-Briggs claims that 'it is certain that [Vermuyden] had established a reputation as a man of vision and an organiser long before he left his native land', otherwise, 'he would not have been invited by Liens to take charge of the financial side of the operation in 1622'.⁸⁷ The basis of his certainty is not stated by Curren-Briggs but Harris also speculates that his previous experience was in finance. Neither Joachim nor Johannes Liens are mentioned in accounts of the drainage and it seems likely that the primacy of financial considerations to both James I and Charles I was the reason for Vermuyden's

⁸⁴ L. Miller, 'The History of the Travis Charity and its schools in Hatfield and Thorne (Yorks) and Wroot (Lincs.), 1710-1968'. Unpublished M.A. Thesis, University of Sheffield, 1974, pp 24-44 and 431-433. I would like to record my grateful thanks to Mr Miller for lending me his own copy of his thesis and for permission to photocopy large parts. Also for bringing N. Curren-Briggs's work to my attention.

⁸⁵ Curren-Briggs, *op cit*, p505

⁸⁶ *Ibid.*, p578

⁸⁷ Curren-Briggs, *op cit*, p505

emergence by 1625 as the leader of the Dutch pressure group. Similarly Vermuyden's position as the financier ensured that his was the name most frequently to emerge in disputes and to be recorded in the ensuing documents. There are, however, other indications that Johannes Liens was more heavily engaged in the actual drainage work than has been recognised. For example, in 1629, which is before Vermuyden left the Level, the Commission of Sewers for the Isle of Axholme met and agreed with John Liens and 'other Dutchmen of his party' to drain 'the carr grounds and many grounds in Axholme, and other great Carrs, and drowned grounds in the County of Nottingham' by making sluices 'on the river called Bickersdike'.⁸⁸ Significantly, although local tradition ascribes every bank and dyke to Vermuyden, the bank of Bickersdike as it flows north of Misterton is still known locally as 'Liens's Bank'. It is also possible that Johannes Liens was the author of the pamphlet signed I.L. which Metcalfe suggested was by Joachim Liens. As the purpose of the pamphlet was to show that the failures of the drainage in Axholme was the result of the damage of the inhabitants it would be natural, if he were the engineer, for him to defend his work. Liens was responsible for the building of the Dutch river as, by the time it was built, Vermuyden had left the area and was reluctant to have any more to do with the drainage which went on for some years after he became engaged in the Great Fen. In 1635, Liens petitioned the King and described himself as Director of the work of Draining Hatfield Chase.⁸⁹

It becomes clear in the cases printed by Curren-Briggs that another great source of dissatisfaction with the scheme was the inadequate distribution of individual plots of land. This failure appears to be partly a result of the unfinished state of the drainage and partly a result of bad surveying. It was a very important failure for out of the ensuing chaos Vermuyden lost the support of his financial backers and brought about many of the legal cases which dogged him for years. The bad surveying was probably not Vermuyden's fault as the case in which Johannes Liens was named as engineer in the Level also named Mr (David) Perole as the 'chief surveyor'.⁹⁰ But the overall responsibility for financing and carrying out the work was Vermuyden's and

⁸⁸ Korthals-Altes, *op cit*, p119

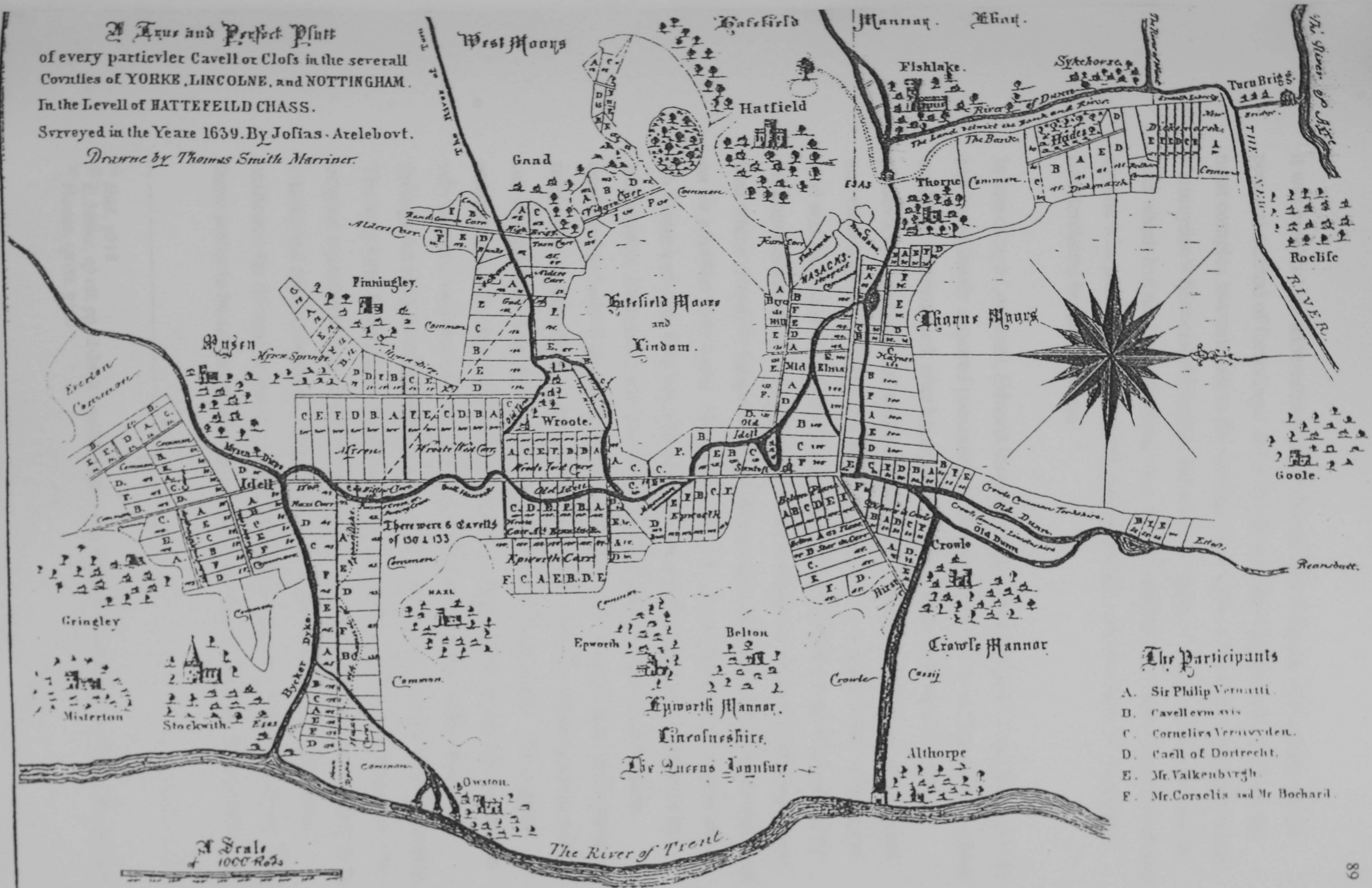
⁸⁹ C S P D, Ch I, No 12, 1637-8, p57

⁹⁰ Curren-Briggs, *op cit*, p505

A True and Perfect Platt
of every particuler Cavell or Clofs in the severall
Counties of YORKE, LINCOLNE, and NOTTINGHAM.
In the Levell of HATTEFEILD CHASS.

Surveyed in the Yeare 1639. By Josias Arlebovt.

Drawne by Thomas Smith Mariner.



- The Participants
- A. Sir Philip Veratti.
 - B. Cavell exm. vis.
 - C. Cornelis Veruyden.
 - D. Caell of Dordrecht.
 - E. Mr. Valkenburgh.
 - F. Mr. Corselis and Mr. Bochard.

Arlebout's Map of the divisions of the Drained Land of 1639 redrawn in a much clearer version by Thomas Smith Mariner for Read's *History of the Isle of Axholme* (1858)

Publ. for Read's History, 1858

it was here that his underestimation of the cost and difficulty of the work and his personal method of financing it led to the most dissatisfaction of his backers, the most complex lawsuits and to the withdrawal of some of the Dutch financiers when Vermuyden's financial difficulties led to the charging of scotts or drainage rates on land which had not been allocated. As it was decided by the Council of the North that anyone who paid outstanding scotts could claim the land the chaos of claims and counterclaims became extreme.

In one case, a Londoner, Edward Bishop, bought 400 acres from Vermuyden in 1631 and immediately acquired possession of 90 acres in the Severals. The other 310 acres could not be identified, after his death in 1633 his widow attempted to gain possession of the land but 'could not find out in which cavell the land was situated, and there were many others in a similar position'.⁹¹ As a result of this situation the land was redivided in 1634-35, seven years after it had been divided into thirds by the commission led by Viscount Aire. In the reallocation, widow Bishop was given land which already belonged to John Gibbon and legal battles for its possession went on for a further forty years. The reallocation was carried out by a Mr Hampe and a Mr Smith and after they had carried it out they acknowledged the help given by Vermuyden, Johannes Liens and David Perole.⁹² Shaky claims to ownership continued to bedevil landlords in the Levels for much of the century, but irritating as these were to individuals a more serious long term weakness of the drainage work can be attributed to the failure to survey and distribute accurately. The original estimations of the amount of land drained were exaggerated, which was one reason why owners could not find land allotted to them, but because of this and other failings the most pressing problem became the need to meet the claims to ownership. The long term financing of the drainage was, therefore, conveniently forgotten. The original agreement stipulated that Vermuyden was 'to transfer to a corporation; to be established for the perpetual preservation of the works, lands of a yearly value sufficient for the maintenance of them, to be held in trust for him and his heirs',⁹³ but there seems to be no record of such lands ever being set aside with the consequence

⁹¹ *Ibid.*, p518

⁹² E. Miller, *op cit*, pp 32-34. It was this reallocation which was recorded in Arlebout's Map of 1639

⁹³ Hunter, *op cit*, p160

that the preservation of the works had to be entirely financed by scotts with crucial consequences for the future agricultural development of the drained lands. It is quite possible, therefore, that Vermuyden might not have been personally responsible for either the mistakes in the drainage, which have received such attention, or for the chaos over the distribution of the drained lands which has received almost no attention at all. Why then is Vermuyden's almost the only name connected with the drainage? The answer seems to lie partly in the original agreement with the King in which Vermuyden took sole responsibility for the work and his subsequent acquisition of the Manor of Hatfield and the royal share of the drained lands and partly in his ambitious, unscrupulous, driving personality. But the main reason must be his financial involvement which ensured that all the loans and sales went through him, ownership of the new land was vested in him until it was distributed and, therefore, not only did his name figure on all the documents but he was primarily engaged in negotiation, financial and legal and was the figurehead who faced the public and had to answer to the complaints of both participants and local opponents.

The financial organisation of the Hatfield work has produced debate. Harris wrote that 'The Hatfield Chase undertaking could more truly be referred to as "onderneming", because, with two exceptions, it was financed entirely from the Netherlands on the pattern which had for so long been in use in that country. The agreement was between (the king) and Cornelius Vermuyden, of London... but while Vermuyden was the principal undertaker, he was, of course, acting only as an agent for the other participants, each of whom was to benefit from the profits of the undertaking in proportion to his contribution to the capital fund'.⁹⁴ But this does not appear to be the case. Vermuyden was not the agent of this group of participants, 'He had raised capital by anticipatory sales of land to [chiefly absentee] Dutch investors'.⁹⁵ The nature of this relationship is brought out by the subsequent legal cases. In 1633 Vermuyden brought a case against Sir Philibert Vernatti, John Corsellis and Sir James Campbell, all leading investors, over a debt of £2,000. In his

⁹⁴ Harris, *op cit*, pp 43-44

⁹⁵ M. Albright, 'The Entrepreneur of Fen Draining in England under James I and Charles I An illustration of the uses of Influence', *Explorations in Entrepreneurial History* 8, 1955, p 55

précis of their deposition Curren-Briggs outlined their version of the financing of the Hatfield work:

Vermuyden agreed to undertake the drainage at his own expense... Vermuyden proposed to sell to the defendants and others unnamed some of the lands which had been allotted to him when the rest was drained, for a price agreed between them. The money was to be paid shortly after on terms laid down by Vermuyden. Vermuyden undertook to bear the full cost of draining and ditching except the cost of digging the ditches which divided the land of each participant. It was intended that the work should be finished before the end of the Summer of 1628 after which the participants would pay Vermuyden the money for the land they had contracted to buy... they complain that like many of the other participants they advanced money to Vermuyden before the draining and ditching were completed, and that Vermuyden promised... possession at an early date.⁹⁶

If these defendants were right Vermuyden was not their agent but the vendor of lands to be drained. Vermuyden, if he was anybody's agent, was probably, as was suggested earlier, the agent of a Vermuyden/Liens family partnership. Furthermore, the defendants also indicated where the blame should lie for many of their misfortunes in the Chase. 'They complain that Vermuyden dealt so deviously with the tenants of the several manors and lordships who claim "commoners rights" in the area to be drained that they were antagonised and numerous lawsuits arose, which have contributed to the delay.'⁹⁷ This is a very different explanation of local hostility to that which has dominated most accounts.

It is quite obvious that Vermuyden's claim to have completed the drainage in two years was fraudulent and was based on his desire to satisfy those who had invested in the scheme. That they were not satisfied is clearly shown in this case. The defendants state that:

In spite of having received large advances on the land he has still not yet [June or July 1633] so much as begun to drain a great part of it eight years later... Vermuyden has for a long time claimed that the land was fully drained and ready to be divided, but they do not believe this. On the contrary they think he has taken their money and the money of other participants for his own use in order to force them to take a share with him in the cost of drainage: first under the pretence of levying certain scotts, or taxes, for

⁹⁶ Curren-Briggs, *op cit*, p509

⁹⁷ Curren-Briggs, *op cit*, p510

dividing the whole level as though it were already to be divided, while in reality four fifths of it was still under water. He raised a large sum of money by way of impositions and scotts amongst the participants which were paid in the belief that the money was to go to the cost of digging boundary ditches. In reality it went to pay for works which Vermuyden should have paid for himself.⁹⁸

The Surveyor-General, Charles Harbord on 1 November 1633 certified that 20,738 acres of the land in Yorkshire, Nottinghamshire and Lincolnshire had been drained and that 3,767 acres remained to be drained.⁹⁹ The defendants were probably even nearer to the real proportion of drained and undrained land. Throughout the years of the 1630s there is a constant stream of petitions, from Fishlake, Sykehouse, Snaith, Nottinghamshire, Lincolnshire and even the villages on either side of the river Ouse. One of the petitions from Fishlake, Sykehouse and Snaith relates to the unfinished state of the Dutch River, reputedly finished in 1633, but according to the petitioners not finished in 1636.¹⁰⁰ There were also petitions from the southern parts of the drainage from 1628 to 1634 for the reopening of the Idle River which resulted eventually in the New Idle River being dug. It was not, therefore, part of the original scheme. Not only was the drainage not finished, it was, according to two of Vermuyden's erstwhile partners, Vernatti and Corsellis:

so badly done, and so unskilfully managed that the participants, who lived abroad fearing that they would see no profit from their investment refused to pay any further scotts. Vernatti, Corsellis and Campbell together with those participants who lived in England, who had invested the major part of their estates in the venture, were in danger of losing not only their money, but also the land they had bought in the level. Vermuyden appeared to be altogether careless of their fate once he had got their money, and refused to finish with the work unless the purchasers agreed to undertake further drainage which he now contended was necessary... They only paid the money under duress and complain that Vermuyden neglected the work and was absent much of the time.¹⁰¹

They add that 'the new river should have been cut in the first place'.¹⁰² But the most important part of the statement indicates their belief that Vermuyden's lack of

⁹⁸ *Ibid.*

⁹⁹ C.S.P.D. Charles I, 1631-33, p271

¹⁰⁰ C.S.P.D. Charles I, 37, 1635-6, p60

¹⁰¹ Curren-Briggs, *op cit*, p510

¹⁰² *Ibid.*

interest and his, and possibly, John Liens's inefficiency, was the reason for the unfinished state of the drainage, with, they claimed four-fifths still undrained eight years after the start of the work. Vermuyden's principal enemies were, therefore, by this time, the mainly Dutch participants, not the locals whose opposition was merely an irritant. These participants also imply doubts about the source of the money for Vermuyden's purchases in 1628-30, of part of Sedgemoor, Malvern Chase, and the loan of £10,000 to the King on the security of the Royal share.

It seems difficult to accept the defendants' deposition that so little had been done between 1626 and 1633 when Vermuyden had claimed that the drainage had been finished in a very short time. Acceptance of this claim established Vermuyden's reputation with his biographers, and possibly with his contemporaries, as a brilliant organiser and a man of vigour. Various times have been given for the completion of the work. Harris wrote that 'The expedition with which the work on the scheme went forward was truly remarkable, and certainly a tribute to the organising ability and energy of Vermuyden himself. In about eighteen months... towards the end of 1627, Vermuyden was able to claim that the work was completed...'¹⁰³ Korthals-Altes made similar comments but gave him a longer period, 'three years later [Vermuyden] had completed the drainage'¹⁰⁴, though a few pages later the time of completion was extended to five years.¹⁰⁵ The implication of all these dates is, of course, that the digging of the Dutch river was after the completion of the main part of the drainage and none agree with the claim of the defendants that in 1633 large parts of the work had not been started. Fortunately there is other evidence, from sources less closely involved in the disputes, which show that Vermuyden's opponents were probably right in their claims.

Depositions taken in Hatfield in 1662 for a Chancery case, *Portington v. Irwin*, show that the drainage took much longer than Vermuyden claimed. Although the dispute over ownership of part of an area called the Hassocks had its origin in the disputes after the drainage began, the evidence which emerges on the drainage was not in

¹⁰³ Harris, *op cit*, p49

¹⁰⁴ Korthals-Altes, *op cit*, p29

¹⁰⁵ *Ibid.*, p37

dispute and the depositions on behalf of both sides to the dispute broadly agree. On the completion of the drainage John Noades, of Hatfield, gentleman, aged 72 said that he 'hath heard and doth verily believe that the Levell of Hatfield Chase was p.fectly dreyned about twenty four years agoe'. By 'p.fectly' he presumably meant that the major works were completed. Other deponents agreed that 'a great drayne was cutt and made betwixt Tudworth Ings and the Hassocks' and gave various dates for it. One deponent remembered that it was being cut 'about 25 or 6 years ago the draynage of the Levell of Hatfield Chase beinge then about to be p.fected' another that it was '7 or 8 and 20 years agoe' and a third 'about six and 20 years agoe'. The Hatfield Common Drain was, therefore, dug between 1634 and 1637, near the end of the draining. Several points of interest emerge from this series of depositions.¹⁰⁶

Firstly, Hatfield Common Drain which was ascribed to Vermuyden by Korthals-Altes – 'Vermuyden also constructed a canal from the elevated ground round Hatfield past Tudworth by way of Dirtness to the Trent near Althorpe'.¹⁰⁷ It was in fact ordered and supervised by Hampe, Steward of the Manor of Hatfield under John Gibbon, some time after Vermuyden had lost interest in the levels. Secondly, the area drained by this drain included the land between Tudworth and Thorne Mere, which was one of the wettest parts of the levels. This gives some support to the defendant's claim in the 1633 case that large parts of the supposed drained lands had not been touched eight years after the drainage started. Thirdly, it confirms that the Dutch river was not dug as a postscript to the rest of the work which took about twelve years to complete not the eighteen months or two years claimed in the traditional accounts. Finally, the later work was not just minor diking but included important works like Hatfield Common Drain.

The accusations made in their defence against Vermuyden cannot, therefore, be simply dismissed as the exaggerations of disappointed investors frightened of losing their wealth and ready to strike at Vermuyden who had persuaded them to invest in a risky scheme. Other evidence also exists in a form less liable to exaggeration than legal depositions, which helps to confirm their complaints. Korthals-Altes included in his account of Vermuyden's career several important extracts from the private

¹⁰⁶ W. Y. A. S., WYL 100, TN/HC/B/13, Portington v. Irwin

¹⁰⁷ Korthals-Altes, *op cit*, p29

correspondence of the Cats family held in the Museum Catsianum at Leyden University, which shows that the dissatisfaction of the participants grew long before Vermuyden left the levels and the issue of the Dutch river emerged. Sir James Cats had bought the Manor of Finningley, to the south of Hatfield Chase, and 600 acres of drained lands. As early as November 1628, Sir James was writing from Finningley to the Netherlands with complaints of inadequate supervision of the workmen engaged on the drainage and of Vermuyden's neglect of affairs.¹⁰⁸ In May 1631 the Collection showed seven of the investors in the Amsterdam syndicate appointing Marcus van Valckenburgh and Jacob Cats, Sir James's nephew, to investigate the state of the Hatfield drainage and 'to receive instructions about the lands still under water', among other duties. The anxiety implied in these instructions was confirmed by Jacob Cats's correspondence with his uncle in London. Jacob asked Sir James to 'dispose of his portions for him, for he has had enough of the business, the more so as he sees not only evasion of the contract in every way, but an attempt to force them to the making of banks this being contrary to contract'. He also wrote moderately optimistically about farming prospects but added that he 'was sorry to notice that only 30 of the 600 acres were arable and regretted that they were not at present in possession of all the land they had bought'. In September of the same year another correspondent wrote to Sir James Cats to express his disgust that participants' land would be sold for £1,000 scotts arrears by Vermuyden. 'If,' he wrote, 'there is justice in England they will sell Vermuyden's land not ours'.

The correspondence brings out also an important point which does not emerge elsewhere. Vermuyden had sold land to Sir James Cats with the promise that 'the fields should be handed over, in April or May 1628, free from lock, dam, scotts, water dues, and other charges', hence presumably the nephew's reference to 'evasion of contract'. This is not proof that Vermuyden made similar promises to every investor, though Korthals-Altes shows that Vermuyden had huge debts for scotts by 1635 although he had sold the bulk of his lands in 1630. He did not sell the last of his Hatfield lands until 1654 when he sold 1,578 acres, but he was assessed on 4,500 acres from 1629-35¹⁰⁹ which does suggest that he had made this promise to others

¹⁰⁸ *Ibid.*

¹⁰⁹ *Ibid.*, pp 79-94

besides Sir James Cats. It was these debts which led Korthals-Altes to believe that the Hatfield scheme left Vermuyden penniless. He had, of course, many other irons in the fire by that time and his obligations and debts were very complicated. The basic reason for his difficulties seems to be the same as in the small Dagenham work, great underestimation of the difficulty of the work and consequently its time and cost, hence his attempts to pass over his costs to the participants. His financial problems were well established before he was forced to contribute to the building of the Dutch river by a spell in prison, and many of the participants were clearly disillusioned long before that additional financial burden occurred. The participants' disillusionment no doubt had something to do with the opposition they received from local troublemakers but equally clearly this was of relatively minor significance, at least in the early years of the drainage, compared with the mismanagement of the scheme and the financial pressure to which Vermuyden's mistakes had subjected them. The widow of Edward Bishop claimed, for instance, that she paid £600 in 'scotts and other taxes' between the death of her husband in 1633 and December 1637 on 400 acres of land, 310 acres of which had never been in her possession.¹¹⁰

As the work in Hatfield appears to have been going wrong early, the question must be raised, why did Vermuyden saddle himself with extra burdens by buying the Manor of Hatfield and the King's third of the drained land? To do so he increased his financial problems and probably increased the suspicion of the participants about his use of their money. He must have anticipated real advantages from the purchase, which seem to fall into three categories. Firstly, by allowing the Crown to show a profit on the 1626 agreement he could expect to increase his prestige at court and acquire support in future. This occurred with his knighthood and royal support in his candidature for the Great Fen project. Secondly, he believed that the Lordship of the Manor of Hatfield would greatly increase his power to deal with the inhabitants especially the troublesome inhabitants of Fishlake and Sykehouse. Like some of the writers on this subject, he probably exaggerated the powers of the Lordship and underestimated the power of the custom of the manor to protect the rights of the commoners. Korthals-Altes wrote, for instance, on the Council of the North's attempt to remedy what the commoners believed to have been an unfair distribution

¹¹⁰ Curren-Briggs, *op cit.* p518

of the new lands ‘this verdict appears to me to have been unjust, there having been no privileges of importance in Hatfield Manor and the only recognised right being that of the inhabitants of Crowle to dig turf’.¹¹¹ Turbary in Crowle had nothing to do with the issue, of course, as Crowle is outside the Manor of Hatfield to which the dispute was confined, but the inhabitants had many valuable privileges which they fought to keep against various lords of the manor from 1607 to the early nineteenth century. Commoners’ rights were clearly recognised by the 1624 agreement with James I. Nevertheless, it is probable that Vermuyden believed that lordship of the manor would increase his standing with the Council of the North and allow him to ignore complaints and deal vigorously with opposition. Thirdly, as problems in Hatfield began to mount and it became more obvious that the promises he had made to Charles I to procure his agreement to the work could not be fulfilled, Vermuyden did not want the Crown to be involved in the affair. It must sooner or later have become obvious to royal officials that the claim to have completed the drainage in 1627 was fictitious and had the Crown retained a financial interest and expectation in the Chase Vermuyden would have had to deal with royal officials and not the local people whom he believed he could bully or the participants who could be side-tracked. As it was, he was pursued through the courts but the expertise he developed to escape the consequences of his failure would probably have been less successful in dealing with the power of the Crown. In February 1638-9 a paper entitled ‘Information for his Majesty on how he has been abused in the bargain of Hatfield Chase’ was compiled by Lord Deputy Wentworth, the former President of the Council of the North and a long time opponent of Vermuyden, and two others. It refers to the royal loan of £10,000 on the security of the Manor of Hatfield, and the royal third of the drained lands, and the additional payment of £6,800 made by Vermuyden when the land was transferred to him on the non-payment of the loan. They calculated that the value of the land acquired was £29,475-15-0 (at 15 years purchase) plus £15,000 for land in Nottinghamshire and Lincolnshire – a total of £44,427-15-0. The implication of the paper was that the King had been robbed and that steps should be taken to rectify the situation even though Vermuyden had sold it in 1630.¹¹²

¹¹¹ Korthals-Altes, *op cit*, p79

¹¹² C.S.P.D. Charles I, No 13, 1638-9, p78

In spite of slowness in completing the drainage and the chaos over the distribution of land, some participants were in possession of some of their land as early as 1628 and tenants began to arrive from France soon after. The new settlers in the drained land are usually referred to as Dutch and French and it is assumed that some of Vermuyden's Dutch labourers settled. There seems to be no evidence of this, nor of other Dutchman. Dutchmen were participants and settled as estate owners but their tenants were French Huguenots. A petition of Robert Long and John Gibbon of 6 June 1637 requested permission to move some tenants from the Chase to the Forest of Galtres. The petition stated that 'after draining the level of H Chase, most of the participants being Dutch, brought over divers French families out of Normandy and other parts of France, being all Protestants and planted them as under tenants.'¹¹³ Agriculture was, therefore, being carried on in an area which before 1626 had been common and waste and much of it too wet to use. The legal and administrative problems and the inadequacies of the drainage did, however, directly affect farming. For instance, ownership squabbles involved tenants who were likely to be suborned by a competing owner or ejected by a rival owner and replaced by another tenant. Scotts were so high and frequent that the new lands were starved of capital. Drainage was often so bad that tenants suffered huge losses of animals and crops and, more frequently, were severely limited in their farming options, with consequent loss of rent to the participants. In terms of agricultural history it is these issues which are fundamental in deciding the success of Vermuyden and those others involved with him the reclamation of the levels. How much of the economic change which occurred in the Chase after 1626 can be credited to the drainage and how much to other, often independent, factors? The following chapters will attempt to consider.

¹¹³ C.P.S.D. Charles I, 10, 1636-7, Footnote 1118

CHAPTER IV

AGRICULTURAL CHANGE IN THE WETLANDS OF THE MANOR OF HATFIELD, 1635-1750

PART 1: RENTS AND THE COMMISSION OF SEWERS

Many changes occurred in the agriculture of the south-east corner of Yorkshire in the seventeenth and eighteenth centuries, but the greatest was in the newly drained lands which passed into private hands between 1628-1635. This was a minor agricultural revolution on its own, not so much because land that was formerly drowned was now dry, that simple antithesis requires considerable caution, but because land that once belonged to everybody and yet to nobody, was now being farmed to a considerable extent on the system of large rentier proprietors and large tenants that was to become the basis of the changes which are usually called the English agricultural revolution.¹ The proprietors of the new lands were anxious for further improvement and high rents and their tenants, who were frequently foreign exiles, were also anxious to make a success of a new start in England. This chapter will attempt to make some judgements on the extent to which conditions in the Levels permitted them and their successors to realise their hopes.

After the drainage nearly two-thirds of the old commons and wastes belonged to private owners. The distinction between the 'new drained lands', known also as the 'participants' lands' or the 'scotted lands' and the old townlands was very important in agricultural terms and in other ways too. It marked a distinction between those who farmed in traditional ways on the open fields, haylands, closes and common pastures and those who were free, within the limitations of their land, to innovate. Later chapters will show that it would be wrong to take this difference too far. It also involved elements of hostility, not just between natives and foreigners, which was a difference which disappeared with time, but between those, the townland farmers, who believed that all forms of drainage were now the responsibility of the

¹ J.D. Chambers and G.E. Mingay, *The Agricultural Revolution 1750-1880* (1966) p21

participants, and those, the participants who believed that as all benefited from drainage, all should, therefore, contribute to drainage taxes.

From the earliest post-drainage times scots had been collected from the owners by the Commission of Sewers and were a great and much resented burden. They were laid usually in units of one shilling per acre and scots of three or four shillings were demanded almost annually. The inequity of this arrangement soon became apparent and after 1649 the new drained lands were differentially scotted with a shilling, eightpence and twopence as the basic unit of the tax. In the words of the minute of 1649, the shilling per acre tax was put

upon all lands in Ditchmarsh, Severalls, Haynes, Midleyings and Bray hills, Belton Playne, Starr Carr, Crowle, Dirtness, Rosse Carr, Wroo Carr, Epworth Carr and Haxey Carr,
And a Tax of eightpence the acre upon all lands belonging to the p.ticipants in Benningtack, Bull hassocks, the Willowes and Tysons ffarme, And a tax of twopence the acre upon all the rest of the lands, in Misson, Wroot, and ffiningley, Uggin carr West Mores and Rand carr²

The new scot rates provide a rough and ready basis for judging the success of the drainage in different parts of the marshland, but, as will be seen, even land scotted at the highest rate was often far from satisfactory. Also, some of the twopenny land near the river Idle was still seriously flooded at the end of the twentieth century.

As was shown in the previous chapter, the main source for the widespread belief in the success of the drainage was Dugdale who repeated claims of successful cropping on Haxey Carr and of greatly increased rent. Dugdale cited rents of 30 shillings an acre, 13/4 and ten shillings for land previously worth almost nothing. He also claimed that the new lands' great fertility was shown by high yields of wheat, rye and oats in successive years. He claimed that Hatfield marshland (Ditchmarsh), though previously subject to flooding, 'now no water came to trouble' the farmers.³ In contrast, Andrew Burrell claimed that the 'Yorkshire improvement', though it was

² University of Nottingham, HCC/6001, Minutes of the Court of Sewers. The minutes show that over several years view were widely different on this question. There were changes in this list, eg, Wroo Carr was later eightpenny land.

³ Dugdale, *op cit*, p144

raised to the best level that 'Dutch, French or English ploughs' could raise it, was not worth 'a Noble an Acre, one acre with another' and that the land was 'in continuall danger of drowning'.⁴ Similarly, Jacob Cats had expressed disappointment that only 30 of his 600 acres was fit for arable.⁵ It is very probably that even though all these claims, except the last one, were made to support a case for or against the drainers, they were true for some part of the drained land. It is when they are used, as they were originally, as an indication of the success or failure of the whole scheme, that they become valueless. For, as the evidence for the Hatfield, Thorne and Snaith levels shows, the success of the new works was very variable and that both in the short and in the long term it seems to show that the views of the critics were nearer the truth.

In the immediate post-drainage period, three documents have survived which permit some judgements to be made on the success of the works. The first document, a tithe list of 1635 for the Rectory of Hatfield, can be assumed to deal with all the Levels which were being farmed in the Rectory of Hatfield in that year. The interpretation of the document is not easy, though its general significance seems clear enough. The document consists of a letter sent by Stephen Varmier to Sir Arthur Ingram's steward in September 1636, five pages of which list the tithes collected for crops, including hay, and pasture in the autumn of 1635.⁶ There are also details of the sale of some of the crops at Hull and York. Ingram had leased the tithes in June 1635, some years before he bought the Lordship of the Manor and some of the drained land from Sir Edward Osborne.⁷

The accounts show that a large part of the drained land was pasture or meadow and that a small acreage was used for a fairly wide range of crops. Unfortunately, it is not easy to estimate the acreages for different land uses. As so often in agricultural history, the source is difficult to translate into statistics. Nevertheless, table IV(1) is an attempt to estimate the crop acreages from the values given in the tithe list.

⁴ Burrell, in Harris, *op cit*, pp 85-89

⁵ Korthals-Altes, *op cit*, p30

⁶ W.Y.A.S. WYL 100, TN/HC/C1 Rentals

⁷ *Ibid.*, TN/HC.A.9b Leases. The lease for £500 was from Henry Lee of Dunscroft, Henry Lee, gent, John Gibbon, Nicholas Gibbon, Clarke, John Atkins and Lord Gorges.

TABLE IV(1)**Land use in the newly drained lands of Hatfield Manor in 1635**

Crop	I Tithe quantity q-b-p	II Total grown (col.Ix10) q-b-p	III Yield according to Dugdale and Marshall	IV Estimated yield per acre in Hatfield	V Estimated acreage under crops
Oats	92-7-0 ¹	928	8 quarters ²	5-6 qtrs	169
Rye	6-5-0½	66-3-1	3 quarters	2½ quarters	26½
Wheat	1-5-0	16-2-0	3½ qtrs ³ 4-4½ qtrs 20-80 bush ⁴ 20-40 bush	3 qtrs	5½
Barley	2-3-0	23-2-0	-	-	say 10
Rape	13-0-0	130	5 qtrs ⁵	4 qtrs	32½
Flax	£14 value @ 6/8 per stone	420 stone	30 stone ⁶	20 stone	21
Beans	not specified, but few	-	-	-	say 5 acres
Estimates acreage under crops					260

¹ 12 quarters were described as 'very meane otts'.² A. Young, *General View...Lincs* stated eight quarters in Holland Fen also, p67³ *Ibid*, pp 68 and 70⁴ V. Marshall, *Review and Abstract... Vol I*, Northern, pp 78 and 151⁵ Actually 50 quarters in ten acres.⁶ Marshall, *op cit*, p398

The acreages given in the table must be regarded as very approximate as crops which failed utterly would not be tithed. However, the general significance is clear, for, either a very small amount of land was thought to be suitable for arable, or crops failed on a large area of the new drained land. Oats was quite clearly the most important of the corn crops and it was sold by Varmier for £60-18-8. The others were insignificant: rye was sold for £8-18-0, wheat for £2-7-6 and 'very meane barley' for £1-4-6. Some of the oats were also described as 'very meane'. Rape, the second crop in importance, was sold at Hull for £18-19-0, line worth £13-13-0 was collected and a minute amount of beans was grown.

The assumption behind the production of the estimates in table IV(1) was that the tithes represented one tenth of the output of the land and that to multiply the tithed quantity by ten would give the total produced in the whole level. This in turn was divided by average yields for the early seventeenth century, from land as near in type as possible, where such information is available. However, as Kain has pointed out 'one of the principal *lacunae* in European, agricultural history is the lack of quantitative data on crop yields in the period before central government began to collect agricultural statistics annually in the late nineteenth century. Average yields are not easy to calculate and there are great problems in using tithes for statistical purposes. Kain stresses that this is especially so for England, where customs varied from parish to parish, particularly in the use of the *modus* and in cash payments in lieu of payments in kind and lay proprietors had often replaced ecclesiastical authorities as recipients of tithe.

Kain has argued that a long run of tithe accounts is necessary to make convincing use of the data they contain and points out that this has been done in France where such long runs exist.⁸ The Hatfield list of 1635 is a single survivor, but possibly it is sufficient for the limited purpose for which it is used here. It shows how little of the drained land was in arable seven years after the supposed completion of Vermuyden's drainage and at the beginning of the reputed seven good years before the Civil War. Roughly 750 acres were tithed for hay and another 2,627 acres for pasture. About 400 acres of the pasture was also being prepared for rape which,

⁸ R. Kain, 'Tithe as an Index of Pre-Industrial Agricultural Production', *A.H.R.* 27, 1979, II, p73

presumably would be sown in August, the time for sowing overwintering rape.⁹ Rape appears, therefore, to be in process of becoming a very important crop on the levels though the later evidence suggests that oats were always more important. In this early period in the new stage of wetland history, however, it was still being used, as it had been for centuries, for meadow and pasture. With only one thirteenth of the new land cropped in this year, 260 acres out of 3,377, the document seems to indicate that Vermuyden's work had only limited success. This unsatisfactory proportion could be a result of underestimation of the crop acreage, though it is a higher proportion than the twentieth that James Cats wrote about in 1628. Also significant is that about 1,000 acres of Hatfield Level land is not accounted for in these estimations. This possibly implied that the land was not in use in 1635, either because it was useless or because the new owners had only taken possession of it after the redistribution of the lands by Smith and Hampe which was probably not completed by the date of the tithe list. The problems associated with the original division were partly solved by the redistribution although some disputes lasted for much of the century.

Obviously the tithe list refers to a transitional period in the history of the levels when much of the land was newly occupied and the tenants were still learning of its possibilities. The hierarchy of crops in that year supports this, with oats by far the most important crop. This was not just an indication that the land was not fit for less tolerant cereals, for oats was the traditional cereal for growing on new land.¹⁰ On newly drained fen the tolerant oats 'served for bread, drink and provender if need be' and it was probably grown as a means of survival in the early years. Rape which was 'The predominant and characteristic first crop on fen-mould'¹¹ was second in importance to oats in 1635 though it was a long way behind. Probably the 'fen-mould' was still not dry enough for rape. The smallness of the other cereals and the 'meanness' of the barley and even some of the oats appears to support the critical view of the immediate results of the drainage. The Hatfield tithes produced a second

⁹ Kerridge, *op cit*, p237

¹⁰ Kerridge, *op cit*, pp 130 and 159

¹¹ *Ibid.*, pp 235-6

piece of evidence tending to show that the levels were little different from before the drainage. Sir Arthur Ingram re-leased the tithes to John Duncan of York in December/January 1637/8 and added to the lease was the rider that the 'grounds and lands called the Levells or newe improvement are subject to the inundation and overflowing of the waters and have been diverse times wholly over-flowne by reason whereof it was agreed before the sealing and delivery of the... indenture that... John Duncan should have £100 yearly... allowed unto him in his rent... such years as any such inundation should happen', half the rent was to be abated when the levels were fully drowned.¹²

There is also evidence from 1641-1644 of the risks involved in cropping the new lands. In those years some of the land bought by Sir Arthur Ingram appears to have been in hand and accounts of costs, crops and yields were sent to the estate office at Temple Newsam.¹³ The document refers to five closes: Wyke Closes (30 acres), Ferne Carr (44 acres), Stawpers (or Stompers) Close (28 acres), Moor Hassocks Closes (80 acres) and Langholme Closes (56 acres). They were at the western edge of the drained land in an area known as the Severals between Tudworth and Thorne. All were scotted at a shilling per acre after 1649 and it is reasonable to assume that they did not represent the worst areas of drainage. The list of crops shows that there was no attempt in these four years to grow wheat or barley. The conclusion seems to have been drawn already that for these lands, at least, oats and rye were the only cereals to stand much chance of success. However, rape was the second crop in importance and rye came a long way behind. The outstanding features in the document are the frequency with which crops were either wholly or partly ruined by flooding and, where crops survived the water, the yield was low. In spite of the fact that Fearn Carr was the lowest rented area it was the least affected by drowning, although a good crop of rapes was reduced by floods in 1642. The other closes were drowned for some part of almost every year. It was mostly winter flooding, as it had been before Vermuyden's work, but the sorrowful comment that Moor Hassocks was drowned for about '3 moneths in the drought of Somer' in 1644, shows that it was not always so. As a result the 'profit', by which the agent meant income from crops

¹² W.Y.A.S. WYL 100, TN/HC/A 13a, 20 Dec 1637 and 15b, 13 Jan 1637/8

¹³ *Loc cit*, TN/HC/C5 Rentals

sold and joysting, from these five pieces of land was less by £7.14 than the cost of seed and labour invested. When the rent foregone is added the loss amounts to £745.78. There is little wonder that this land was in hand at this time, nor that the high nominal rents rapidly dropped to a more realistic figure.

The date of these accounts is of some significance in the debates which surround the drainage, for had they belonged only to the period after 1642 it would have been easy to lay the blame for the wet state of these closes on the men of the Isle of Axholme. The Isle men took the opportunity of the disturbed state of the country, prior to the raising of the Royal Standard at Nottingham in August 1642, to destroy the 'floodgates of Snow Sewer, one of the most important of the works... in consequence of which the waters of the Trent spread themselves over a great part of the levels'.¹⁴ Hunter states that the damage was done about Candlemas (2nd Feb) 1641/2 and that for about seven weeks the Isle men prevented attempts to repair the damage. These accounts seem to suggest that 1642 was not a very significant year, the lands suffered as much in 1641 as they did in the three following years. In fact, Fearn Carr had its best crop of rape in the summer of 1642.

The document, therefore, suggests that the immediate results of the drainage were poor whether the Isle men interfered with the sluices or not. At least in the Manor of Hatfield a large proportion of the land could only be used for the same purposes as it was before the drainage and where crops were grown it was accompanied by great risk. Only the rents expected for the land support Dugdale's assertion of great increases in rent on land which was almost worthless before. However, before his claim can be accepted more examination of rents within the level is necessary. Fortunately it is possible to trace the rental history of the level land on the Ingram estate well into the eighteenth century and to show that the exceptionally high rents were not to be found in the Ingram lands even in the highest optimism of the immediately post-drainage period. The Ingram land did not contain any of the poorest, twopenny land, but there is other evidence to show how little was required to rent it and how difficult it often was to find tenants. The notional rent on the five closes ranged from 17/6 to 4/2 but table IV(2) shows that during the next century

¹⁴ Hunter, *op cit*, I, p166

TABLE IV(2)

RENTS ON FIVE AREAS OF LEVEL LAND 1641- 1743

	1641-44	1653	1667-68	1680-85	1708	1743	
Wyke Closes	30 acres 14/- p. acre	Tenant: Edward Canbie 8/- p. acre	Tenant: Benj. Canbie 6/- p. acre	Tenant: Edward Canbie 6/- p. acre	Tenant: Edward Canbie 21 year lease dd. 1690 7/4 p. acre	Tenant: Thos Canbie 41 year lease £11 for Wyke Close plus 4 acres and Thorne Peel	
Ferne Carrs	44 acres 11/2 p. acre	Tenant: Richard Stones et al 48 acres 10/- p. acre	Tenants: Richard Rawles and 3 others 5/2 p. acre	Tenant: Henry Moore 4/2 p. acre	Tenant: Tim Moore and 2 others 5/6 p. acre	In leases as part of large farms. 16 acres described as 'meadow'	1774 lease refers to 44 acres
Stoupers and Langholmes¹	Stoupers 28 acres 17/6 p. acre Langholmes 28 acres 16/3 p. acre	Tenant: John Elwicke 60 acres 11/6 p. acre	Tenants: Robt Beaumont and 6 others 7/- p. acre	Tenant: Jo Mallinson and 6 others 1680 6/8 p. ac. 1684 Lease 7/4 p. acre	Tenant: Jo Smith and 3 others 1697 'improved' 30/- to £25 1708 in lease for 11 years £25. 8/4 . ac	Tenant: Wm Jackson Lease 21 years dd. 1731 for £25 Now 77 acres 6/6 p. acre	Leased by Wm Jackson 1747 for £20 1774 part Wm Jackson Level Farm
Hassocks	80 acres 13/8 p. acre	Tenants: 8 First H. 16 ac. 10/4½ p. acre Far H. 20 ac. 10/- p. acre Middle H. 14 ac 9.4 p. acre Long H. 30 ac. 10/6 p. acre	Tenants: 7 Mid H. 10/- p. acre Meer H. 9/4	Tenants: 5 and others and 'partners' 5/9 p. acre		Held in 3 separate leases Wm Killam held 22 ac at 6/9 p. acre Rest part of large farms	

¹ Treated as one area after 1641-4. W.Y.A.S. 100, TN/HC/C5 Rentals

rents for these closes never approached those amounts. Table IV(3) shows a similar situation in other parts of the drained land. As will be shown, the real value of level rents was much below face value.

Obviously rents in the levels up to 1750 reflected national trends as well as the state of the drainage. The 'frontier' nature of the levels must also have reduced demand for it, at least up to 1719 when the Isle men eventually compromised on their demands. The disputes in the Isle involved the whole level at times and led to murder and arson as well as armed riot. Even though the disputes did not concern the Hatfield part of the lands the troubles spilt over.¹⁵ Many of the 'protestant strangers' were sufficiently discouraged by riot or bad drainage to leave the levels which again must have left land difficult to let. The trend of rents nationally shows that even without these local difficulties the expectations of the supporters of the drainage were unlikely to be realised. Rents, according to Kerridge, 'peaked' in 1610 after the long sixteenth century inflation. In the 1620s prices fell and marked the end of the period of buoyancy in prices.¹⁶ The work of the drainers of Hatfield Chase and the Great Fen coincided with the end of this long buoyant period and it obviously contributed to it by adding to the acreage under cultivation. From roughly 1650-1750 years of rental stagnation were punctuated by periods of rapid decline. The worst years were probably the 1660s and 1670s and 1730-1745.¹⁷ The period 1680-1710 has also been described as 'critical' for agriculture,¹⁸ with part of the 1690s being called 'seven barren years'.¹⁹ The hundred years to 1750 concluded with Mingay's 'agricultural depression' of 1730-1750 when he found huge accumulations of arrears of rent,²⁰ but Kerridge claimed that rents were 'depressed for eighty years before 1750'.²¹ Holderness's graph shows that although there were two periods of sharp rent rises in the 1690s and again in the decade before 1720, the overall trend from 1650-1690 and from 1700 to 1750 was down. The trends in Hatfield differ from this

¹⁵ Lindley, *op cit*, pp 233-234

¹⁶ E. Kerridge, *op cit*, p344

¹⁷ D.C. Coleman, *The Economy of England 1450-1750*, (1977), p123

¹⁸ A.H. John, 'The Course of Agricultural Change 1660-1760', L.S. Presnell (ed) *Studies in the Industrial Revolution* (1960), reprinted in W.E. Minchinton (ed) *Essays in Agrarian History* I, (1968), p249

¹⁹ G.E. Mingay, *English Landed Society in the Eighteenth Century* (1963), p54

²⁰ G.E. Mingay, 'The Agricultural Depression, 1730-1750', *Ec.H.R.* 2nd Series VIII (1956), 3. Reprinted in E.M. Carus-Wilson (ed) *Essays in Economic History* II, (1962), pp 309-326

²¹ Kerridge, *op cit*, p347

TABLE IV(3)
RENTS ON SOME OTHER LEVEL LANDS 1637-1743¹

	1637-8	1653	1667-8	1685	1696-7	1743	
Meere Hills	Lease of farm at Idle Side alias Meere Hills. 20 years. £18-8-0	21 acres @ 17/2 per acre	21 acres @ 12/- per acre	21 acres @ 5/4 per acre 36 acres @ 6/4 per acre	36 acres @ 8/5 per acre	29 acres @ 10/4 per acre 36 acres @ 10/- per acre	
Midlings			23 ³ / ₄ acres @ 11/- per acre	10/- per acre	8/- per acre		7/6 per acre in 1763
Brierhills			alias Brewer's Hills. 40 acres @ 9/- per acre	alias Pride's Hills. 40 acres @ 7/- per acre	Leased 11 yrs @ £15 7/6 per acre Renewed 1706		
Ditchmarsh	Lease for 20 years. 40 ac. £32. 14/- per acre		8/6 per acre	5/- per acre	5/6 per acre	6/- per acre	

¹ Compiled from W.Y A.S WYL 100, TN/HC/A Leases and TN/HC/C5 Rentals

slightly, but given such a gloomy picture for agriculture as a whole it was little wonder that rents were so disappointing in the levels during the period covered by this chapter.

In the levels the trend of rents from 1683-1743 was slightly upwards but even in the latter year they were still below the index year of 1668 and less than half of the immediate post-drainage period. Explanations of the catastrophic decline between the early 1640s and 1683 must include those offered for the general decline in rents in the mid-seventeenth century and the relative stagnation to 1750. A.H. John has written that, 'It is possible that the extension of cultivation over the wastes and reclaimed fens, together with the slowing-up of population growth, might well have been the significant factors in originating the new [downward] trend of prices after the Restoration'.²² To these important points can be added the effect of the new crops and methods of cultivation which increased both production and productivity, even though the extent of these is still a matter of conjecture. Nevertheless, the new crops affected particularly the rents of meadow and pasture which had always commanded higher rents than arable, even enclosed, arable. Bowden has shown that whilst arable rents increased from 4/- per acre in 1600 to 10/- in 1640-1650, pasture rents only increased from 6/- to 12/- and meadow only from £10/- to £12/- in the same period.²³ This relative decline in the rents of meadow and pasture could be expected to keep level rents down as so much of it continued to be used in this way. None of these factors, however, explain the disastrous nature of the fall in level land rents. Whilst all would contribute to some extent, the most significant factor was almost certainly the inadequacy of the drainage.

In the two centuries after the drainage the works were overwhelmed many times by a combination of extreme weather and high tides. Several such catastrophes have been described in the local histories of the area. For instance, Tomlinson cites Thorne Parish Register for descriptions of severe floods on 15 Jan 1681, 27 April 1682, 13 and 15 Dec 1696, 18 Jan 1701, 18/19 July 1706, and de la Pryme's Diary records

²² John, *op cit*, pp 248-249a

²³ P. Bowden, 'Agricultural Prices, Farm Profits and Rents' in Thirsk (ed) *A.H.E.W.* IV, p 693, referring to Norfolk and Suffolk

floods in 1687 and 17 Dec 1697.²⁴ Apart from these very serious floods there were many others and occasional references to them occur in the Ingram rentals. In 1673, for example, the front page of the accounts noted that 'The Levill being drowned, the Levill Tenants retained their rents, expecting allowance for drowning as other lords allow'.²⁵ Thomas Canby wrote in 1711:

We have had my Lord a great fflood and forc'd to Watch our Banks three or four nights. But ye waters are now abated. There was a great Cropp of Rape in ye Low Levells, But all, or most of it is now gone and most of ye Low Levells and part of our high Levells I believe cannot be sown this year²⁶

Tomlinson's conclusion on flooding is clearly very near the mark. He wrote:

It would appear as if extraordinary floods were rather frequent not only while Vermuyden was engaged on his works but for many years afterwards, the disasters probably in some measure increased by the participants' banks, & c. not having become consolidated²⁷

The floods were serious enough in the damage they did to animals, crops and buildings, but they were equally serious for the long-term prospects of agriculture in the Levels. As well as serious floods there was the less spectacular chronic wetness of the land which caused tenants to give up their holdings and rents to be low. This problem was not solved until the twentieth century. The situation in the five closes in the early 1640s and other documents show, if not so clearly, that shilling land was often useless for agriculture. The rental history of the five closes is followed on table IV(2). This is one area which illustrates the problems faced by landlords. Ditchmarsh to the north of Thorne was scotted at the highest rate, it had long been embanked from the Don (or Turnbridge Dike, hence the name, Dykesmarsh or Ditchmarsh) and the commoners considered it well enough drained to accept half of it plus 200 acres as part settlement of their grievance over the quality of the commons allotted to them in 1628. Nevertheless, Lord Irwin's Ditchmarsh was often wet and without tenants. In 1671, 'the 40 acres in Dikesmarsh being untenanted was plowed and sewed with

²⁴ Tomlinson, *op cit*, pp 103-104

²⁵ Sheffield Archives, WWM BR2

²⁶ W.Y.A.S. WYL 100, TN/HC/C1, Correspondence Thomas Canby to Lord Irwin, 25 4 1711

²⁷ Tomlinson, *op cit*, p104

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²⁴ Tomlinson, *op cit*, pp 103-104

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²⁶ W.Y.A.S. WYL 100, TN/HC/C1, Correspondence Thomas Canby to Lord Irwin, 25 4 1711

²⁷ Tomlinson, *op cit*, p104

oats by Mr Edward Canby'.²⁸ In July 1692 it was again without a tenant and Timothy Moore the under-steward in Hatfield wrote to Temple Newsam about 'ye casualty of the weather', and added, 'for Dickmarsh I never yet had one Chapman – and to mow it will be very chargeable, besides if we sett it they will make us pay ye scotts wch it will never answer this year'.²⁹ Like Ditchmarsh, the commoners accepted part of Fearn Carr in satisfaction of their grievances in exchange for the wet West Carr. Yet in 1653 '10 and odd acres' of it 'being turned up' it was let for forty shillings for that year and a shilling an acre for the next ten years.³⁰

Table IV(3) shows that the closes of table IV(2) were not unique among Lord Irwin's level lands for their declining rents and other landlords suffered similarly. On the Bishop lands rents in the early fifties held up reasonably well. Nathaniel Base signed a lease in 1650 for 90 acres of Severals at £45 per year, the rent in 1633 had been £51.³¹ Thomas Garson held 60 acres in Dirtness for £36 and Isambar Savatt 30 acres near Crowle for £18.50. The 200 acres of twopenny land in Wroot was held by Francis Simpson by a lease of 1647 for £30. Nevertheless the downward pressure was there. Isambar Savatt in 1654, 'having no leas would have given up his land unless he have abatement of rent in regard to these bad times'. His rent was accordingly reduced to £15, 'because he is a sufficient tenant'.³² He thus fulfilled part of a contemporary fenland proverb, 'From the Farm to the Fen, From the Fen to Ireland',³³ which underlined the desperate straits that fenland farmers often reached. By 1668 the land belonged to Henry Travis and the 60 acres in Dirtness and the 30 acres near Crowle were held by Jacob De Camps and Isaac Beharrel jointly for £45. In the early eighteenth century the 200 acres near Wroot was let in two equal parts for £9-10-0 and £10 respectively. The rents for the 30 acres and the 60 acres had dropped to £10 and £24 and the 90 acres to £36. All, therefore, like the Irwin land, had dropped considerably in value and the Travis Charity Accounts show the tenants consistently in arrears in the 1730s and 1740s.³⁴ They had to be shown great

²⁸ W Y A S WYL 100, TN/HC/C5 Rentals (Canby was the local estate agent)

²⁹ *Ibid.*, TN/HC/C1 Hatfield correspondence 1621-1738.

³⁰ *Ibid.*, TN/HC/C5 Rentals

³¹ Miller, Thesis, p38

³² *Ibid.*, p40

³³ Lindley, *op cit*, p2

³⁴ Miller, Thesis, pp 40 and 90-91, Doncaster Archives, Travis Charity Papers, P28 7/2/1.

tolerance for, as John Bright, trustee for the Irwin estate in the 1660s was informed, that in times of agricultural depression level land tenants gave up and were difficult to replace.³⁵

Tomlinson's suggestion that the frequent floods were 'in some measure' caused by the lack of consolidation of the banks could well have been true for the early years of the drainage but there is no evidence of improvement in the next 100 years. Most of the previous evidence related to land scotted at the highest rate, but landlords and tenants had even greater problems with the twopenny land. In March 1718/19 Henry Moore informed Mr Rotherham, the Duke of Devonshire's Steward, that the Duke's 130 acres of Uggin Carr were difficult to let. 'As for Uggin', he wrote, 'before last year we could never make above £15 out of it. Indeed we let it to four poor men after we had been at £10 charge in stooping and railing it for eight years, but I fear it has broken half of them. They say they will rent it no longer'. Uggin was, he added, 'nothing but coarse rushes and foul rough grass' and that Lord Irwin let adjacent land at fourpence an acre. It was let rent free in the late nineteenth century! Of Stainforth Ings which sheltered behind Vermuyden's Ashfields Bank, he wrote to Lord Irwin's agent that it was 'very often lost by floods I have known it lost two years in three we have been forced to make great abatements'. The rent to be abated was £7-10-0 for 150 acres.³⁶

Although the high rents of the 1630s and 1640s were not maintained, they remained relatively high until the farming depression of the late 1660s as table IV(3) shows. After their nadir in the 1680s they remained low until after 1750 and consistently below the general level. Gregory King estimated that for 1688 arable averaged six shillings per acre, pasture and meadow nine shillings and commons three shillings and sixpence, with average rent for a holding at six and sixpence to seven shillings per acre.³⁷ Holderness estimated for the same year, six shillings per acre, rising to between nine shillings and twelve shillings in 1750.³⁸ As these estimates were for all

³⁵ Sheffield Archives, WWM BR75, Layton Firbank to John Bright, 1667.

³⁶ W. Y. A. S. WYL 100, TN HC/B19 Tithe Case

³⁷ J. P. Cooper, 'The Social Distribution of Land and Men in England, 1436-1700', *Ec. H. R.* 20 (1967), reprinted in R. Floud, (ed) *Essays in Quantitative History* (1974), p114

³⁸ Holderness, *op cit*, p200

types of land, including low rented, open field arable, they represent a different range from the levels which was enclosed soon after the drainage, and they emphasise its low value. How low the value really was is only appreciated when the method of renting in the levels is understood, for the normal practice was for the landlords to include in the rent scot charges and the fee farm rent. Consequently landlords had to pay these charges out of rents. The phraseology of a typical lease on the Ingram estate makes this clear. In 1652 three men leased 127 acres of levels at twelve shillings per acre near Sandtoft, on the borders of Lincolnshire. About five acres of it had been thrown open by the Isle men. The tenants promised 'to pay all scots from tyme to tyme wch hereafter shall be laid upon the said land also to pay all such rents as shall be payable thereout formerly called ye kings or Dukes rente and to have all such scots and rente allowed them in there rente... [they had] to pay all assessments and other charges whatsoever'.³⁹ Nathaniel Base's lease of Bishop's land in 1650 went even further, as he was to have 'allowance for scots lots taxes seasments and all other charges whatsoever'.⁴⁰ These allowances greatly reduced landlords' income from level land. Between 1660-1671, for instance, the lowest scot was three shillings per acre in 1668. The maximum was seven shillings in 1663. The total of scots laid per acre in the twelve year period was £2-7-6, an average of almost 4/- per year.⁴¹ In the years just before 1670 Lord Irwin's income from the levels was about £170 of which he had to rebate £20 for every shilling scot. In addition he had to pay his share of a fee farm rent of £195-1-0. This was, however, for the whole manor, not just the levels; nevertheless, approximately half of the level land rents received was paid out again.

Problems with drainage led to other expenses in the form of allowances to tenants. For example, in 1684 Mr Meiers and his brother who farmed Bradholme farm were allowed £25-16-0 from their rent 'p. 2 Engines' which were presumably to improve the drainage.⁴² Abatements for land which had been drowned were normal and indeed it was written into the Bishop Travis land leases that the owners would 'abate halfe of the said rent yearly when it shall happen the said p'misses are wholly

³⁹ W.Y.A.S. WYL 100, TN/HC/A Leases 38

⁴⁰ Doncaster Archives, Travis Charity Papers, P28 7/1/A10

⁴¹ W.Y.A.S. WYL 100, TN/HC/C5 Rentals

⁴² *Ibid.*

drowned with water by reason of the breach of the Levell Banks or Sluices.⁴³ The difficulty of finding tenants for some land is shown by the readiness of landowners to let land to fluctuating partnerships of 'poor' men. Also the Irwin rentals for 1681-1707 make frequent references to composition fines on the taking up of new tenancies, but they all appear to refer to town land. Leases of level land were renewed and entered into without reference to such fines.⁴⁴ From the landlords' point of view, therefore, level lands do not appear to have been a good bargain in the years between the drainage and 1750. Rental reality was a long way from the £1-10-0 per acre quoted by Dugdale and although the land had increased in value after the drainage, much of the increase in value came from the enclosure, individual ownership and tenancy of the land. Land which was held in common had little value and even without other improvement, parcellation, which made possible improvement, increased its value considerably. Hence the pressure for the enclosure of the commons and wastes in the seventeenth and eighteenth centuries.

Ineffective though the drainage appears to have been, the size and regularity of scots show that it was an expensive system to maintain even at a low level of efficiency. High scots and poor results meant, inevitably, that there was much dissatisfaction with the Commission of Sewers. The commissioners and their employees were frequently under attack because they appeared to carry out their duties so badly and scots were so high. Inevitably, in the seventeenth century, this led to the assumption of malversation of the funds. It was usually felt by those outside the commission that the drainage could be maintained better and much cheaper. It was usually assumed too that most of the Commission's energies went into improving the lands of the commissioners and their employees at the expense of the general good. That there was justice in this assumption is illustrated in the following extract from a letter by Sir Edward Osbourne when he was selling his Hatfield lands to Sir Arthur Ingram in 1637/8.

There is little of the land wch Mr Nodes⁴⁵ and Christopher Vanderheck houlds (and they two hould all most £400 p. ann.) butt wch in a few years will be made better by five shillings an acre than it is, because they are two of

⁴³ Doncaster Archives, Travis Charity Papers, P28/7:1/A24

⁴⁴ W.Y.A.S. WYL 100, TN HC/C5 Rentals

⁴⁵ Nodes was imprisoned later for malversation of Commission of Sewers funds

ye principall Agents and disposers of the works for ye generality, for as in Cutting drayns, making other works as occasion may require for ye good of the Levell, they can dispose of them for ye best advantage of their owne grounds, and if they finde cause can of themselves cutt more both for layinge them dry and allways keeping them soe, wthout cost to themselves or ye particular owners, as of late they have done.⁴⁶

Belief in partiality in directing the works and the associated one of malversation increased the already difficult task of collecting scots which was a legacy of the early mismanagement of the distribution of the land and the claim that it was sold scot free. The build up and collection of arrears was one of the most difficult problems for the commissioners who, in the early years of the drainage, forcibly sold land to defray arrears. Mrs Bishop lost twenty acres of her 400 in this way in 1636⁴⁷ and in 1650 Marcus Valckenburgh and his brother were summoned before a Commission held in Doncaster to show why the commissioners should not sell their land or lease it in lieu of scots dating from 1633-4.⁴⁸ It was noted in the Agar papers as late as 1730/1 that the level land of 'The heirs of the Late Lord Halifax' included '70 acres in Ditchmarsh Cavel A wch. are in the Comrs. hands or Court of Sewers having been thrown up by them on acc. of Scotts and other Taxes'. Reluctance to pay made the task of maintaining the levels even more difficult as two minutes of a Bawtry Court held in 1649 illustrate:

Whereas ye works of ye level have beene longe retarded for want of moneyes to sett labour and workmen to worke for ye p.servacon of ye said levels Whereas there are many works to be done in ye Leavell of Hatefield Chace this yeare wch. will admitt of noe further delay and many of ye Dutch p.ticipants and others have endeavored with all their power to hinder payment of scotts.⁴⁹

Attempts to collect arrears included the desperate expedient of inviting Colonel Nathaniel Reading, who had been employed to crush the insurgents in the Isle of Axholme, to do so in exchange for a share of what he collected.

⁴⁶ W.Y.A.S. WYL 100, TN/HC/C1 Correspondence. Sir Edward, the Vice President of the Council of the North, obviously regarded this as normal.

⁴⁷ Miller, *Thesis*, p34

⁴⁸ York City Library, Archives Dept, M154, Agar Estates in Yorks in Yorks, Lincs and Notts. (Hereafter Agar Estates)

⁴⁹ University of Notts. Minutes of the Court of Sewers I, HCC/6001 pp 439-440

The unsatisfactory nature of the drainage and cynicism about the way the Commission of Sewers worked led to frequent petitions aimed at changing its personnel. The petitions make no bones of accusing members of corruption and whilst there was probably some justice in many of the accusations, it is clear that there was also much exaggeration based on the conviction of petitioners that the drainage could be made to work for less. As the works continued to be ineffective it seemed to be proof that scots were not spent on them. Dissatisfaction with the Commission was probably at its height during and immediately after the Interregnum. The main issue, apart from cost, was one of control. Participants believed that as they paid the scots and knew the levels they were the proper people to run the Commission. However, the tradition in England was to have commissioners who represented a wider geographical area and a superior social group. Usually a Commission of about 80 members would be appointed⁵⁰ but, inevitably, a small group of interested members attended the Court regularly and dominated its proceedings. This small group would become the object of the hostility of the inactive commissioners and anyone who felt his interest harmed by the Commission's activities. The latter included participants, who believed that they were over-taxed and badly served and townland and upland men who believed that their problems sprang from the drainage and that the chief task of the Commission was to mitigate its effects on their land.

As early as 1646 the Commission was controlled by a small group of about seven men, mostly non-participants, but including John Gibbon who was still a large participant in Axholme, in spite of selling much of the land he bought from Vermuyden. When their power was challenged in 1653 they claimed to have been chosen by a committee of participants and charged with running the Commission impartially as between the interests of the participants and of the upland men. The petition for their removal in 1653 was raised by Sir Arthur Ingram and other participants on grounds that become familiar. The petition does not appear to have survived but the defendants' answers have and they indicate clearly what the issues were. The defending commissioners naturally dismissed the charges against them as

⁵⁰ 20 from the three counties, Yorks, Lincs, and Notts, and 20 participants seems to have been a normal Commission

‘Scandalous, untrue and devised... out of Malice and evill will to use and Molest them’. In their defence they made eight points which indicated what the charges were and the problems and suspicions that active commissioners had to face. The defendants claimed first that their predecessors were interested parties who had ‘Improved that power for the advancement of their own interests’ and ‘to the pr’judice of the country’. Also they had raised ‘New Banks stopped the Antient Currents and thereby drowned the upland Country and by their New Draines Cutt away their neighbours ground without giveing any satisfaction to the owners’. They claimed that their nomination was, ‘to prevent such abuses in the future’. Their second claim was of impartiality as most of them had no interest in the levels.

Points three and four rejected accusations of making personal profits and extortion. They denied that they had raised £22,000 in scots between 1646-1653 and claimed that the figure was £15,700, though they pointed out that from 1629-1640 their predecessors had collected £80,000. They also denied spending money other than on the preservation of the levels and that they had awarded themselves great salaries. They claimed a salary limit of £200 per annum whereas the previous commissioners had awarded themselves £800 plus three shillings per day attendance money. They maintained that their accounts had been viewed and accepted by the petitioners and other participants and that when other commissioners had been at their meetings they had signed the proceedings. Their final claim was that the works were well maintained, as they ‘have been from time to time carefully and well looked into and maintayned and workmans wages paid as farr as the Moneys raised did extend unto... the whole works of the Levell are att this tme in much better Repair than ever they were since first planted’. To the participants’ desire that they should control the Commission the defendants replied that they were willing to abandon ‘such a troublesome and thanklesse service though they very well understand that the Improved Lands in England are not wholly managed by the Proprietors’.⁵¹

As a result of the petition of 1653 a Commission dominated by participants emerged and in the early 1660s commissioners representing the West Riding petitioned the

⁵¹ York City Library, Archives Dept, M154 Agar Estates

Crown against its continuance.⁵² Whilst the basis of the situation was a simple reversal of the situation in 1653 there were also some totally new factors in the dispute which began about 1660. Firstly, the Commission had been in the control of a new man to the levels, John Bradbourne, a London lawyer. Secondly, the levels, after the visit of Lilburne and Wildman during the Interregnum, and their subsequent support of the Isle men's claims, had gained an increased reputation for sedition, especially as Bradbourne's chief assistant was Capt. John Hatfield, a former parliamentary soldier, and also a newcomer to the levels. Part of the desire to alter the Commission was, therefore, the Restoration desire to remove those who held power in the Interregnum. Bradbourne was the main target of the 'Gentry of the West Riding' in their petition. He had, according to the petitioners, come into the levels simply to act in a professional capacity in a case of debt but had acquired huge amounts of level land by a mixture of fraud, false testimony, legal trickery and terror, created by his nine unscrupulous servants. He then became a member of the Commission, rapidly came to dominate it, and manipulated it in his own interests.

Despite their attack on Bradbourne, the petitioners' first statement was on the composition of the Commission and the area it represented:

of late some of the Assignes of the Undertakers have obtained a Commission for the levell and some small part of the said Country onely and since that time the Country hath been much p'judiced by the practise of some of these Assignes... [the petitioners] on behalfe of themselves and many thousands of people that lye under great p'judice by the workes and heavy oppressions by the practises of the said Undertakers prayd a Commission with such bounds as formerly

The petitioners claimed also to represent the people of Hatfield and Thorne whose attempts to have their grievences redressed, especially the state of the navigation of the Don, had been 'laughed at' by Bradbourne, 'therefore, they want a Commission with the ancient bounds'. The main part of the petition was a list of Bradbourne's evil doings. For example, ten years before, when he 'first went into the Levells', he had conspired with John Nodes, a former collector of taxes for the Court of Sewers,

⁵² *Ibid.* The gentlemen of the West Riding claimed that to prevent their attendance the controlling group called Courts of Sewers at obscure places such as Rawcliffe, 'a little private village', Thorne and Hatfield, which were too far for them to travel.

who was imprisoned in York Castle in 1650 for 'imbesilling', and William Tomkinson, Nodes's servant, to acquire land. They claimed that 'to this day he holds 3399 acres and Mr Harvey hath not left above 1000 acres for what cost his uncle £24,000'. On the strength of this 'the next thing he gets is to be a Commissioner'⁵³. The uncle of Mr Harvey was a London solicitor who bought land around Finningley c. 1640. He quickly discovered that he would have difficulty in gaining possession of it. The nephew Robert Harvey of Godmanchester was constantly urged to go north to sort out the problem.⁵⁴

To ensure his control of the Commission Bradbourne, according to his accusers, removed the skilful, diligent and experienced men who 'from the beginning of that Dreynage have been found to be of great use for the preservation of the said works and prevention of fraud in letting them off and he hath placed in their roome one Mr Hatfield a Souldier under Lambert to the last a stranger and unacquainted with the works'. Hatfield could not do the job, his 'education and course of life having vers'd him in Levelling not in Levell workes'. Thus to the usual charge of dishonesty, ignorance and incompetence were added, he neglected the works, allowed the Don to silt up to the ruination of the navigation, and the bridges to decay. He dug new drains on his own land at the participants' expense and conspired to let contracts for maintenance to a small group whom he paid a shilling a day instead of the normal sixpence in return for a share of their wages. He did work on Hatfield Manor House for Bradbourne, who rented it from Lord Irwin, at the participants' expense and received four times the normal salary of servants of the Commission from Bradbourne.

The participants joined in the attack on Bradbourne blaming him for the failure of Nathaniel Reading's attempt to defeat the Isle men and force them out of the participants' lands. This cost them, they claimed, £3,000 per annum in rents and Bradbourne was accused of hindering Reading in the hope of acquiring further land for himself in the Isle.⁵⁵ He was also accused of partiality in the collection of scots

⁵³ *Ibid.*

⁵⁴ Bedford CRO, DDHY, 677-922

⁵⁵ Lindley, *op cit*, pp 242-243, shows that throughout the 1660s Bradbourne opposed Reading, often violently, and that his claims to land in Epworth were probably the reason

and especially in actions to recoup arrears. In addition to his almost total responsibility for all the weaknesses of the drainage and the losses resulting from the rebellion in the Isle the petitioners also implied that he was responsible for the death of his man, Tompkinson, who was found 'drowned in a shallow ditch where there was not water to his knees and his chin above the water'. Tompkinson had been used by Bradbourne to hide papers essential for the calling of a new Commission and after his death Bradbourne, in burning Tompkinson's papers, set fire to 'the roof of the neighbouring house... to the great hazards and affrightenment of the inhabitants of Hatfield'.

In 1665 when another new Commission was appointed John Hatfield still held his position as Collector of Scots and it was claimed in yet another petition, this time by the Duke of Buckingham, that he was kept in office by the influence of the Earl of Devonshire. Devonshire owned the tithes of Hatfield and a Court of Sewers had decided in 1646 that as scots were so high the tithe owner should pay £50 for every shilling scot laid, which meant £200 per year usually.⁵⁶ The Earl strongly resisted the claim and appointed Hatfield his collector of tithes in order, according to Buckingham, to prevent the Earl having to pay. The Duke of Buckingham had acquired the King's fee farm rent and had great difficulty in collecting much of it because of the high scots and the poor quality of the land. His petition of 1668 after outlining the weaknesses of the Commission appointed in 1655 asked for an 'indifferent' Commission which would 'act better... otherwise the whole improvement which hath cost almost a million of money will irrecoverably be lost, and the Duke must not only loose his whole fee farm rent but ye King must be subjected to diverse suits and vast repayments also'. The petition concluded, in a different hand, 'Tis impossible that the Duke should have his fee farm rent if this Commn. continues. Those lands in the Levell wch. formerly gave 12s. and 16s upon an acre cannot now because of the neglect of the workes be let at above 6 or 7s. p. acre, and much of those are lett under 4s. per acre'. Buckingham's advisors were obviously convinced that all that was needed was a properly constituted Commission and not only would the difficulties in the Isle be solved but the drainage would be made to work properly as they believed it did before the Civil War and rents would

⁵⁶ York City Library, Archives Dept M154, Agar Estates

rise to their early post-drainage levels. Then the participants would be able to pay his fee farm rent and the thousands of pounds owed to him in arrears. As a result of the Duke's efforts, a new Commission was appointed in 1670 with a socially and politically prestigious list of names at its head. Included were the Duke himself, the Earl of Manchester, the Earl of Ogle, the Earl of Devonshire, Viscount Halifax, Viscount Castleton, Wm Pierpoint, Esq, Conyers Darcy, Esq, Sir Thomas Osborne, Bt., Sir John Monson, Kt. and Bt., Sir John Reresby, Sir Myles Stapleton, with 71 others.⁵⁷ However, the Duke's hopes were dashed, for even this powerful group failed to solve the Isle problem or to improve the drainage.

In the early eighteenth century the suspicions and failures continued. In March 1702/3 John Beattie of Barnby Dun swore an affidavit 'that Edward Foster, William Darling and Timothy Moore, servants of the Commission of Sewers have been acting in the interests of Mr Wood and others; raising sums from the Hatfield Levles for their own use neglecting the repair of works in the level'.⁵⁸ Henry Cooke of Bramwith and Robert Foes of Barnby Dun swore other affidavits supporting Battie and adding that Simpson and Wood raised annually more than £1,600 'by extortionate scots and sewer rates and apportioned this sum among themselves'.⁵⁹ Shortly after, an offer by two Rawcliffe men to carry out the maintenance by private contract was turned down. Their view was that they could do the work more economically than the Court of Sewers, though even so it was an expensive task. In September 1716 Thomas Clark and Christopher Bacchus wrote to Lord Irwin that,

Wee have viewed the works and made an estimation thereof and do ffind that when they are putt into good and sufficient reaire we cannot uphold and maintaine them under one thousand pounds per yeare, which is one third part less than has become expended yearly (one yeare with another) for twenty years last past. Excepting the last two years in which time little or noe repairs hath been made, the want of which makes all the works much out of repair than they would have been, and considerably more chargeable now, had they not been neglected⁶⁰

⁵⁷ York City Library, Archives Dept, Hatfield Chase, M:YL/PE

⁵⁸ York City Library, Archives Dept, Hatfield Chase, M 87:2

⁵⁹ York City Library, Archives Dept, Hatfield Chase, M87:3 and M87:4

⁶⁰ W.Y.A.S. WYL 100, TN/HC/C1 Correspondence

Discussion of the proposal occurred at the subsequent meeting of the Court of Sewers but the offer was not taken up. Indeed Thomas Canby, Lord Irwin's understeward dismissed it a fortnight later as an attempt 'to carry Thorne to Rawcliffe' which would not improve the maintenance of the works.⁶¹

Canby's remark indicates that the profits from maintaining the drainage meant a great deal to the Thorne/Hatfield area but it does not necessarily mean that the benefit was illegally gained as complainants usually claimed. Indeed Clark and Bacchus's letter indicates that about £1500 a year was spent on the works and, though it could have been more efficiently spent, it was clearly not 'apportioned... among' a small group of participants as Cook's and Foes's affidavits claimed. The proposal also illustrates one of the great problems of running a large and complex undertaking under the direction of a nominated group. Being a Commissioner of Sewers meant unpopularity and the sustaining of constant supervision to maintain the works. Invariably it devolved upon a few and if their energies declined so did the drainage, as Clark and Bacchus's remark about 'the last two years' shows. Much of the opposition to the Commission was probably a result of the frustration that the participants felt at the huge cost of maintenance and the little apparent effect. In the 1660s the outlay was particularly heavy,⁶² at a time of agricultural decline, and the savage attack on Bradbourne and his henchmen, Hatfield, Canby and Boynton, was possibly a result of this plus some element of reaction against those who held power during the Interregnum and particularly the 'reformer' Hatfield.

How Bradbourne became a participant is not known. Miller's unravelling of the vicissitudes of ownership of the Bishop lands⁶³ in the thirty years after the drainage suggests that the accusations of fraud and force of his enemies would not have been impossible or even unusual in the levels. But possibly like most of the accusations related to the Commission of Sewers they were exaggerated. He was accused of illegally holding 3,399 acres⁶⁴ but an incomplete scot list of about 1660 shows that

⁶¹ *Ibid.*

⁶² *Supra*, p 128 (?)

⁶³ Miller, *Thesis*, pp 22-44

⁶⁴ *Supra*, p 127 (?)

he then held 1,375½ acres.⁶⁵ This was possibly John Gibbon's remaining land for he had disappeared from the levels in the 1650s and was imprisoned in the Fleet.⁶⁶ The 1693 scot list described 2,181 acres belonging to Henry Wood as 'late Bradbourne's'.⁶⁷ Also the implication that he had stolen hundreds of acres from John Harvey is possibly put in perspective by a document of 1664 in which Harvey acknowledged 'that Mr Jo Bradbourne hath delivered and p.cured... unto me ye quiet possession of 150 acres in ye Severals and 200 acres in Haynes'.⁶⁸ The seventeenth century was a violent period in the Levels, though much less violent in Hatfield than in the Isle of Axholme, and Bradbourne took part in the violence. Several deponants were prepared to give evidence of his illegal actions, including Matthew Pryme and Jacob De Camps⁶⁹ but he continued to live in the Hatfield Manor House into the 1680s and his widow lived there until 1693. All those accused with him, Hatfield, Canby and Boynton, continued to live and hold office in the area, which suggests that whatever truth there was, in these and the other allegations against the Commissions of Sewers, there was a large element of exaggeration produced by frustration at the conditions in the Levels.

Nevertheless, these incidents, and many others associated with drainage rates and the collection of fee farm rents, were important to the economy of the levels. They provided an element of uncertainty and disturbance which, added to the uncertainty of the drainage, created an unfavourable climate for further investment.⁷⁰

Landowners were reluctant to risk further money when rents were low and made lower by huge scots and there seemed little prospect of achieving satisfactory conditions. Low rents and large scots were the legacy of Vermuyden's hurried and inadequate drainage scheme and the failure to set land aside to pay for keeping the system working which had been provided for in the original agreement with Charles I.

⁶⁵ Doncaster Archives, Travis Charity Papers, P28/7/3/1

⁶⁶ Miller, *Thesis*, p43

⁶⁷ W.Y.A.S. WYL 100, TN/HC/C5 Rentals

⁶⁸ Doncaster Archives, Hatfield Charity Papers, P28/7/3/D2

⁶⁹ York City Library, Archives Dept, Agar Estates

⁷⁰ The CSPD gives many examples of illegal acquisition of land and dispossession of tenants, eg, D Byford, 'Two Dutch Royalists in Hatfield Chase, 1642-43'. In C. Hill (ed) *Yesterday Today*, Doncaster's Local History Review, No 20 (1996)

PART 2: LANDLORDS, FARMERS AND FARMING

From c. 1690 until 1740 there is abundant evidence on which to make some judgements on the structure of landholding and tenancy in the marshlands and on the state of agriculture there. Although much documentation exists and much has been written in secondary accounts on the period between the drainage and 1690, it is largely on those matters dealt with in the two previous chapters: the success or failure of the drainage, the activities of the Commission of Sewers, attempts to collect the fee farm rent and rents. Farming activity, as such, is largely ignored. There are scattered references in the Hatfield Charity papers, but in the Temple Newsam papers, apart from the documents which gave rise to tables IV(1) and the cropping of the five closes from 1641-5, there is little.

However, after 1690 probate inventories give a basis for discussion of the agriculture carried on in the marshlands and on the wealth of those engaged in it. Although the Hatfield Tithe case of 1729-35 is largely of value for the study of townland farming, there is enough evidence to confirm some of the impressions derived from inventories. The chief impression is that little had changed in the marshlands between 1641-44, and 1690, or, indeed, in the period to 1750. The survival of a hurriedly written and fairly incomplete scot list for 1665, and two other, more complete, ones for 1693 and 1717,⁷¹ make it possible to see the pattern of landholding and tenancy which evolved in the century after the drainage and that, in spite of the opposition to the Commission of Sewers and to the drainage, local people had begun to take over the drained lands both as owners and as tenants.

It has already been suggested that the participants did not do well in terms of rents received from the marshland after the early period of high rents. The long depression in rents after the 1660s, the weaknesses of the drainage and its high maintenance costs, together with disputed ownership and the turbulence in the Isle of Axholme, ensured that much land changed hands during the seventeenth century. Hunter listed

⁷¹ 1665 List, Doncaster Archives, Travis Charity, P28 7/3/1, 1693 List, W Y A S WYL 100, TN/HC/C5 Rentals, 1717 list, York City Library, Archives Dept, Agar Estates

the owners of level land in 1635⁷² but the survival of the three scot lists shows that little land stayed in the possession of the same families. In 1653, according to Hunter, Sir John Ogle owned 339 acres and Mr Marcus Van Valkenburgh owned 1,146 acres, which was part of a Van Valkenburgh family holding of 3,204 acres. In 1665 the Ogle holding was only 49 acres and the Van Valkenburgh's was reduced to 786 acres. By 1693 the Ogle acreage was one less but Marcus Van Valkenburgh held a remnant of the family holding, 166 acres. This land, like the Ogle land, was twopenny land, the least valuable in the levels. Mr Henry Travis both in 1665 and in 1693 owned 379 acres as heir by marriage of Edward Bishop, whose wife and children had fought so hard to hold on to the remainder of the original 400 acres.⁷³

Only three other names on Hunter's list for 1635 were still on the scot list thirty years later. Widow Vernat owned 190 acres which was presumably all that remained of the 3,150 acres of Sir Philibert Vernatti or, more likely, of Mr Abram Vernatti's 550 acres.⁷⁴ Abraham Dolins still held 200 acres and Sir James Cam(p)bell had actually increased his holding from the 600 acres of 1635 to 1,020 in 1665. These three names did not occur in the 1693 scot list and in 1717 only Sir Thomas Ogle's 48 acres represented a holding from 1635, although the Travis Charity was then administering Bishop's 379 acres left by Henry Travis to found schools in Hatfield, Thorne and Wroot. Most of the owners of 1635 were Dutch but only the holdings of Dolins, Vernatti and Van Valkenburgh survived the Civil War, the last two in a very truncated form. This mass Dutch withdrawal was undoubtedly encouraged by the turbulent and dangerous state of the levels in the period immediately after the drainage and in the early years of the Civil War.⁷⁵ It is more than likely, however,

⁷² Hunter, *op cit*, I, p165

⁷³ Miller (Thesis) p44. Travis married Anne, daughter of Edward Bishop

⁷⁴ Both 'Vernat' and 'Vernatti' were used indiscriminately.

⁷⁵ J.W. Clay (ed), *Abstracts of Yorkshire Wills 1665-6*, Yorks Arch. Association, IX, 1890. The Will of Sir Gabriel Vernatt, who spelled his name slightly differently, of Nortofts of 26 Sept 1655, shows the break up of a Dutch estate and how the uncertainty of ownership existed even within families. Sir Gabriel left 56 acres in Haines and 50 near Sandtoft to his nephew Sir ffilibert Vernat, 20 acres to the Lady Rigenortes and 'all that part and moiety of lands lying within the levell of Hatfeild Chase that should or doth belong to me as my part, after the division be made according to the agreement made in the Indenture with my brothers and sisters, which is not formerly bequethed unto Michael Keighley'. The names of none of these beneficiaries occur on the 1665 scot list. The participants domiciled in the Netherlands were so desperate at the high scots and having land confiscated for non-payment that in 1634 they appealed to Charles I's sister, Elizabeth, Queen of Bohemia to intercede for them with the King. C.P.S.D E2, Charles I 1634-5, p399

TABLE IV(4) OWNERS IN THE LEVELS 1665¹

			12d LAND	8d LAND	2d LAND	TOTAL
1		ABDY				433 ²
2	Wm	ADAMS Ar ³	0	0	66	66
3	Wm	ADAMS OF LONDON	0	0	50	50
4	SIR	JOHN AUTY OR VANVALKENBURGH	160	64	0	224
5		JOHN BRADBORNE ⁴ Ar	590	97	701 1,605 plus	1388 or 2,993
6		EDMUND BROWNE	6	0	0	6
7		RICH BURDET Ar	97	40	246½	373½
8	SIR	JAMES CAM(P)BELL	49½	130	850	1,029½
9		PETER DE CAMPS	40	0	0	40
10		JACOB DE CAMPS	40	0	0	40
11	MR	ED CANBY	0	0	128	128
12	MRS		0	0	91	91
13	MR		45	0	0	45
14	EARL	OF DEVON	0	0	130	130
15		ABRAHAM DOLINS	151	0	49	200
16		JO FLESHER	0	0	73	73
17		Wm FOSTER	0	30	0	30
18	MRS		158	0	0	158
19		JOHN GIBBON	26	19	149	194
20		ANTH GILBY Ar	30	0	0	30
21		VERNON HAMPE	0	0	14	14
22	SIR	ANTH HARBORD	80	136	0	216
23		ROBT HARVEY Ar	420	381	721	1,522
24		JOHN HATFIELD Ar	50	0	0	50
25	MR		0	0	21	21
26	LADY		729 (521½)	0	0	729
27		G JOHNSON Ar	974	0	173	1,147
28	MR		59	32	50	141
29		JO LAINES HEIRS	39	0	22	61
30		LUCY	0	0	76	76
31		NAT NOKES	0	0	169	169
32		JOHN OGLE Ar	49	0	0	49
33		Wm RAMSDEN Ar	267	0	226	493
34		RIC ROCK	0	0	263	263
35		RIC SHELBY Ar	30	0	25	55
36		THOS SPURGEON	22½	0	0	22½
37	LADY		29	0	0	29
38		H TRAVIS	179	0	200	379
39		FRA TUTTLE NOW HARLAND	0	0	200	200
40		JOHN VANFLEUR	9	0	56	65
41		VANVALKENBURGH	399	47	390	836
42	WID		95	0	95	190
43		ED WALDRON Ar	0	104	380	484
44	MR		121	0	0	121

¹ This is a hurriedly written document and difficult to interpret.

² This figure is not in the columns with the others and is not broken down.

³ Armiger.

⁴ The two figures suggest uncertainty in the amount held by Bradbourne and are perhaps confirmation of his acquisitions of land by illegal means.

⁵ Both figures are given. It suggests, as no sale is recorded in the Temple Newson documents, that some of this land was abandoned about this time and did not pay scots in future

TABLE IV(5)

OWNERS IN THE LEVELS 1693

			12d LAND	8d LAND	2d LAND	TOTAL	
1	SIR	ANTHONY	ABDY	1,039	130	697	1,866
2	MR	WILLm	APPLEYARD	330	40	210	580
3	MR		BAKER	401			401
4	MR		BROWNE	6			6
5	MR		CANBY*			158	158
6	MR	WILLm	CAPPER			42	42
7	WILLm	DUKE OF DEVONSHIRE			130		130
8	MR		GILBY	30			30
9		JOHN	GONY	40			40
10		THOS	HOYLAND*			66	66
11		JOHN	HATFIELD*	48		65	113
12	MRS		HOLMES			22	22
13	MRS		HARLAND			170	170
14	LORD		HALIFAX	121		60	181
15		JOHN	HARVEY	778	281	937	1,996
16	MR		IDLE			200	200
17	LORD		IRWIN	522			522
18	MR	HENRY	KENNISTON	58	32	50	140
19	MR		LEE		30		30
20	MR		LEHOOKE	40			40
21		HENRY	MYERS*	127	40	156	323
22	MR		NOAKES			169	169
23		CHRIS	MIDDLEBROOK	183			183
24	SIR	THOS	OAGLE	48			48
25	MR		PRYM*	151		49	200
26	MR		ROACH			263	263
27	MR		STAPLETON	29			29
28	MR		SCORAH		18	124	142
29	MR	Wm	SIMPSON	198¾		90	288¾
			LATE MR BARTHROPES & MR HEN MYERS				
30	MR		SIMPSON & MR WOOD LATE MR SINGLETON	206½		84	290½
31	MR		SIMPSON MR ERIFF HENRY MOORE & C MIDDLEBROOKE	267		226	493
32	MR		SIMPSON MR WOOD MR ERIFF & MR PRYM LATE MR VANHECKS	559½		79	638½
33	MR		SALMON*			180	180
34	MR		TRANVES (TRAVIS)	179		200	379
35	MR	PETER	VANHECK OR MR VICKFORD	104			104
36	MR	MARCUS	VAN VALKENBURGH			166	166
37	MR	JOHN	VANFLOOR	8½	56		64½
38	MR		MANWOOD LATE SIR JOHN AUTY OR VAN VALKENBURGH	150		64	214
39	MR		WHARTON LATE MR DERWINS & MR WALDRONS*		240		240
40	MR	HEN	WOOD LATE MR BRADBORNE	595½	122	1,464	2,181½
41	MR		WALKER	90			90
42	MR	EDWARD	WALDRON			380	380
43		ROBERT	WOODWARD*	40			40
44		JOHN	WATSON			31	31
						13,891	

* owner occupiers

TABLE IV(6)

OWNERS IN THE LEVELS 1717

				12d LAND	8d LAND	2d LAND	TOTAL
1	SIR	ANTHONY	ABDY	1,039	130	697	1,866
2	MR	W	APPLEYARD	330	40	210	580
3	MR		BAKER NOW MR GRACE	401			401
4	MRS		BROWNE	6			6
5	MR	THOS	CANBY			158	158
6		Wm CRAPPER &	MR THO BRADBURY			42	42
7	MR	ROBT	COGGAN & JOHN URRY		64		64
8	SIR	GEORGE COOKE & JOHN SIMPSON ESQ LATE MYERS		127	40	156	323
9		Wm	DEVONSHIRE			130	130
10	MR	HENRY	RANN LATE DARWEN		136		136
11	MR	R	ELWICK	80			80
12	MR	HENRY	FLOWEER			45	45
13		Wm	GILBY ESQ	30			30
14	LORD		HALLIFAX	121		60	181
15		JOHN	HATFIELD ESQ	48		65	113
16	MR		HARLAND OR TUTLES			170	170
17	MRS		HOYLAND	90		66	156
18		JOHN	HARVEY ESQ	778	282	937	1,997
19	LORD		IRWIN	522			522
20	MR		IDLE			200	200
21		THO	JOHNSON	25			25
22	MR		LUCY			76	76
23	MR	JOHN	MAW LATE KENNISTON	58	62	50	170
24	MR		MARWOOD	70			70
25	MR	AARON	MAW			49	49
26		HEIRS OF ROBT MIDDLEBROOKE		158			158
27	MR		NOAKES			169	169
28		Wm	NEWSON			21	21
29	SIR	THO	OAGLE	48			48
30	MR	P	PRYM	151			151
31		ANN	POGSON		18		18
32	MR		ROACH	29			29
33	MR		STAPLETON			263	263
34		GEO	SCHOLEY			33	33
35		HEIRS OF MR SALMOND ¹				116	116
36		RICH	WRIGHT			58	58
37		JOHN	SIMPSON LATE SEVRAL'S	206½		84	290½
38		JOHN	SIMPSON FOR BARTHROPP'S	198¾		90	288¾
39		JOHN SIMPSON MR HEN WOOD EJ & TJ & P PRYM LATE VANHECK ²		499¾		79	578¾
40		JOHN SIMPSON EJ & TJ & HEIRS OF HENRY WOOD LATE RAMSDENS		267		228	495
41		TRUSTEES FOR LATE MR HENRY TRAVERSE (TRAVIS)		179		200	379
42	MR	VICKFORD FOR MR HATFIELD		104			104
43	MRS	CRIDLAND & MRS WOOD LATE VALKENBURGH				166	166
44	MR	VANFLEET NOW MR READING		8½	56		64½
45		ABR	VENNY	80			80
46	MR		HARRISON		104		104
47	MR	EDW	WALDRON MR WHARTON			380	380
48	MR	HEN	WOOD	595½	122	1,464	2,181½
49		ROBT	WOODWARD	40			40
50		JOHN	WATSON			31	31
		LINCS LORD IRWIN ³		111 by Sandtoft			
							13,836

¹ Will of Will Salmon of Blaxton 7/12/1694, referred to 153 acres 'in ye Levels'

² Will of Thos Johnson of Thorne April 1720, 'all my level lands called Vanhecks which I hold and enjoy with John Simpson Esq and others and all that other parcell of Levell land called Ramsdens and which I hold with the sd John Simpson and others'

³ There is some correspondence on the reacquisition of the land from 'the Isle people' and this list indicates that it was returned at least two years before the final settlement in 1719.

that they left because of their resentment, as expressed in the Cats's correspondence and the legal battles with Vermuyden, at having to pay scots. Their refusal to pay resulted in the build-up of huge arrears and the compulsory sale of much land by the Commission of Sewers. Many of the Dutch, especially those who had not settled in England, probably gave up or sold their land rather than pay taxes which they regarded as unjust.

An undated but probably early breakdown into the geographical areas of all the cavells of the whole drained area in the Hatfield Charity papers⁷⁶ shows that the total area distributed was 25,643 acres 3 roods and 5 perches. The three scot lists from which tables IV(4), IV(5) and IV(6) are derived deal almost entirely with the Yorkshire part of the drainage. The absence of all but a small minority of land outside the county shows how the Axholme disturbances had reduced the total scotted. The totals of the three lists are given in table IV(7) and they show that about half of the total drained was available to the participants. The table also seems to indicate that the disturbances of the Interregnum also decreased the amount of better drained, twelve penny land, and increased that scotted at twopence. This might have been the case but it is more probable that the discrepancies between the scot list total for 1665 and the two later lists are a result of the inaccuracy of the earlier list. This likelihood is based on the similarity in the three lists in the total area scotted and the difficulty of altering the scot rates in the Court of Sewers.

Table IV(7): Totals of Scotted Land in 1665, 1693 and 1717

Rate of Scots	2d	8d	1/-	Total Acreage
1665	7,219.5	1,080	4,954	13,253½
1693	6,532	989	6,349¾	13,870¾
1717	6,593	1,054	6,289	13,936

⁷⁶ Doncaster Archives P28/7/3/1

The pattern of ownership in the three lists is roughly similar though there is considerable change in the names of owners. The ownership pattern of 1665 is much distorted by the uncertainty over the amount owned by John Bradbourne. At the larger figure it was by far the largest and even at its smallest it was only exceeded by Robert Harvey's acreage. In 1693 when the Bradbourne holding was in the hands of Henry Wood it was almost exactly between the figures of 1665 and was the largest single holding. In all the three years about half the land was in the hands of four large holders. They were, in 1665, Sir James Campbell, Robert Harvey and G. Johnson in addition to Bradbourne. In 1693 John Harvey, the first of a series of John Harveys who held the land into the middle of the nineteenth century, had replaced his uncle, Robert. The other major owners were Sir Anthony Abdy who had increased the Abdy holding since 1665 by 1,433 acres and Henry Wood and William Simpson.

In 1693 the four dominant families owned 7,743 acres of the available levels between them, well over half the land on the scot list. The largest single owner was Henry Wood who was William Simpson's son-in-law.⁷⁷ Wood, as well as being one of Simpson's partners in 928 acres, also owned 2,181½ acres 'late Bradbourne's'. The Simpson partnership owned 1,710¾ acres. Simpson and his partner represent a trend to increased local ownership in the levels. Whilst the main base of the Harvey's was Ickwelbury in Bedfordshire and Abdy was possibly a Londoner,⁷⁸ Simpson was the son of a former Vicar of Blythe in north Notts, and was described by Hunter as of Sheffield and later of Babworth, Notts. Wood was described as of Barnsley.⁷⁹ Both were associated locally with Stainforth. Of Simpson's other partners, Henry Moore was probably the same man who acted as a local agent for both the Duke of Devonshire and Lord Irwin, and was a member of a local family. Christopher Middlebrook was a member of a Thorne Quaker family and the Pryme's were early Huguenot settlers in the levels.

Of less importance than these four large holders of land was a group of smaller rentier landlords. They owned between them 3,087 acres ranging in size from 580

⁷⁷ Hunter, *op cit*, I, p183

⁷⁸ J R. Woodhead., *The Rulers of London* (1965), p154 A Sir Thomas Abdy married Anne, daughter of Thomas Soames, a London Alderman in 1660.

⁷⁹ Hunter, *op cit*, p183

acres to 240. They included Lord Irwin, the Lord of the Manor and the London attorney, Henry Travis, as well as members of local small gentry families such as Henry Myers of Hatfield. Some of this last group themselves farmed some parts of the levels. The smallest owners were the most diverse. They ranged from rentier nobility such as Lord Halifax and the Duke of Devonshire to very small rentiers such as Mr Lee of Hatfield and Mr Browne who only owned six acres. Eight of this group farmed the land themselves and whilst Wharton, Pryme, Hatfield and Woodward held sufficient of the better land to be able to farm successfully in level land conditions, the others only held twopenny land and would need to own or rent land elsewhere. In fact, both Pryme and Hatfield rented land from Lord Irwin. Pryme adjacent to his own land in Bryerhills and Hatfield in Hatfield Park.

The scot list for 1717 is more complete than either of the earlier ones and confirms the pattern of landholding of 1693. The changes which had taken place were very minor. Table IV(6) shows the same four large holdings though the Simpson partnership was now led by John Simpson and one of the holdings had declined by 50 acres. The middle group of owners had dropped from eight to seven and the total holding of this group had declined from 3,083 to 2,878 acres. Henry Myer's land had become a new Simpson partnership between John Simpson and Sir George Cooke of Wheatley. Henry Travis's land was now in trust for the Travis Charity Schools of Hatfield, Thorne and Wroot. The total number of owners had grown from 44 in 1693 to 50 and the new owners tended to be local men like Mr Elwick of Thorne, Aaron and John Maw,⁸⁰ William Newsom and George Scholay of Armthorpe, who were townland farmers who had bought cheap land in the levels, adjacent to their townlands, presumably to use as rough pasture. Some marshland tenants, like Abraham Venny, had bought land and some, like Peter Pryme, had modified their holdings. By 1717, for instance, Peter Pryme had sold the 49 acres of Wroot Carr that his father had owned in 1693. Overall there appears to be a trend to local ownership, apart from the large blocks in the hands of Simpson, Wood and their partners, Peter Pryme, Henry Moore and Thomas Johnson of Thorne, local farmers.

⁸⁰ Members of the Maw family farmed in both Hatfield and Wroot. The prominence of the Maws of Wroot in local affairs in the early eighteenth century suggests that their rise was a result of their new status as owners of land. Miller, *Thesis*, p85

who were freeing themselves from the restrictions of traditional open field farming and at the same time compensating themselves for the constriction of their pastures that the drainage had caused by handing over two-thirds of them to the drainers.

The scot list of 1665 named no tenants and the 1693 list is deficient as they were not mentioned when the scots were paid directly by the landlord or his agent. Nevertheless, the 1693 list names 79 tenants and although some tenants must have been omitted altogether and the holdings of others must have been understated, for many tenants held land of several landlords, the picture of tenantry which emerges is sufficiently similar to the almost complete list of 1717 to place some reliance on it. It is a fair assumption that the early participants hoped to be able to let their newly drained land to substantial tenants who would hold large acreages and pay high rents. Hence the attraction of Huguenot and Dutch settlers and Sir Edward Osborne's remark to Sir Arthur Ingram during the negotiations for the sale of Osborne's land in January 1637/8 that 'All the tenants mentioned in the Rentall that farm any considerable quantity are as able men as any man in England hath upon his land... being either Coppingholders of 30, 40 or 50 [acres] of their owne... or are such as are reported to have at least £1000 apiece in their purses'.⁸¹ This was also the assumption of some members of the Hartlib circle among whose many interests was the advancement of the nation's agriculture. One of the circle, Dymock or Beale, wrote to Hartlib to suggest an ideal type of farm lay-out for new-drained land based on 200 acre units and a false assumption of homogeneous and versatile soil.⁸² The land in the Hatfield levels was not, however, homogeneous and the use to which much of it could be put was very limited. Ideal types of farm lay-out were not developed in the levels, therefore, although there were some very large and wealthy farmers who farmed exclusively in the levels on ring-fenced farms. Many of the tenants were townland farmers who extended the scope of their operations by renting townland adjacent to their drained land and some were very small men who formed partnerships to rent a few acres of hayland or pasture. Some again were poor men desperate to make a living out of a few cheap acres of marshland and hoping to move on to bigger things. These were the tenants of 40 or 50 acres, for acreages which

⁸¹ W.Y.A.S. WYL 100, FN/HC/C1 Correspondence

⁸² Sheffield University, Hartlib MS, 62/29/1

would have supported a good life on the townland did not do so in the levels, especially on the twopenny land.

The inventories of marshland farmers for 1696-1740⁸³ analysed in tables IV(8), (9) and (10) mostly relate to large tenants who, in spite of the difficulties of farming in the levels and the almost chronic depression of agriculture in these years, were rich at the time of their deaths. Table IV(8) includes a group of six with inventories valued at over £400. By far the wealthiest was Abraham Venny, yeoman, of Thorne levels who was the descendant of a Huguenot settler. In addition to his inventory total of over £742, Venny had investments in mortgages, notes and debts owing amounting to £1,629-14s. The stock and crop figures on tables IV(9) and IV(10) show that he farmed on a large scale and his success confirms the expectation that to do well in the levels a large acreage had to be available. In the 1717 scot list Venny was shown to be holding 329 acres from six different owners. He also owned 80 acres of twelpenny land in Dirtness. On the 1693 list he was not shown as an owner but he was tenant of 313 acres from four proprietors and he might have rented more. Half of the land in his tenancy in 1693 he still held in 1717, the change in the other half of his holdings probably indicated a policy of exchanging inferior land for better whenever it became available. The Venny family were, however, more than just yeoman farmers, for the will of the next Abraham, dated November 1732, included bequests of farms in Cambridgeshire, Lincolnshire and Hatfield. The Prymes were another successful family descended from a Huguenot settler. In the 1690s the antiquary, Abraham, was sent to Cambridge and his brother Peter farmed in a considerable way in the levels. In 1717 Peter was tenant of 265 acres in the Severals and 17 acres in the wet West Moor and owner of 151 acres in Brierhills as well as the partner of John Simpson and others in 578 acres of levels. When he died in 1724 he left £600 in cash to his daughters, his freehold land in Hatfield levels to his elder son, Francis, and his copyhold land in Hatfield to his younger son, Abraham. The will, therefore, not only indicated his considerable wealth but his adoption of the local custom of gavelkind in the distribution of his land to his sons.

⁸³ Borthwick Institute, Wills and Inventories, Deanery of Doncaster, 1696-1740

TABLE IV(8)**SOME MARSHLAND FARMERS – 1696-1740**

DATE OF INVENTORY (I) OR WILL (W)	NAME	TOTAL WEALTH AT DEATH¹	WEALTH IN CROPS	WEALTH IN STOCK	OTHER WEALTH	DEBTS OWING	LANDS RENTED	LEVEL AND OTHER LANDS OWNED
19.6.1704 (I)	AMORY ISAAC (husb)	£457	£206	£97	£101 Bonds	£99 rent	1693 50 ac Wroot Carr (2) ² 22 ac Benintack	
14.5.1721 (I)	AMORY JOHN	£88	£23	£32	£15 Credits	£51		
29.3.1739 (I)	BRUNYEE PETER (husb)	£222	£89	£90	P & A £10 ³			
28.10.1719 (I)	DOBSON SAMUEL (husb)	£277	£135	£84		£86	1717 156 ac Haines (12)	
8.8.1729 (I)	FORES JOHN (yeo)	£216	£81	£57	P & A £10		1729 90 ac of Severals (12) @ £36 ⁴	
- 1.1699 (I)	HARNEW ISAAC (husb)	£130	£51	£32		£45		

¹ All values are rounded to nearest pound.

² Figures in brackets, 2, 8, or 12, refer to scot rate – 2d, 8d, or 12d.

³ Purse and apparel.

⁴ Fores only took the tenancy of the trustees of the Travis Charity in 1727-8 and his widow retained it in 1729 when the rent was raised to £38.

TABLE IV(8), cont

4.12.1724 (I)	HARNEW JOHN	£126	£19	£39		£55	1717 100 AC Haines (12)	
- 2.1733 (I)	LELEW ABRAHAM (husb)	£448	£216	£134	two-thirds share of a mill £20		1717 80 ac Wroot Carr (2)	
2.8.1719 (I)	MAINMAN RICHARD	£67	£14	£38	P & A £5	£57 (rent £36)		
17.8.1696 (I)	MILMAN Wm (husb)	£16	£1	£9	£3 Credits			
- 4. 1735 (I) 6.12.1734 (W)	MILMAN Wm (husb)	£248	£113	£78			1717 153½ ac in Severals & Haines (12)	1 ac of moor in South or Sand moor Thorne with turbary there (will)
- 1.1704	MORRILLION JOHN	£289	£146	£94			1693 280 ac Dirtness (12)	
29.5.1725 (I)	MORRILLION ABRAHAM	£263	£109	£81	P & A £15	£56 rents		
9.9.1719 (I)	OXLEY FRANCIS (husb)	£99	£34	£24		£43	1717 100 ac in Haines (12) partner with Peter Lelew for 198¾ ac	
2 7.1719 (I)	OXLEY JACOB	£270	£139	£78	£93 Bonds	£6 rent Breat Hall £38 rent	1717 38 ac in Brierhills (12), 100 ac in Severals (12)	

TABLE IV(8), cont

20.11.1724 (W)	PRYM PETER				£608 in legacies		1717 265 ac in Severals (12), 17 in West Moor (2)	Level lands late Mr Vanhecks £300. Copyhold lands in Manor of Hatfield
- 7.1699 (I)	SAVATT ISAMBAR (yeo)	£418	£140	£126	P & A £10 £30 Credits	£41		
24.11.1726 (I)	SMAGG BENJAMIN (husb)	£247	£116	£101	£15 Credits	£99		
2.7.1730 (I)	STEADS THO (husb)	£344	£141	£120	P & A £5 £13 Credit			
- 9.1728 (I)	TAFFINDER PETER	£230	£125	£96	P & A £10		1717 150 ac in Haines (12)	
- 8.1735 (I)	TAFFINDER Wm	£111	£39	£34			1717 71½ ac in Haines and Dirtness (12)	
- 7.1721 (I)	TISSON ABRAHAM (husb)	£204 (£433?) ⁵	£76	£52	£241 Credits	£13 rents & scots	1717 70 ac in Ditchmarsh (12)	
3.7.1721 (I)	TISSON DANIEL (husb)	£190	£89	£60	£7 Credits	£15	1717 29 ac in Ditchmarsh (12)	
26.6.1721 (I)	VENNY ABRAHAM (yeo)	£742	£477	£181	£1630 in mortgages, notes & debts		1717 329 ac in Severals, Dirtness and Haines (12)	1717 80 ac in Dirtness (12)

⁵ Inventory total is £204 but if credits were as stated it should have been £433.

TABLE IV(8), cont

- 11.1732 (W)	VENNY ABRAHAM (yeo)							WILL -Boardenhouse Farm, Wibidge Fen (Wisbech?) Inkersley Farm in Inkersley Fen, Lincs. Farm in Hatfield
3.4.1725 (I)	WANDE JOHN (husb)	£109	£38	£36		£195	1717 55 ac Ditchmarsh 60½ ac Severals	
24.3.1696 (I)	WOOD SAMUEL (yeo)	£583	£274	£183	£71 Credits P & A £10		1693 200 ac in Misson (2), 52 ac Severals (12)	
10.5.1721 (I) 2.5.1721 (w)	WOODWARD JOHN	£186	£93	£45	P & A £26		1717 75 ac in Dirtness (12)	WILL - Copyhold land, cottage, a close, ½ ac of meadow in Crowle
- 9.1721 (I)	WRIGHT Wm (husb)	£579	£201	£98	£109 'at use' 9th part of a ship at Goole £13		1717 158 ac Ditchmarsh (12)	

The inventory of William Wright of Thorne (Marsh), husbandman, also shows investments of £109 'out at use and in ye booke'. He was a tenant of John Harvey for 158 acres of Ditchmarsh, which must have been of better quality than most of the land in that area, if it were the only land he farmed, for his is the only inventory which shows a preponderance of wheat over oats among the crops. Abraham Lelew the third of this group of wealthy farmers to be named on the 1717 scot list was tenant only of 80 acres of West Carr. This area was amongst the wettest of the drained land and it is likely that by the time of his death in 1733 he held a much larger area and of better quality. It is possible that the 1717 holding represented an early stage in his farming career and that later he acquired some of the better land held in 1717 by Peter Lelew and Francis Oxley.

The problem of holdings too small to account for prosperity at the time of death is also found in the cases of two tenants on the 1693 scot list. Sam Wood's considerable stock of £583 was unlikely to be the result of farming 200 acres of twopenny land in Misson Carr and 52 acres of shilling land in the Severals. Similarly Isaac Amory was named as tenant only of 50 acres in West Carr and 22 acres of eightpenny land in Bennintack. A third tenant, Isambar Savatt, who was worth £457 at death was not mentioned at all on the list. The incompleteness of the 1693 list is sufficient explanation for the omission of Savatt's holding and it is probable that both Wood and Amory held other land from owners who paid scots directly and thus were included for only part of their holdings. In fact Amory's inventory gave acreages of meadow and of crops sown amounting to 130 acres and showed a debt of £99-4s to John Harvey for rent. If this referred to twelpenny land and did not include arrears it would represent, at about 8s an acre, 243 acres.

In the next group of eleven substantial farmers with inventory totals of over £200 the connection between their wealth and large holdings is clearer. Of the seven on whom there is information on tenancies, all except two farmed over 137 acres of shilling land and the richest, John Morrillion, farmed 280 acres. The two who farmed relatively small amounts were John Fores and Abraham Tisson. Fores farmed at his death, in 1729, 90 acres of Travis Charity land at a rent of £36 per year.⁸⁴ He had

⁸⁴ Doncaster Archives, P28/7/2/1, Travis Charity Accounts.

only held the tenancy since 1727 and it is possible that this was an addition to other holdings. This must have been so in Tisson's case as the 70 acres of Ditchmarsh, even though it was shilling land, was known to be marginal. It belonged to Lord Irwin and its poor condition had been the subject of correspondence between Irwin's steward and Timothy Moore in the 1690s. The least well-off group consisted of nine farmers whose wealth at death varied from £190 to £67. There is some evidence on the scot lists of the holdings of six of them. Five farmed large acreages varying from 199 acres (on the assumption that Francis Oxley's partnership with Peter Lelew was an equal one) down to 75 acres. One of the group was Daniel Tisson and his inventory shows that the acreages given, even on the accurate 1717 list, soon changed. In 1717 Tisson held only 29 acres according to the scot list. His inventory only four years later shows him to have had 73 acres under crops.

The wealth of this group of farmers shows that the marshlands were not necessarily a bad bargain for the tenant, however much the landlords might have suffered. Large farmers obviously benefited from the low rents that even the better lands attracted and the tradition which readily allowed abatements in difficult times. Their range of wealth was not unlike that of the larger townland farmers in Hatfield but, of course, the size of their holdings was much greater. Sheer acreage enabled them to employ their land to the best advantage and, as knowledge of drainage conditions in different parts of the levels grew, they were able to put their land to its best use. Growing knowledge of the flood risks in different areas probably explains the changes in tenancies that took place between 1693 and 1717. These market-orientated farmers were able to benefit from the good and improving connections of the area with a wide range of markets which by the end of the seventeenth century, and probably earlier, even included London.⁸⁵

Nevertheless, despite their growing knowledge of the land and their freedom from traditional restraints on innovation, the inventories show that the range of agricultural activities open to marshland farmers was severely limited by the wetness of the land and the risks of serious flooding. A century after the drainage the system of farming on the new drained land was much the same as it had been in the decade or so after

⁸⁵ T.S. Willan, *The Early History of the Don Navigation* (1965), p5

the land was divided. Tables IV(9) and IV(10) based on a sample of 24 inventories clearly shows this, though some changes in emphasis appear to be evident. The most obvious point to emerge is the overwhelming importance of oats as a crop. Its total value of £1,209-4-0 is far more than the total value of all the other crops. Winter sown grain had become the second crop of importance with rye, worth £386-1-6, being grown more than the less tolerant wheat which was worth £324-7-0.

Surprisingly, rape, which is usually considered the other 'characteristic' drained land crop, with oats, appears to have declined in importance. Cattle and horses were of roughly equal value on the inventories at £923-7-0 and £998-10-0 respectively. The cattle herds appear to have been mixed with breeding having a slight predominance over dairying and fattening. Horse breeding appears to have been important, as would be expected in an area where oats was the dominant crop. In spite of the heaviness of the land, traction was provided by horses as was the case almost entirely throughout the region.

The inventories also show that barley, the major crop of the townlands, was hardly grown at all and, with only seven references and a total value of £24-15-0 including £10-15-0 of malt; pulses were also of little significance. It also, however, suggests that some experimentation with the growing of pulses was taking place in the Thorne Levels in the period 1726-30 as the two references to peas and five of the six references to beans occur in Thorne between those years. Two growers had fairly large amounts of flax ('line' worth £10 and £15) but the rest was grown in small amounts which was normal in the region as a whole. That there were only eight references to flax, a typical marshland crop, is not surprising as it was very much a small husbandmans' and cottagers' crop, although most of those who were growing it were very large farmers and descendants of Huguenot settlers.

The decline, if indeed it were so, of the importance of rape/cole is surprising. There are only eight references to rape in the inventories and its total value was only £137-10-0, which makes it of far less importance than either wheat or rye, the secondary cereals. This appears to be a major change in the marshland cropping pattern. In 1635, as table IV(1) showed, rape was second in importance to oats, though it was a long way behind oats in value and acreage. The 1641-44 document indicated that rape was still a poor second to oats, with rye, the third in importance, of very little

TABLE IV(9)
RANGE AND VALUE OF ANIMALS IN THE WETLANDS, 1696-1740

HATFIELD LEVELS									
		CATTLE		HORSES		SHEEP		PIGS	
DATE	NAME	NO	VALUE	NO	VALUE	NO	VALUE	NO	VALUE
3/1696	Sam Wood	40	95-0-0 ¹	24	77-10-0			-	10-0-0
1/1699	Isaac Hernew	15	16-12-6	4	15-0-0			-	-
6/1699	Isamber Savall	24	51-5-0	21	73-0-0			2	1-6-0
1/1704	John Morrillion	40	45-10-0	14	42-0-0			-	6-0-0
6/1704	Isaac Amory	38	75-0-0	6	21-0-0			-	1-10-0
7/1719	Jacob Oxley	21	30-0-0	13	47-0-0			-	1-10-0
5/1721	John Amory	10	16-0-0	5	16-0-0			-	-
5/1725	Abraham Morrillion	25	41-0-0	11	37-0-0			3	3-0-0
5/1726	John Woodward	(15) ²	(22-0-0)	5	20-0-0			-	(3.0.0)
2/1733	Abraham Lelew	31	50-10-0	17	84-0-0	(14)	4-0-0	7	(3-10-0)
4/1735	William Milman	(29)	41-10-0	(10)	35-0-0			-	0-14-0
8/1735	William Taffinder	13	20-0-0	(4)	13-0-0			-	-
9/1735	Mary Taffinder	14	15-0-0	5	12-0-0			-	-

¹ Values in £ s. d.

² Brackets indicate an estimated figure or value.

TABLE IV(9), cont

THORNE LEVELS, DITCHMARSH AND MOORENDS									
		CATTLE		HORSES		SHEEP		PIGS	
DATE	NAME	NO	VALUE	NO	VALUE	NO	VALUE	NO	VALUE
11/1696	Roger Cutler	9	17-0-0	4	8-0-0	83	20-0-0 ¹	-	0-16-0
10/1719	Sam Dobson	16	18-15-0	22	74-0-0				
6/1721	Abraham Venny	27	(70-0-0)	26	(105-0-0)	14	4-1-0	-	2-0-0
9/1721	William Wright	21	31-10-0	12	51-0-0			-	8-2-0
12/1724	John Hernew	14	18-0-0	8	20-0-0			-	1-0-0
4/1725	John Wande	22	30-17-6	3	6-10-0			-	0-16-0
11/1726	Benjamin Smagg	28	(43.0-0)	19	(57-0-0)			-	3-5-6
9/1728	Peter Taffinder	(25)	43-0-0	12	50-0-0			-	(2-0-0)
5/1729	John Fores	18	29-5-0	6	27-0-0			-	1-0-0
7/1730	Thos Stead	29	55-10-0	18	60-0-0			-	3-0-0
3/1740	Peter Brunyee	24	41-0-0	13	44-0-0			-	4-0-0
	TOTALS	548	923-7-0	282	995-10-0	111	26-1-0	12	56-19-6

¹ Roger Cutler had a farm at Sykehouse as well as Moorends North and it is likely that his sheep were at the Sykehouse farm.

TABLE IV(10)
RANGE AND VALUE OF CROPS IN THE WETLANDS, 1696-1740

HATFIELD LEVELS

DATE	NAME	WHEAT	RYE	BARLEY	OATS	CORN	PEAS	BEANS	RAPE	HOPS	HAY	LINE
3/1696	Sam Wood	16-10-0	59-13-0	3-0-0	161-10-0				29-10-0		3-0-0	
1/1699	Isaac Hernew	2-0-0		2-0-0	33-5-0							
6/1699	Isambar Savall	24-0-0	25-4-0		90-0-0			1-0-0				
1/1704	John Morrillion	14-10-0	14-10-0		88-0-0				25-0-0			4-0-0
6/1704	Isaac Amory	20-10-0	20-0-0	MALT 2-10-0	106-10-0				20-0-0		26-0-0	10-0-0
7/1719	Jacob Oxley	17-0-0	18-5-0		60-0-0	16-0-0			2-0-0		6-0-0	
5/1721	John Amory	1-0-0	6-0-0		11-5-0						0-10-0	4-10-0
5/1725	Abraham Morrillion	10-0-0	16-0-0		62-0-0				6-0-0	5-0-0 with poles	6-16-0	4-0-0
5/1726	John Woodward	8-5-0	9-5-0		52-0-0	8-0-0		10-0-0			4-0-0	
2/1733	Abraham Lelew	5-0-0	48-0-0			127-0-0			15-0-0		6-0-0	15-0-0
4/1735	William Milman	WINTER CORN 20-0-0			12-0-0	69-0-0					12-0-0	
8/1735	William Taffinder	1-0-0	13-10-0	MALT 1-0-0	23-10-0							
9/1735	Mary Taffinder	7-10-0	7-10-0		35-0-0						3-0-0	

TABLE IV(10), cont

THORNE LEVELS, MOORENDS AND DITCHMARSH

DATE	NAME	WHEAT	RYE	BARLEY	OATS	CORN	PEAS	BEANS	RAPE	HOPS	HAY	LINE
11/1696	Roger Cutler	6-5-6	1-5-0		7-0-0							
10/1719	Samuel Dobson	17-10-0	17-10-0		60-0-0	16-0-0			20-0-0		4-0-0	
6/1721	Abraham Venny					464-0-0 with rape					10-0-0	3-0-0
9/1721	William Wright	86-0-0	57-0-0	MALT 2-10-0	48-0-0						7-10-0	
12/1724	John Harnew	8-0-0	3-10-0			7-0-0 (CROP)						
4/1725	John Wande	5-0-0	2-6-0		30-8-0							
1/1726	Benjamin Smagg	3-16-6	2-11-6	9-0-0	81-7-6			12-5-0				7-0-0
9/1728	Peter Taffinder	20-0-0	20-0-0	MALT 2-10-0	40-0-0			20-0-0			20-0-0	2-10-0
5/1729	John Fores	13-0-0	16-12-0	MALT 2-5-0	30-13-6		1-17-6	1-17-6			15-0-0	
7/1730	Thomas Steads	10-10-0	25-5-0		103-15-0		1-10-0					
1/1740	Peter Brunyee	7-10-0	8-10-0		73-0-0							
TOTALS		324-7-0	386-1-6	14-0-0 MALT 10-15-0	1,209-4-0	707-0-0	3-7-6	45-2-6	117-10-0	5-0-0	123-16-0	52-0-0

significance indeed. Rape was not, of course, confined to the newly-drained marshlands,⁸⁶ nor was it brought to England by the Dutch settlers to plant in Hatfield and the Great Fen, but it has always been considered a very important fenland crop. Dugdale made much of the great crops grown in Haxey Carr and wrote of the growth of a seed-crushing industry between Sandtoft and Thorne with the building of four crushing mills.⁸⁷ Fussell charted its importance in the Fens by reference to the views of contemporaries,⁸⁸ one of whom, Walter Blith, eulogised it for the value of its seed, for its use as sheep fodder and for the improvement of land in preparation for wheat or barley.⁸⁹ Holderness claims that it was 'grown increasingly in the Fenlands from about 1640 to clear the land and to provide nutritious fodder (oil-cake) for livestock'.⁹⁰

Many scattered references to rape-growing confirm that it was important in the Hatfield levels after 1644. Francis Simpson who rented 200 acres of twopenny land near Wroot in 1653/4 was growing rape and oats.⁹¹ The same land was still being used for rape in 1715 when the Secretary of the newly formed Travis Charity Trust charged two shillings expenses for 'going to Wroot to secure Pogson's rapes' as Pogson was in arrears with rent.⁹² Thomas Canby, under-steward to Lord Irwin, wrote to his lord in April 1711 that a great flood had ruined a good crop of rape in the Low Levels.⁹³ The continued profitability of rape as a crop is illustrated by the fact that by the early eighteenth century at least it was being grown on Hatfield townland closes and on the open fields.⁹⁴ Nevertheless the inventory evidence appears to show that over a period of nearly fifty years twenty large marshland farmers had no crop of rape or rape seed to value at the time of their deaths. Rape was, of course, supposed to be especially grown on newly drained marshland and by the eighteenth century the Hatfield marshland could no longer be called that. It was

⁸⁶ Holderness, *op cit*, p65 states that it was grown 'in areas where roots were not found satisfactory'.

⁸⁷ J. Thirsk, *English Peasant Farming* (1957), citing Dugdale, p128

⁸⁸ G.E. Fussell, 'History of Cole', *Nature* Vol. 176, 1955, pp 48-49

⁸⁹ J. Thirsk and J.P. Cooper, *17th Century Economic Documents* (1972), pp 132-133

⁹⁰ Holderness, *op cit*, p65

⁹¹ Miller, *Thesis*, p40

⁹² Doncaster Archives, Travis Charity Accounts P28/7/2/1

⁹³ W.Y.A.S. WYL 100, TN/HC/C1 Correspondence

⁹⁴ It was probably the dwarf variety which was suitable for light soils, unlike the giant which was suited to fresh marshes. Kerridge, *op cit*, p29

also reputed to be an exhausting crop⁹⁵ and its popularity might have declined as a consequence. Its use as sheep fodder could not have been very significant as most of the inventories did not refer to sheep even though Kerridge claims that a special breed of marshland sheep had been developed to cope with the conditions.⁹⁶

Table IV(9) shows that only three farmers kept sheep and that the bulk of them, kept by Roger Cutler, could have been kept in Sykehouse where he also had a farm. The two marshland farmers whose evidence was given in the tithe case of 1729-35 also had little interest in them.⁹⁷ Isaac Lelew claimed that he 'did not keep sheep except in one year, 9 or 10 in 1733'. Abraham de la Pryme said that he 'commonly had sheep, but always under 20'. In spite of this, rape oil cake could have been important in feeding the substantial herds of cattle, that the inventories indicate, during the winter. Equally the cattle could have been fed on the hay that was the only crop that much of the marshland could produce. This might be an explanation for the apparent decrease in importance of rape and the unimportance of pulses, though by the late seventeenth century rape might have only retained its significance in the wetter areas like the Travis Charity lands near Wroot. The substantial farmers had little such land.

Though sheep were not important, cattle and horses were. In terms of value, cattle and horses were almost equal in the inventories and it seems from the breakdown of animals owned in table IV(11) and IV(12) that breeding was important. Table IV(11), the breakdown of cattle, shows no clear bias to dairying or fattening, both, naturally, had their place, but the clearest tendency is towards breeding. Only Samuel Dobson of Thorne levels had no mature cows on his inventory, though he had a dairy, and the rest had between three and 13 animals listed as 'cows', 'incalvers' or 'milk cows', a median figure of seven such animals suggests that they only supplied the farm. The tithe case evidence confirms that seven was about the number of dairy cattle to supply a substantial farm. Isaac Lelew in his evidence dismissed his milk as only 'worth about £6 per year' and de la Pryme confirmed that his milk was used in his household and that its value 'if sold, might be about £6 per year'.⁹⁸ Almost all the

⁹⁵ Holderness, *op cit*, p65

⁹⁶ E. Kerridge, *The Farmers of Old England* (1973), pp 92-93

⁹⁷ W.Y.A.S. WYL 100, TN/HC/B19 Tithe Dispute

⁹⁸ *Ibid.*

TABLE IV(11)
BREAKDOWN OF CATTLE ON 24 MARSHLAND INVENTORIES, 1696-1740

Type	Bulls	Cows	Heifers	Queys	Calves	Young Beasts	Beasts	Fat Beasts	Oxen	Steers	Bullocks	TOTAL
No.	11	149	32	1	135	121	60	6	2	28	5	544

TABLE IV(12)
BREAKDOWN OF HORSES ON 24 MARSHLAND INVENTORIES, 1696-1740

Type	Horses	Draught Horses and Mares	Mares	Foals	Young Horses	Galloways	Stoned Horses	TOTAL
No.	110	22	46	60	42	1	1	282

inventories refer to a dairy or a milkhouse or a buttery, but only two mention cheese. Abraham Lelew had 32 cheeses valued at £1 and a cheese chamber. William Wright had cheese along with beef and bread worth £3.35. Perhaps fattening could have been expected to be important but the terms used in the inventories do not suggest this with only 41 animals clearly labelled as fat beasts, oxen,⁹⁹ steers or bullocks. With 286 of the cattle, nearly half of the inventory totals, called young beasts or calves, breeding seems to have been the most important object of marshland cattle farming.

Very few oxen seem to have been used as draught animals in the south-east corner of Yorkshire despite the heaviness of much of the soil away from the sandlands.¹⁰⁰ Even so only 22 of the horses on the inventories were defined as draught animals. The bulk of them were simply entered as 'horses' and like the term 'beasts' among cattle this reduces the value of the breakdown of types of horses given in table IV(12) as an indication of their use. Nevertheless, a median figure of nine illustrates their importance in the marshland and, as all but five of the farmers had foals, colts or young horses, the importance of breeding was clearly considerable.

Other animals were not very important. The insignificance of sheep has already been mentioned, though it is highly likely that they were more important to less substantial farmers than those on the inventories. Also, townland farmers who rented relatively small amounts of levels did so to pasture sheep as well as cattle and to mow for hay. For instance, John Norfolk, a yeoman of Snaith, on the evidence of this inventory dated 26 Feb 1655/6, farmed largely in the grounds of Snaith Hall, but he also had 260 sheep valued at £76 pasturing on Ditchmarsh.¹⁰¹ William Hudson, a Hatfield yeoman, had '80 sheep of all sorts' worth £20 recorded on his inventory of 10 Oct 1719. On the 1717 scot list he was shown as a tenant of 37¼ acres of Brierhills. In view of the value of his sheep they were probably pastured in his closes on Brierhills

⁹⁹ In the south-east of Yorkshire 'oxen' usually meant fattening beasts though a few more substantial farmers kept 'draught oxen'.

¹⁰⁰ R. Lennard, 'English Agriculture under Charles II: the evidence of the Royal Society's Enquiries', *Ec.H.R.* IV, 1932. Just across the river Ouse in the East Riding four oxen and two horses were used to plough 'warpe and clay', the draught all summer was 'fower horse yoked coachwise'. Ox ploughs were also used 'but never butt in winter'. p30

¹⁰¹ Borthwick Institute, *Wills and Inventories, Peculiar of Snaith, Inventory of John Norfolk of Snaith, 1655/6*

rather than on the commons. The inventories show that pigs were kept widely but on a small scale. Only Samuel Wood and William Wright whose swine were valued at £10 and £8-10-0 respectively kept any number beyond what would be expected to supply their own requirements.

The view of pasture farming in the marshland derived from the inventories is largely confirmed by the tithe case evidence some of which has been cited previously. Isaac Lelew, who farmed 220 acres from 1729-32 and 157¾ acres from 1733-5, was the only purely marshland farmer to give evidence. Abraham de la Pryme was a marshland farmer from 1729-32 but gave up the marshland for a townland farm. Both have already been quoted on the subject of dairying and sheep farming and their evidence further illustrates the importance of breeding to their income. Lelew stated that in 1732 he had sold two bullocks and two more a year later at Thorne Fair. He sold in all in 1732-3 'several cows and calves, not above ten in number'. At Bawtry Summer Fair in 1734 he sold two colts and at Thorne fair a draught mare and a filly – 'all of them of his own breeding'. De la Pryme also found cattle and horse sales an important source of profit. In 1731 he 'sold two colts at Blythe Fair for about £10, which he had bred' and three lean steers for £9.45, having 'bred 'em in Brierhill and wintered 'em at straw'. He also 'sold a steer to a neighbour about Martinmass for about £5'.¹⁰²

The inventories of townland farmers who owned or rented level land were not usually informative about the use to which it was put. Poor farmers like Thomas Brigh of Snaith Ditchmarsh, whose undated inventory of 1655-7 simply recorded a total value of £1.25¹⁰³ must have attempted to eke a living out of a very small piece of marshland. He probably failed like the 'poor men' who were beaten by the wetness of Uggin Carr referred to earlier in the chapter. Others farmed on a large scale and men like George Scholay of Armthorpe and Thomas Tuke of Auckley¹⁰⁴ were as wealthy as the big marshland farmers. Scholay was tenant of 45 acres in

¹⁰² W. Y. A. S. WYL 100, TN/HC/B19 Tithe Case

¹⁰³ Borthwick Institute, Wills and Inventories, Peculiar of Snaith, Thomas Brigh of Snaith Ditchmarsh, undated (1655-57)

¹⁰⁴ Nottingham C.R.O. Wills and Inventories, Deanery of Retford, Thomas Tuke of Auckley, 1697 (Auckley was in the West Riding but the parish, Finningley, is in Notts.)

West Moor in 1693. In 1717 he owned 33 acres. His inventory of October 1718 was appraised at £446.30 and showed that he was a large grazier with a herd of 42 cattle, 14 horses and, like most Armthorpe farmers, a flock of sheep. He folded 300 on the barley ground on the Armthorpe townlands. There is nothing on his inventory to suggest his ownership of part of West Moor except perhaps 40 loads of hay worth £20. Tuke's inventory also makes no mention of his connection with the levels. He farmed on the sands of Auckley and like Scholay, was a sheep corn farmer. His inventory debts, however, included £14-10-0 for rent to Mrs Simpson and Mr Wood who were large owners of level land. He also owed tithe to 'Mr Errat'. As Mr Errat was the vicar of Hatfield at that time (October 1697) it can be assumed that both debts referred to Hatfield levels. Tuke had, at his death, hay worth £10-10-0, oats new and old worth £30 and 17 acres 3 roods of rye sown, as well as rye worth £10 in his barn. All of these could have been grown in the levels and they possibly illustrate the complementary nature of the marshland and the barley, wheat emphasis of the sandy townlands. On the 1717 scot list a John Tuke was Henry Wood's tenant for 44 acres of Rand Carr.

The Irwin rentals included many small amounts of level land rented by townland farmers often in partnerships. The inventories of some of these husbandmen and yeomen show how such holdings widened the scope of their farming as was suggested in the case of Tuke. Thomas Dearman's inventory, dated June 1695, shows that he was growing rape, rye and oats worth £38-10-0 and barley worth £19-10-0 at that time. It was possible that all these crops but the barley were being grown on the 18 acres of Hassocks that he rented from Lord Irwin and it is almost certain that his oats, worth £20, was grown there. Other inventories suggest a similar usage. John Midgeley's inventory of June 1704 included 40 acres of oats and 12 acres of meadow. Elizabeth Stones of Tudworth had a stack of oats worth £48 on her inventory of December 1724. There are several references to the growing of rape in the townland inventories which might support the previous suggestion that by the end of the seventeenth century rape had become a small man's crop or merely that the crop was established on the townlands by then. The tithe case makes it clear that much of the marshland was still used as rough pasture though the inventories do not illustrate this.

Although there were only two purely marshland farmers among those who gave evidence in the tithe case and one of them, de la Pryme, abandoned marshland farming during the years at issue, six of the townland farmers owned or rented some marshland. Thomas Doughty only rented seven acres of townland and twenty acres of marshland and at the other extreme Cornelius Dickenson rented 285 acres 3 roods of which 145 were in the levels. Their farming was on a very different scale but they had in common with each other, and all the others who farmed the marshland, a great uncertainty about the way they had used the marshland in the several years. At the same time they were all able to give precise details of the use of their townlands. Lelew and de la Pryme explained their uncertainty by claiming that the improved land

can seldom go in any regular course of tillage because the inconstancy of the seasons too frequently defeats the Farmer's designs and the part or parcel of ground intended for one sort of grain is obliged to be sown with another... Nor is it uncommon for the same close (though but of small dimension) to fail of producing the first seed in some parts or corners thereof which defect is frequently supplied with seed of another kind

Lelew added that his Level lands 'have been part corn, part hay and part pasture, according as ye seasons would yearly permit'. Dickenson also gave no details of cropping on his Level lands possibly because he used them largely for pasture. John Youdal who farmed 47¾ acres of townland and 120 acres of Levels referred to the latter simply as 'meadow', though as he only paid £8.50 a year for it, it was more likely to be rough pasture. William Jackson held 31¼ acres in Ferne Carr and Hassocks (shilling land) and 52 acres in Hatfield Park and his Level land too seems to have been used only for grazing.¹⁰⁵

Sub-letting was common in the levels, as it was in most of the south-east corner of the West Riding. Even a small tenant like Thomas Doughty had his 20 level land acres 'sometimes all in his own hands, and sometimes part was lett off'. De la Pryme, a large tenant with 200 acres and a farm rented from Mrs Appleyard of Barnsley for £90, 37 acres 3 roods from Mr Simpson of Stainford for £3 and 38 acres from Lord Irwin for £18, sub-let 'about 80 acres... to several tenants'. It appears that

¹⁰⁵ W Y A S WYL 100, TN HC/B19 Tithe Case

sub-letting could have been a way of sharing the risks involved in marshland farming.¹⁰⁶

The tithe case generated a good deal of evidence on the establishment of new crops in Hatfield townland and the inventories support this, but there is no evidence in either tithe case or inventories for innovation in the marshlands. In view of the scale of operations of some marshland farmers and their freedom from customary restraints, it seems that the state of the levels precluded the introduction of new crops. Almost certainly the levels were too wet and too heavy for turnips and probably natural hay was available in sufficient quantities to render experiment with the new grasses unnecessary, though John Youdal, who held a large acreage of marshland, grew both turnips and clover on his townland. Nevertheless, Huguenot descendants still lived in the levels and the Huguenots had, like the quakers, a reputation as innovators. The exodus from France after Louis XIV's Revocation of the Edict of Nantes in 1685 was reputed to have impoverished France as it enriched the countries to which they went. It was claimed, for instance in Prussia, that the Huguenot immigrants who farmed made 'a profound impress on the agriculture and food habits of the region [of Maobit, north west of Berlin], by introducing new culture such as tobacco and setting a new standard of gardening.'¹⁰⁷ Seventeen of the inventories related to descendants of Huguenot settlers and another nine different family names occur in the scot lists for 1693 and 1717. This is much less than the 200 families whom Dugdale estimated to have settled in the levels but much nearer the 66 families listed by Hunter as appearing in the Sandtoft chapel register. That there was no evidence of innovation on the Hatfield levels was probably because the settlers had to concentrate on what would tolerate the inadequately drained ground: cattle, horses, oats, rye and rape.

There is, however, evidence that the innovatory Huguenot spirit had not been entirely dampened by the conditions. The inventory of John Morrillion, undated but of 1704, refers to 'Hop poles and other wood £3'. Abraham Morrillion's inventory of May 1725 shows that the family was still growing hops, stating 'Hop yard. Crop and poles

¹⁰⁶ *Ibid.*

¹⁰⁷ F. L. Nussbaum, *The Triumph of Science and Reason, 1660-1685* (1953), p116

£5'. The Prime family was also growing them at this time. In 1692 Timothy Moore writing to John Roads, Lord Irwin's Steward, informed him that Mr Prym would 'Abate something of 4d. p. cwt of his Old Hops but new must be £8'. In the following year Roads was told that 'Mr Pryms Hops are very good this year tis expected they will be very cheap'.¹⁰⁸ Nearly 40 years later Matthew Prime's grandson in his tithe case evidence stated that 'In 1730 he occupied in the Rectory of Hatfield a Hop Yard containing about 7 acres... on the product of which he paid duty of £6-12-5... as will appear by ye Exciseman's books'. It seems that hops were grown for several decades in Hatfield and that marshland farmers, descendants of Huguenot settlers, were behind it. But it was not confined to Hatfield. The accounts of Owston Hall, at the extreme west of the wetlands, show that in 1718 five shillings was paid 'for felling and bringing a load of hop poles from Dunscroft to Owston' and other payments relating to hops and hop poles appear in 1717 and 1720.¹⁰⁹ The reference to Dunscroft, a small settlement to the west of Hatfield West Field, probably means that de la Pryme's hop yard was there and not in the levels. An area in Dunscroft is still called Hop Hills. In the reign of Charles I Christopher Copley of Wadworth, a village adjacent to the lowlands on the magnesian limestone 'planted orchards, hop yards and timber trees'.¹¹⁰ Parts of the marshland might have been suitable for hop growing, for in the north clays of adjacent Nottinghamshire coarse hops were grown in land which would now be considered unsuitable. R. Lowe recorded that hop yards in the north clays were 'in vallies, wet lands for the most part not very valuable for other purposes'¹¹¹ which seems a fair description of much of the levels. Owston too was subject to flooding especially after Vermuyden had interfered with the flow of the Don.

The growing of hops in south Yorkshire is interesting whether or not they were grown in the marshland. Defoe claimed that he had never seen 'one acre of hop ground planted beyond Trent' and used this claim to explain the great trade in hops from Worcestershire to the north.¹¹² The Hatfield acreage was probably quite small,

¹⁰⁸ W.Y.A.S. WYL 100, TN/HC/C1 Correspondence 1621-1738, October 1692 and 16 September 1693.

¹⁰⁹ Doncaster Archives DD DC/E11/1, Accounts of Owston Hall, Yorks

¹¹⁰ J.T. Cliffe, *The Yorkshire Gentry*, (1969), p 277

¹¹¹ Cited by D.C.D. Pocock, 'Some former Hop-Growing Centres', *A.H.R.* 1965, p 20

¹¹² D. Defoe, *A Tour through the Whole Island of Great Britain*, (Penguin edition, 1971), p104

however, and, with Owston and possibly other south Yorkshire hop growing parishes, was only an outpost of the Nottinghamshire hop yards. This is suggested by a document in the tithe case headed 'Tythable things in Hatfield Parish' which includes a note that tithe of hops was 'to be enquired after in Nottinghamshire'. Pocock has shown that, in the early eighteenth century, a larger acreage of hops was grown in Nottinghamshire than in either Essex or Suffolk, with 943 acres in 1724. Hop growing declined later in the century but it still persisted in the mid-nineteenth century.¹¹³ It had probably died out in south Yorkshire before 1800 as Miller refers to the movement of Hall Cross in Doncaster in 1792 to a site 'where there was formerly a market for hops'.¹¹⁴

Despite the possibilities that hop growing had developed in the levels and that rape growing had declined, it seems clear that marshland farming had not changed a great deal between 1630-1750. Large parts continued to be pasture and fetched very low rents. Large parts continued to be meadow and sufficient was used for crops for it to be claimed that Vermuyden's intention to make the land 'fit for tillage and pasture' had been realised. Not all of this was, however, a result of the drainage. The question remains of how much the pre-drainage wetness of the land had been exaggerated to justify the undertaking in the first place and afterwards to hide Vermuyden's failure. There is a strong possibility that parcellation and individual tenancy of the former commons might have permitted the kind of development that took place after 1635 without Vermuyden's scheme. Certainly the maintenance of the scheme was a very costly business which caused constant friction in the levels and throughout much of upland areas drained by the Don, Torne and Idle. The cost of maintenance made landlords unwilling to risk money on further improvements both to the drainage and to the farms. Although the difficulties with the commoners of the Isle of Axholme were solved by 1719 the other problems in the levels were no nearer solution in 1750 than they had been in 1650.

On the evidence presented in this chapter it is fair to say that the drainage was a failure. Frequent floods, waterlogged ground, high maintenance costs and low rents

¹¹³ Pocock, *op cit*, pp 17-20

¹¹⁴ E. Miller, *History of Doncaster* (1804), p 186

made much of the drained land a poor bargain for landlords. It was difficult to find tenants or to sell the land and some landlords abandoned their holdings rather than pay high scots. In addition there was, even in the Chase, constant friction in the early post-drainage years resulting from rival claims to land and disputed boundaries which resulted in sitting tenants being forcibly replaced by those of a rival claimant. Disputes about the payment of the fee farm rent to the Duke of Buckingham were not solved until the early eighteenth century, and they even led to the hiring of armed groups to terrorise the settlers into paying. Most important, however, was the overflow of conflict from the Isle of Axholme as both participants and commoners frequently seized their opponents' animals grazing on disputed land and drove them into Hatfield. Axholme riots often spilled over the boundary too.

The situation on the drained land, of course, improved with time. Some areas had been successfully drained and tenants with a long experience of the area were able, over time, to unload their wetter land and acquire the drier. As a result these areas were mostly tenanted by the wealthier farmers whose inventories showed the extent of the farming the land permitted. The range of farming activity was not very large and was dominated by oats, cattle and horses. The difficulties of the post-drainage period started to erode from about 1750 when artificial warping of the wettest ground permitted a wider range of arable activities to be introduced. Attempts to improve the drainage of the better wetlands began at this time though it was not until the early nineteenth century that real improvement occurred and not until c.1950 that the drainage was satisfactory.

CHAPTER V

AGRICULTURAL CHANGE AND THE TOWNLAND FARMERS OF THE MANOR OF HATFIELD, 1630-1811

For three and a half centuries debate on the draining of the marshlands of Hatfield Chase obscured the fact that townland agriculture was well developed before the drainage. Where the existence of this agriculture was recognised it has tended to be described simply as 'pastoral'¹ whereas it was a well balanced system of mixed farming with the local farmers showing a marked tendency to expand their arable wherever they could. The structure and population of the parishes of the Manor were very different and their differences were reflected in their agriculture and the way that it changed between 1630-1811. Of the three parishes in the Manor, Thorne was the least favoured; it had only two small open fields and fewer ancient closes than either Hatfield or Fishlake.² Also it had no former demesnes to exploit whereas Hatfield had the Park and Fishlake had demesne ing lands. Sykehouse also had little open field land but great numbers of enclosures. Thorne farmers compensated for their shortage of arable land by cultivating the cleared turf moors but table V(1) shows clearly that farming was less important there than in the other parishes, although the town grew in other ways in the seventeenth century. Thorne was developing urban characteristics which compensated for the weakness of its agricultural base and this is illustrated in table V(1). Hatfield and Fishlake were more obviously orientated towards farming, having greater numbers of larger farmers and tradesmen for whom farming still contributed largely to their livelihood. The gentry and professional men of these two parishes were also much more likely to farm than those in Thorne. The very considerable difference in wealth in the former parishes also seems to support this conclusion. These wealthier farmers were the ones most likely to be innovators in agricultural practice and their greater numbers in Hatfield and Fishlake may account for the differences in agricultural development in the

¹ J. Thirsk, 'The Farming Regions of England' in Thirsk (ed.) *A.H.E.W.* Vol IV, pp 28-40

² *West Riding Record Sessions, 1611-1642*, Vol II, John Lister (ed) The Y.A.S. Record Series, Vol VIII (1915), pp 285-6. Thorne petitioned at the Sessions held at Pontefract on 4 May 1641 for the new farmers in the Levels to contribute to the poor rate 'as the Towne of Thorne is very populous, and there in great numbers of poor people and that the lands belonging to the townships are small'.

TABLE V(1)**ECONOMIC AND SOCIAL STRUCTURE OF THE MANOR OF HATFIELD FROM PROBATE INVENTORIES 1690-1740**

Parish	Gentry & Professionals	Larger Farmers¹	Farmers²	Small Farmers³		Tradesmen		Labourers⁴	Boatmen Keelmen Mariners	Totals
				mixed	graziers	non-farmers	farmers			
Hatfield	6	31	17	4	5	1	6	2	0	72
Fishlake	2	28	11	4	6	1	10	1	2	63
Thorne	5	9	14	9	6	10	8	6	13	80

¹ With inventories valued at over £100. Mostly styled 'yeoman' but some were 'husbandman'.

² Inventories between £35-£100. Mostly styled 'husbandman' but some were 'yeoman'.

³ Inventories under £35.

⁴ Styled 'labourer' but often as wealthy as the small farmers.

seventeenth and eighteenth centuries. It is also significant that the defendants in the tithing case were all Hatfield men although Thorne was also in the Rectory of Hatfield and the tithes were in the same ownership. The tithes of Fishlake, on the other hand, belonged to the Dean and Chapter of Durham.

Before these changes can be considered, however, it is necessary to examine the ways in which the townland farmers lost or gained as a result of the drainage and the consequent changes. Quite clearly the principal loss was to the inhabitants of Fishlake in crops, cattle and even houses as a result of the increased flooding consequent on the curtailment of the Don's south easterly arms; this will be considered later in the chapter. It was suggested earlier that a major gain was the disappearance of the marauding deer from the Chase. Another gain was the availability of former demesne lands for greater exploitation by farmers, the greatest loss was the curtailment of the commons, two thirds of which were now in the hands of individuals.

i. The Commons

After their complaints at the low quality of their share of the newly drained lands the commoners of the Manor accepted the new distribution awarded by the Council of the North in June 1630. The old award had given them over 4,000 acres of common in twelve separate allotments of which the largest was 893 acres in the West Moors. The West Moors were badly drained and the new agreement had exchanged some of the land allotted there for land in Ditchmarsh and Ferne Carr. In accepting the award the commoners agreed that all suits against Vermuyden should cease. They also received important assurances on their common rights. Their rights of turbary were guaranteed as was freedom from tolls on all lanes and passages 'by land and water'. Of great importance was the ending of the long dispute over agistment on the commons in the commoners' favour. Additionally, the new owners of the other part of the drained lands, and their tenants, were excluded from any common rights and their turbary was extremely limited.³ This decision of the Council of the North convinced the commoners of their outright ownership of the commons which was a

³ Hunter, *op cit*, pp 160-165, gives the names of the commons and the Council of the North's decision

source of dispute between them and the Lord of the Manor until the nineteenth century.

Although the question of common rights appeared to be settled in the short term by the 1630 decision it did nothing about the major problem of whether the truncated, but supposedly improved, commons were sufficient for the commoners' agricultural needs. It is clear that much of the land awarded was still unsatisfactory, indeed the evidence in chapter IV shows that the supposedly better land in Ditchmarsh and Ferne Carr granted in exchange in 1630 was often flooded. It is also clear from the evidence cited in the chapter that the drainage system required constant attention and expense to keep it working at even a low level of efficiency. It was also shown that many participants were convinced that the Commission of Sewers constantly put the interests of favoured individuals above the general interest in their maintenance work. Whatever the justification of this view, it is obvious that the interests of the commoners, who paid no scot charges, would be very low in the Commission's scale of concern. An early example of the commoners' dissatisfaction with the Commission occurred in 1647. They complained that the 'draynes in Kirton, Brearholme Carr, Brickhill Carr and West Moore and the drayn at Moor Ends, Clownes Mores are all in great decay and... lanes and carteways are... altogether useless, and that by reason thereof yo^r. petict^{rs}. Comons and Turfmoores are miserably drowned and fludded'.⁴

It is possible, nevertheless, that the commons were in a better state than they were before the drainage though it does not seem likely that the improvement would have been sufficient to compensate for the loss of almost two-thirds of the undrained land. Given the population of the seven townships of the Manor, it is likely that from the beginning the reduced commons were overstocked and there is clear evidence that this was so in the eighteenth century. The commons were unstinted⁵ and large numbers of inhabitants relied on the commons for their living. In many cases they had no legal rights of commons but, as in the days of the Forest Law, enforcement of

⁴ Notts Univ, Commissioners of Sewers Minutes HCC/6001

⁵ Thirsk (ed), *A.H.E. and W.* IV, p183. This was usual in Forest areas in the lowlands and fens in eastern England.

legal rights was difficult especially as the large number of very small commoners resisted any attempts to bring order as they suspected that it would result in severely limiting the number of animals they could graze.

The consequences of lack of stinting and over-stocking were well described by an anonymous correspondent (probably John Hatfield) in the tithe case papers. He wrote that 'our commons [are] very large and great quantities of sheepe kepte as many as actually are some dry years pyned'. The letter writer went on to state with some bitterness that the farmers were

oblidged to milk their cows and have their horses for bit and for other cattle as horses or beas oblidged to Sumer ym out which is commonly done a boute thorne Moore for 2/6 to 3/- for a grown beas and so proportionately less... and in some other pasture we can have yt at 1/6 a gate a grown beast at Barnby Dun a bout 2 miles from us. Our own neighbours yt have not comon right usually pays a bout 4d or 6d and seldom ever a shilling for a grown beas somring to ye gras man.⁶

The implication of this complaint seems to be that small men, i.e. not 'farmers', over-stocked the common with their sheep and that those without common right paid very small fees to further overstock them and forced farmers to pay high grazing fees elsewhere.⁷ Another correspondent developed this by suggesting that it was the careful farmers who paid agistment outside the parish: 'persons not thinking ye Comon pastures good enough and sufficient for ye improvement of there stock take adgistment in Inclosed pasture ground lying near or adjoining to our said commons'.⁸

When Brown visited the area as a Board of Agriculture surveyor in the late eighteenth century he noted 'large areas of waste land, a great deal of it under water' between Hatfield and Thorne and between Thorne and Snaith and that it supported many thousands of stock.⁹ His criticisms were, of course, part of the campaign against open fields and commons that agricultural reformers had been waging for many years because such land, as it belonged to nobody, could not be improved. Metcalfe commented that Jeffray's map of the area (surveyed 1767-72) showed that

⁶ W.Y.A.S. WYL 100, TN/HC/B19 Tithe Case

⁷ Although the evidence of table V(4) does not support this view.

⁸ W.Y.A.S. WYL 100, TN/HC/B19 Tithe Case

⁹ R. Brown, *A General View of the Agriculture of the West Riding of Yorkshire* (1799), Appendix p94

the commons were largely rough pasture,¹⁰ which, of course, is what commons were and the reason why many in the Manor of Hatfield wanted the enclosure as did the Board of Agriculture's surveyors. Brown further blamed the commoners for the bad state of the commons and thereby missed the point that to the commoners drainage was the responsibility of the participants who had been given the other two thirds as a reward for draining the whole.

In his defence of Vermuyden's work Metcalfe made a great play with the 'backwardness' of the agriculture of the Manor and implied that this supported the view that the inhabitants were not worthy of Vermuyden's work because they failed to develop it further. In fact, the Bye-Law Book of Fishlake shows that the inhabitants continued to maintain the dykes as they had done before the drainage. For instance, the Bye-Law court in 1667 ordered that John Goodridge should have the piece of common between Double Dike and the meadows for 'dicking the dubell dike betwixt the clawe and the 2 inges and is alsoe to kepe and drese the blacksike clawe for the profites of the said pece of grounds'.¹¹ In 1674 Richard Goodridge was paid one shilling for dressing Double Dike. These were minor dykes; the major drainage channels of the area were not their responsibility. Far from being incapable of acting communally, the inhabitants of the Manor were used to common action to protect their interests and from the early seventeenth century, at least, members of the leading families in all the townships of the Manor had concerted action against the Crown before the start of the drainage, Vermuyden during it and the Ingram lords of the Manor afterwards. The issue of the ownership of the soil of the commons arose in acute form in 1727.¹² The commoners maintained that the 1630 award gave them full and permanent ownership but Lord Irwin maintained that right of the soil remained in the hands of the lord of the Manor. Even after a decision in the commoners' favour in the House of Lords in 1750 the Ingrams would not concede. They finally obtained a solution satisfactory to themselves by obstructing enclosure until the principal inhabitants finally accepted that to gain consent to enclosure they had to accede to the lord's claims.

¹⁰ Metcalfe, *op cit*, pp 198-199

¹¹ Doncaster Archives, Fishlake Bye-Law Book

¹² W. Y. A. S. WYL 100 TN. HC B18, Stainforth Riots

Nevertheless the commons, like all such land, suffered from lack of management and control. In the absence of stinting they suffered from over-grazing and large areas were useless because of standing water. This suggests that they were insufficient for the size and population of the Manor, a suggestion which is supported by the fact that many farmers, especially the larger ones, were willing to pay large agistment fees for enclosed land both inside and outside the Manor. It also explains why farmers in a manor with such extensive pastures should adopt the new fodder crops at a relatively early date.

The final proof of the small value of the commons comes in the Enclosure Act of 1811 which required a separate act for their drainage before their enclosure was considered worthwhile.

ii. Hatfield Park

In the sixteenth century Hatfield Park was already partly divided and brought in an income of £100 a year from pasture, warren and coppice. After dischisement and the royal sale of the Manor the new lords attempted to make a greater income from it. In the Park the income certainly increased, but as in the newly drained lands, the improvement was always disappointing though its problems were not caused by flooding. Sir Edward Osborne, an early Lord of the Manor, claimed that the Park was much improveable. In 1638 when he was negotiating the sale of the Manor he wrote that he had not 'yet had leazure to divide [the Park] into parcells as it must be, before it can be improved to ye [full] worth'. Also, he pointed out, that he had not made leases or even annual rents. Instead the tenants were paying a 'sheaf rent' of every third sheaf, even so it comes very little short of ye rent expressed notwithstanding that the present tenants have but meane crops in respect of what they will get when they have leases'.¹³ The 'rent expressed' was £200 but a sceptical reader added the comment in the margin, 'at ye most worth £160 a year'.

The new purchaser of the Manor, Sir Arthur Ingram, worked hard to increase the income from it but neither he nor his son, the younger Sir Arthur, developed the Park's potential by dividing it into separate farms hedging the fields or granting

¹³ *Ibid.*, TN/HC/C1 Correspondence, Sir Edward Osborne to Sir Arthur Ingram, 22.1 1637/8

leases. Nevertheless a rental of 1653 shows that some 660 acres were rented for £231 or seven shillings an acre. There were 52 separate holdings of which only five were held in lease. These five ranged from 99 to 18 acres. Another 35 farmers held one or more plots and there were six holdings held by partnerships. The size of holdings varied from the one acre of Christopher Stringer to the 99 acre lease held by Mr John Ellwicke. Ellwicke also held three other plots and a total acreage of 142 acres for which he paid £49-13-4. He also rented Park House Farm for £14 a year.¹⁴ This was at the northern edge of the Park and its seventeenth century tenants all acted as rent collectors for the Ingram estate. Its rent was always given separately from the Park land and on one rental it was described as 'copyhold' whereas the Park was demesne land.

It is clear from the above quotations from Sir Edward Osborne's letter that he believed that the way to improve the Park rents was by turning land that had traditionally been pasture, warren and coppice into arable. Only four years after the 1653 Rental an attempt was made to bring this about. In 1657 a lease was drawn up between Thomas Ingram, Esq, and Francis Simpson of Duncroft, Hatfield, gent, for Simpson to rent the Park for £210 per annum for 31 years. The acreage referred to on the lease was 800 acres 'by estimation'. The lease was not to become operative until after the death of the younger Sir Arthur Ingram's widow, Lady Katherine, but Simpson was already the occupier.¹⁵ There is no indication why Simpson should have become the tenant of the bulk of the land in place of most of the tenants of 1653. Six years later, when his difficulties had already started he wrote to Henry Ingram, the newly created Viscount Irwin, to appeal for patience and added 'Sir Arthur yo^r father loved me well'.¹⁶ Possibly, therefore, the long lease was intended to establish Simpson's fortune. If this is so he was sadly disappointed and 20 years after the lease was made he left Hatfield bankrupt. Presumably Simpson had promised that in return for his long lease he would develop the Parks for agriculture so that the estate would benefit in the long run. In the years immediately after 1657

¹⁴ *Ibid.*, TN/HC/C5 Rentals

¹⁵ *Ibid.*, TN/HC/A50 Deeds. The 1774 Survey showed 1,153 acres in the Parks. Other leases had been already granted which remained in force.

¹⁶ *Ibid.*, TN/HC/C1 Correspondence, Francis Simpson to Viscount Irwin, 15 October 1663

he built two farms and other buildings and divided it into closes. He spent £500 of his own money and over £1,000 he borrowed from the Earl of Devonshire.¹⁷

His failure was a result of a combination of local circumstances and the glut of grain which forced down prices in the late 1660s and early 1670s. Even in 1663 when he began to grant leases to sub-tenants he was unable to do so at rents which gave him an adequate surplus over the rent he paid to the Ingram estate. He was only able to achieve rents similar to, or lower than, the rents for the unimproved land on the 1653 rental. In spite of his investment he was obviously unable to remove suspicion of the quality of the Park land among the local farmers. His lease with John Priestley and his four partners was, for instance, at seven shillings an acre, exactly the same as in the 1653 rental. This lease also shows that Simpson had created in the Park a modified open field system. The lease referred to the fifteen acres leased as 'arable lying in the highe parks next the Copsy Leas within the three shifts as is now divided'.¹⁸ Also he had given his fields the traditional open field names of West Field, Middle Field and South Field, with a fourth called Hoddy Field. Their total acreage was only 122 acres and it can be assumed that this was expected to be the land best suited to arable farming. In 1663 Simpson leased to four husbandmen of Hatfield Woodhouse, John Hudson and his partners, a 45 acre close of arable called West Field for 5/3 an acre which was the same rent as he paid to the lord.

The implication of this is that he had over-estimated the value of the land after improvement. His obligation to pay £210 in rent in addition to his repayments to the Earl of Devonshire ruined him as prices dropped in the 1660s and some of his sub-tenants abandoned their leases and left him with land in hand which he had to farm himself to try to meet his obligations.¹⁹ It soon became obvious that large areas of the Park sands were unimproveable by any means that Simpson knew and his plight is illustrated in letters to John Bright. John Bright was one of Lady Katherine Ingram's two trustees for the manors of Hatfield and Birdsall, near York, that were set aside

¹⁷ *Ibid.*, TN/HC/C5 Rentals, c. 1685. Sheffield Archives WWM/BR/75, John Arthur, Devonshire's steward to John Bright, 12 August 1668

¹⁸ *Ibid.*, TN/HC/A44 Deeds and TN/HC/C5 Rentals c. 1685

¹⁹ *Ibid.*, TN/HC/C5. The remaining sub-tenants were paying their rents directly to Temple Newsam and were also in arrears.

for her maintenance during her widowhood. The first letter, from John Arthur, informed Bright that Francis Simpson had been to Chatsworth and 'further solicited' the Earl 'for his assistance to carry on ye husbandry of ye pk. at Hatfield', but his lordship having spent so much would lend no more 'having now made triall these two years 67 and 68 in hope that something would have been made out of it, over and above the... rent, towards his debt but finds none'.²⁰ Two years later a letter from Simpson himself to Bright attempted to explain his inability to pay his rent. He referred to the low quality of some of the Park crops and claimed that there

are but three acres of Rye for seed, a bad close of Rye and Masling in Hen. Abbeys grounds... about 20 acres of oats And 15 acres of Barley in the Coney Warrn... 9 acres of bad Barley in the hye pk. a great part spoyled with rabbits,... 15 acres sown with peas not worth anything.

Simpson referred also to his debts for seed and 'lyme' and his need of more and to his hope that 'providence will raise me up ffriends to procure me that that sum [to pay his debts] And help me in management of the unfortunaate pk. which now I suffer much in not knowing wherewith to manage half as it should be'.²¹ The absence of wheat from the list of crops in the letter and presence of maslin, barley and rye, the reference to lime all indicate his attempts to come to terms with the poor sandy soil. There is no evidence of the use of the sheep fold which was the normal method of making the sands fertile in the villages to the west and south of Hatfield though it is difficult to believe that he was not aware of the practice. Nevertheless, whatever the methods he used, the soil and the rabbits defeated him and what the local conditions did not do, the low prices of the period completed. His letter to Bright also shows that he stored tenants' grain in the hopes of better prices in the following season and that he was forced into the desperate strait of even selling 'muck' to other farmers.

Simpson struggled on with his lease until 1678.²² In 1670 his arrears were £74, in 1671 and 2 they were low, at £8-0-3 and £5-13-4 respectively but in 1673 and 1675 they were very large again and accounted for the bulk of the arrears on the Ingram

²⁰ Sheffield Archives, WWM/BR 75, John Arthur to John Bright, 12 Aug 1668

²¹ *Ibid.*, Francis Simpson to John Bright, August 1670

²² W Y A S WY1 100, TN/HC/A51, Deeds. Simpson moved out of the Manor to Grimethorpe

Hatfield estate: £105 out of £263-17-9 in 1673 and £104-13-6 out of £312-2-3 in 1675.²³ The rentals make it clear that Simpson's experiences, and those, no doubt, of his sub-tenants, made the Parks difficult to let in the future. In 1682 Henry Moore paid £81-5-11 'in full for goyst in ye Parke'²⁴ and an undated 'Particular of the Lordship of Haitfield', probably of the mid-1680s shows that much of Simpson's land was still unlet. 290 acres of it were let at an average rent of 4/3. 128 acres of this was the low rented Cow Close and Whitmosse but even excluding these the average for the rest was only 5/6. A marginal note on the 'Particular' gives a brief history of Simpson's fate which concluded with the statement that he was 'much in arrears and not able to pay any pte. thereof, the Trustees were constrained to take an assignment of ye said lease and his owne bond, and ever since to Lett pte. and Joyst ye remainder there being noe ferm^s. to be found that would farme the same it being a very barren soyle and far from tillage, nor can we dispose of it wthout a considerable abatement.'²⁵

Simpson's lease did not include all the Park. Park House Farm with some of the Park land which John Ellwick had held in the 1640s and 1650s had passed to Capt. John Hatfield who paid £12 per year for the farm, two pounds less than Ellwick. In 1695 the second John Hatfield's lease was renewed for 41 years and included 225 acres of Park land for £57 or four shillings an acre. In 1737 it was renewed to the same family with the rent 'advanced £10'.²⁶ Another gentry family, the Lees, also held a part of the Parks. In 1666 a lease was made between Thomas Lee and Henry Lord Ingram for c.100 acres of the Parks called Park Carr and Needham Carr which now 'lye inclosed and adioyning one to another... and now in the tenure... of the said Thomas Lee'. The rent was £33 or approximately 6/8 an acre. He still paid the same rent in the 1680s and held in addition Lawn Hills at three shillings and fourpence an acre. Park Carr and Needham Carr were leased by a James Harrison in 1736 at six shillings and sixpence.²⁷ But after Simpson's failure the bulk of the Park land was rented on the former system of many small tenants who paid, in the 1690s, rents

²³ *Ibid.*, TN/HC/C5 Rentals

²⁴ *Ibid.*

²⁵ *Ibid.*

²⁶ *Ibid.*, TN/HC/A59 Deeds

²⁷ *Ibid.*, TN/HC C5

varying from ten shillings to four shillings an acre. The bulk of them held annual tenancies though there were some 293 acres leased to eight farmers, other than the Hatfield and Lee leases, between 1696-1700 at an average rent of six shillings and sixpence. The Hatfield's land was mostly let to sub-tenants and at the time of the tithe case, in the 1730s, Hatfield only farmed 85 acres, out of 265 acres, himself.

Obviously some parts of the Parks continued to be used as arable despite Simpson's experience and the generally 'barren soyle' though the evidence comes only from the tithe case. Only one Hatfield inventory refers to the Parks, that of Thomas Stones of Duncroft, who in 1731 had 'hay in the Park value 5/-'. Several of the farmers involved in the tithe case held Park land. John Hatfield's holding has previously been mentioned though he made no mention of how the lands were used. William Jackson held 35 acres and claimed that he reaped from them 'large quantities of corn, hay, clover and turnips for the support of his cattle'. Cornelius Dickenson shared the other half of 70 acres with Jackson in addition to the seven acre Park Field. He made no mention of the cropping of the larger holding but stated that he had turnips, 'eaten with young stock', clover, wheat, turnips and barley from Park Field in the years 1729-34. Francis Killam who paid £27-13-0 per year for 40 acres of the Parks claimed to have used it for wintering young calves and colts after they had summered on the commons.

This lack of detail on the Parks is because they were not properly a part of the Rectory. As former demesne land it had been claimed in the immediate aftermath of the sale of the Manor that tithes were due to the king. Uncertainty on the issue was probably one of the causes of the early difficulty in letting the land. There seems to be no evidence on when this issue was cleared up but by the time of the tithe dispute the Parks were tithe free. An undated 'List of Tythable things in Hatfield Parish' among the tithe case papers stated that 'the tythe proprietor has 40 acres in the Parks in lieu of tithes' and in 1734 John Hatfield stated in a letter to Irwin's steward that the 40 acres were in the hands of Mr Jackson, the tithe collector. He also gave its butts and bounds and referred to it as Parsnidge Coppys.²⁸ The tithe owners were not directly concerned, therefore, with the use of the Park land though Hatfield was

²⁸ *Ibid.*, TN/HC/C1 Correspondence, John Hatfield to Robert Hopkinson, 3 2 1734/5

charged with removing 'titheable goods', i.e. sheep, from the commons into land not titheable just before clipping time to avoid paying tithe on the wool.

An undated 'Particular of Lord Irwin's Hatfield estate', c. 1743 shows that some of the Park closes were then part of the large farms which included drained land and townland.²⁹ John Hatfield still held 265 acres 2r.8p and Cornelius Dickenson still held nearly 42 acres on his own as well as other parts in partnership. Their rents were five shillings and five shillings and threepence respectively though it can be assumed that Hatfield's sub-tenants paid more. John Robinson who rented a farm in Hatfield Woodhouse had almost all of his 271 acres in the Parks and only paid three shillings an acre. The detailed *Survey Book* of the estate drawn up in 1774³⁰ shows clearly, as it distinguished on each farm between tithe free land and that which paid tithe in kind, and that except for John Hatfield's holding and John Robinson's the Park closes were all distributed among farmers who held all types of land. The Survey makes no reference to rents.

In 1653 Park rents brought in £231 for 660 acres, a few years later Francis Simpson agreed to pay £210 for about 800 acres. An estimation based on the 'Particular' of c. 1743 shows that some 857 acres were rented for £221-9-6.³¹ The later figure is considerably less than the rent for 1653 and little more than Sir Edward Osborne's estimation of its unimproved value in 1637 in spite of all the hedging and building which had ruined Francis Simpson. Thus, although the evidence shows a wide range of crops both in the 1660s and the 1730s including, in the latter years, wheat, and the new crops, clover and turnips, and some land specifically designated as meadow and worth ten shillings an acre, the agricultural history of the Parks was a disappointing one for its owners. Even clover and turnips with their special suitability for light soil do not appear to have improved the rents. Great expenditure on improvements, long leases and freedom from tithes alike were unable to compensate for the poorness of most of the Park soil.

²⁹ *Ibid.*, TN/HC/C5 Rentals

³⁰ *Ibid.*, TN/HC/C9

³¹ *Ibid.*, TN/HC/C5 Rentals. What bias there was in the estimation tended to inflate Park rents

iii. The Townlands

When Vermuyden became lord of the Manor of Hatfield much of the open fields and the closes of Hatfield was copyhold and the rest was held in very small freehold estates. The copyholders found their situation changed by the replacement of the mild, inefficient and, frequently, corrupt rule of the Crown and its local representatives by the agents of lords determined to make a profit out of the Manor. One very obvious source of increased revenue was the replacement of copyhold by leasehold tenure. This process was started by Sir Edward Osborne during his brief period of lordship³² and immediately Sir Arthur Ingram became owner he pursued the policy vigorously. Very quickly he persuaded hundreds of copyholders to enfranchise their holdings at 'only one years true value'. Most of them equally rapidly withdrew their agreement most likely because they refused to accept Sir Arthur's estimation of 'true value'.³³ Additionally they became aware that the enfranchisement would be the prelude to a modernisation of the organisation of the Manor in the interest of the lord.

The copyhold customs which had evolved during the royal ownership were extremely favourable to the tenants. They included 'fines certain' of one year's rental on the transfer of a copyhold which had been confirmed on 1 Jan 1609/10 by a 'perpetual' Exchequer Decree. At the time this decree had effectively prevented any royal increase in income arising from Salisbury's 1607 Survey of the Manor. Sir Arthur's attempt to enfranchise copyholds also failed to increase his income and led to the first of the many disputes between the Ingram lords and the people of Hatfield. The copyholders presented to parliament a bill for the confirmation of their ancient customs in 1640. Sir Arthur counter-petitioned against the copyholders 'p.tended claims' which he described as:

1. their p.tence of Right of Comon for all their Cattle comonable at all times of the yeare within and upon all and every of the wastes of the said manor,
2. their houlding copiehold and Turfe moores without Admeasurement,
3. the certainty of the Copiehold ffines,

³² *Ibid.*, TN/HC/B7. 21 Dec 1637, Sir Edward Osborne, Bart, 'enfranchises all his copiehold land held of the Manor of Haitefeld by Ed. Waller, gent., of Beverley for £100 at Pentecost 1638 and £61 at Pentecost 1639'.

³³ *Ibid.*, TN/HC/B9

4. their title to fell wood and Timber growing upon their copieholds and to sell and dispose of the same,
5. their injoying the lanes, ways and passages within the said Lordshipp and profit thereupon growing in Comon,
6. their exemcon from Toll and Liberty of ffishing within the said Lordshipp.³⁴

The commoners believed that the issue of their rights on the truncated commons had been settled forever in their favour by the decision of the Council of the North in 1630 which had also exchanged the lands which they complained about for drier ones and limited severely the rights of common and turbarry of the new settlers on the levels. Sir Arthur's argument that he was not party to this agreement nor to others made at the time of the King's sale of the Manor to Vermuyden and his, probably just, claims that the excessive rights of the commoners were the result of the neglect of royal officials were rejected by parliament and the claims of the copyholders were reconfirmed.

Consequently a large area of the Manor continued to be held in a form of copyhold which brought little profit to the lord and great profit, freedom and security to the tenants until the enclosure award of 1825. The freedoms which so irritated Sir Arthur in 1640 continued to exist and go far to explain the conflict between lord and tenants in the Manor during that period. To take the points as listed by Sir Arthur:

1. Totally unlimited right of common was taken to mean that the lord had no right in the soil. The determination of the Ingrams to reverse this belief never wavered.
2. Copyhold land and turf moors were still largely unmeasured in the late eighteenth century. Even as more areas were given both an estimated size and a surveyed size in the Court Rolls, it made no difference to the rent and the surveyed size was always the larger although not by the 'some places, sixe times, in some... tenn' that Sir Arthur Ingram complained of in 1640.³⁵ In a Court Roll of 1790 'two closes of arable, meadow or pasture called ffurthouse closes' were estimated at four acres and surveyed at 6 acres 9 poles.³⁶ Other examples in the same roll and

³⁴ *Ibid.*

³⁵ *Ibid.*, TN/HC/B9

³⁶ *Ibid.*, DB 205

later ones show that the underestimation was usually of about a half though one in Hatfield Woodhouse in the Court Roll of 1810 give 1 acre 1 rood by estimation and 3 acres 2 roods 9 perches by survey.

3. The Court Rolls also show that fines certain survived. In most cases the fines were given in the margin with the majority being of 1d, 3d, 4¼d, 6½d, and representing small amounts of land 'by estimation'. That the fines still represented the annual rent is shown by an entry on the Court Roll of 1790 which gives the rent of three pieces of land as two shillings, one shilling and one and elevenpence, the total, four and elevenpence is also the amount of the fine. These minute rents had been entirely unrealistic in the early seventeenth century but after the increase in prices of the late eighteenth century they were even more so. Some entries give sufficient detail to illustrate the situation from the lord's point of view. Mary Atkinson, a widow of Hatfield Levels, sold her 23½ acres of copyhold land and buildings to the sitting tenant, Richard Mainman, in 1790. As sub-tenant Mainman had paid £46 per year, the fine on the transaction was eighteen shillings and sixpence, i.e., the annual copyhold rent paid to the lord. Except for Sykehouse entries the price was not given when copyholds were sold but the sale value bore no relationship to the rent. The Rev. John Taylor of Rothwell's sale of Sykehouse land to Thomas Brunton of Leeds for £500 was for land on which Taylor paid eight shillings and one penny copyhold rent.³⁷ Similar sums were frequently lent on the mortgage of copyhold land which was transferred to the mortgagor for the period of the loan by the manor court.³⁸

5. The tenants' freedom to use and graze the lanes and ways of the Manor was never reversed. The ways (lanes) are the only existing remnant of the pre-enclosure period. Nevertheless, the Marquess of Hertford attempted to move a bill in parliament to assert his ownership during the later stages of the enclosure process and managed to remove the 'broad' lanes which provided common grazing from common ownership.

6. The question of freedom from toll raised important issues particularly when the Don Navigation Act was passed in 1726. In anticipation of increased use of the

³⁷ Nearly 1,250 years purchase!

³⁸ W. Y. A. S. WYL 100, DB 205, 1789-92

commons adjacent to the river banks for wharfage, loading and for cartage the Lord of the Manor let Martin Ing, Fishlake to Francis Simpson of Fishlake in 1723

together with all the said Lord Irwin's right title Interest property claim and demand of all Tolls Wharfage Damages and demands of and from all and every person... by reason of ... their carrying and recarrying over and upon the soile of any of the Waists and common grounds within the said Manor of Haitefield any goods Wairs and Merchandizes whatsoever to putt into or which shall be taken out of any keel boat Lighter or other Vessell upon the River Dun there as also for wharfage lyeing lodging and depositing loading and unloading such goods waires and Merchandizes upon the said river banks and shores... and for the better secureing the same Toll Satisfaction and Wharfage to sett up any Barr or Barrs Turnpike or Turnpikes within the said Lordship...³⁹

Shortly afterwards a toll bar was erected at the ford of Stainforth and a lane to the river was blocked at Dunstal Hill. The ensuing riots led to charges on the ringleaders for trespass and a covenant among 'the major part of the Inhabitants of Stainford'⁴⁰ to defend them legally. This issue and the associated issue of the lord's right in the soil eventually went to the House of Lords on appeal in December 1750 when Irwin's appeal was dismissed and costs awarded to the inhabitants.⁴¹

On the second part of point 6, Liberty of fishing, and on point 4, freedom to fell and sell timber, there appears to be no evidence but considering the way in which the copyholders maintained their other rights it must be assumed that these were maintained too. John Leland claimed that the Chase was denuded of timber long before the drainage so that this right might have declined in importance especially as timber houses began to be replaced by brick ones in the Manor from the beginning of the seventeenth century. In the eighteenth century the Irwin leases began to insist on the annual planting of a mixture of trees, presumably to repair this deficiency on the leasehold land even if little could be done on the copyholds.

The success of the copyholders in maintaining their exceptional privileges despite the strenuous efforts of an increasingly powerful landed family illustrates several points

³⁹ *Ibid*, TN/HC/B129

⁴⁰ *Ibid*, TN/HC/B 18

⁴¹ *Ibid*, TN/HC/B/20

about the nature of the manor and of copyhold tenure in it. The first point which was true generally and not just in Hatfield was that by the time the king sold the lordship copyhold had lost all traces of servility. The 1607 copyholders had included Sir Robert Swyft, Bart., a considerable figure in the Elizabethan court and many other local gentry. Swyft was the Bowbearer of the Chase, i.e. the leading local official, and his son, Lord Carlingford, succeeded to the copyhold. At the time of the drainage, the gentry families remained the natural leaders in the fight to retain copyhold and common privileges. One who gained great notoriety for his struggle against Vermuyden was Robert Portington of Tudworth, a Justice of the Peace, who 'so far forgot what was due to his character and office, that he openly countenanced lawless proceedings, and is supposed to have been personally engaged in them'.⁴² Portington's descendants were also in dispute with the Ingram family and a deed of 1665 to confirm copyhold shows why they were prepared to resist and to lead the smaller tenants. The deed referred to a farm, two houses, a kiln and other outbuildings and over 112 acres of open field, ing land and closes in Tudworth and confirmed that Roger Portington of Barnby Dun and his heirs should hold this 'customary or copyhold' land 'forever at the ancient rent of £2-18-4³/₄'.⁴³ In 1722 the inventory of Richard Wallon of Tudworth included a debt of £56 to Mr Portington 'for rent'.

Roger Portington had not, of course, fought to have his ancient rent confirmed because he farmed the land at Tudworth but because of the profit he could make from sub-letting to those who did farm it. Similarly very many of the other copyhold tenants did not farm their land. Therefore the existence of hundreds of small copyholders in the Manor did not imply a peasantry squeezing out an existence from very small holdings which became smaller with each generation as a result of partible inheritance. The copyholds were mostly sub-let and the result often appears on probate inventories when a farmer left debts for rent to several small owners of land. The real value of the land was in the amount the copyholder paid to the lord, unchanged since c. 1500, and the amount for which it could be sub-let at market prices. Hence the copyholds had become a source of income for a rentier class, of

⁴² Hunter, *op cit*, I p161

⁴³ W.Y.A.S. WYL 100, TN/HC/A 45

widows, tradesmen and small gentry (often not resident in the Manor).

Unfortunately, for the agricultural history of the Manor, the system of copyhold produced almost nothing in the form of rentals and associated information to indicate the changes which were occurring. It did, however, have very important effects on the economic activity of the inhabitants. The easy sale of copyhold in the Court Baron facilitated the build up of small estates for farming or for rent and the use of copyhold land as security for mortgage was a cheap method of legalising the transaction. The purposes of the mortgage were not mentioned on the Court Rolls but in the case of Nathan Dearman's loan from Francis Ingram and Benjamin Kennet of Wakefield, bankers, raised on his Thorne copyhold in 1801, it was almost certainly to finance his new interest in the Barnsley linen industry.⁴⁴

iv. Agricultural Change in the Townlands

At the end of the eighteenth century the Board of Agriculture's surveyor for the West Riding of Yorkshire presented a damning picture of the state of farming in Hatfield and Thorne as he rode through them.

From Doncaster eastward to Thorn, the land is capable of greater improvement than any we have seen in Yorkshire. There is a great deal of common field, and there is also large tracts of waste. At Hatfield there are very large common fields, the rotation upon which is turnips, barley, clover, wheat, and barley' and one of the fields not ploughed, but kept in meadow grass. We examined the turnip field, which consisted, as we were told, of 150 acres, and although of a soil exceedingly proper for that root, they were a crop not worth 20s per acre. We heard afterwards they were only valued at 15s. The turnips were quite small – few bigger than an egg, and the ground in the most wretched and dirty condition. It appeared to us they had not been hoed at all, or at least very imperfectly, a large proportion was covered with weeds; and worse culture cannot be figured.

If the cultivation was bad, the manner of consuming them was still worse. The whole 150 acres were eating at once, and the stock appeared to be cattle and sheep of all ages and descriptions; such management needs no comment, it speaks for itself.

Between Hatfield and Thorne, there are great quantities of waste land, and much under water. Upon the whole, the land we have seen this day stands in

⁴⁴ *Ibid.*, DB 205 1800-01

the greatest need of improvement, which cannot be done without a previous division.⁴⁵

The view expressed here when taken with the evidence previously presented on the effects on the common of lack of stinting and the lack of any form of landlord control over the copyhold land in the open fields appears to justify the accusation that Hatfield farming was backward.

It seems likely, however, that Brown's view misrepresented the reality of agriculture in the Manor by presenting a view based on the worst features of it.⁴⁶ Firstly the open fields were relatively small in terms of the total townland and secondly the final paragraph in the quotation from Brown refers to an area supposedly drained in the seventeenth century and still a long way from satisfactory. Earlier evidence shows that the farmers of Hatfield township were relatively quick to adopt the new crops and methods where they were suitable and that where they did not adopt the new husbandry in the 'pure' form preached by Brown and other improvers there were good reasons. Much research into agricultural change in recent years has undermined the view of an agricultural revolution confined to the period 1750-1850 and to a small number of innovations the adoption of which represented the move from a medieval system of agriculture to a modern system. In spite of the survival of important 'medieval' agricultural features such as open fields, copyhold tenure and unstinted pastures nevertheless, alongside and within these indications of stagnation, innovation was taking place in the agriculture of the townlands.

It was a common claim of supporters of fenland drainage that fenland farmers were lazy pastoralists more interested in fishing and fowling than in good agriculture. Of course, pasture farming was extremely important in the lowlands but it is clear that mixed farming was the norm, even before the drainage took place. The evidence subsequent to 1630 seems to confirm that this was so and that in the Manor of Hatfield farming interests were so varied that it is difficult to find any general

⁴⁵ Brown, *op cit*, App. p37

⁴⁶ Marshall, *Review and Abstract of the County Reports of the Board of Agriculture . Vol. 3 Eastern Department*, p5, considers this to be a mistake 'or some extraordinary improvements have recently taken place'.

TABLE V(2)
CATTLE IN THE TOWNLANDS OF THE MANOR OF HATFIELD 1690-1746

Township	No. of inventories	Types of cattle included on inventories								Total	Average	Median
		cows kine drapes	bulls	beasts	oxen	calves	young beasts stirks	steers young steers	heifers queys			
Hatfield	27	98	2	19	14	74	51	15	31	304	11.1	10
Woodhouse	21	67	3	80 ¹	0	26	57	19	15	267	12.7	11
Stainforth	16	68	1	0	25	44	48	18	16	220	13.75	15
Tudworth	4	26	0½	4	0	39	20	9	6	104½	26	26
Fishlake	29	78	2	0	6	41	31	5	21	186	6.4	5
Sykehouse	33	136	7	0	6	122	79	60	52	462	14.9	15
Thorne	66	171	5	33	0	100	25	25	65	424	6.43	5
Manor Total	196	644	20½	136	53	446	311	151	206	1,967.5	10.35	

¹ John Dickenson of Hatfield Woodhouse whose inventory was dated 21 April 1722 had the largest herd in the whole sample, unfortunately it was simply described as '75 beast £50'.

specialisation although individuals showed how specialist tendencies and townships could move more in one direction than the others did.

In the Manor there were great contrasts in soil and farming conditions and in levels of wealth. At the lowest farming level was a large group of cottagers whose few animals helped to eke out small incomes derived from crafts, part time labouring and the renting of small pieces of copyhold land or closes. Widows often lived partly on the interest from the small sums left by their husbands. Typical of the craftsmen in this group was Cornelis Russells of Thorne, a bricklayer, whose inventory, dated 6 April 1726, included 'two drape cows, a heffer and a steer' and 'calfe at ye stake' all valued at £10-6s.⁴⁷ His only other agricultural possessions were a pig and some hay. Gentry and professional men also sometimes farmed on this scale also. William Trimmingham, schoolmaster of Fishlake, a member of an ancient gentry family in the parish, left a will made in August 1701 which consisted of a list of debts owed to him by the parents of his scholars and '23 sheep and one cow' valued at £19-5s. William Fryer of Bearswood, Hatfield, was described as a labourer and like many such in the Manor had farming interests. His inventory, dated 27 June 1722 included sheep worth £16 and two cows and a calfe worth £6 out of a total inventory value of £31-10s. Among the rentiers and merchants whose only farming stock was a few sheep or cattle were Mr William Woodcock of Hatfield. His inventory of 15 September 1719 was valued at £135-17-1d most of which came from outstanding 'salary' and rents, his farming stock consisted of 'one red cow near Toad', 'one brinded cow', a saddle mare, two little pigs, some hay and a small amount of rye.

Although these inhabitants made a considerable contribution in total to the overstocking of the commons they cannot be called pasture farmers. At the other end of the farming scale were, however, farmers like Robert Laverock of Sykehouse. His inventory of 10 January 1714/15 totalled £937-19-0 and included 53 cattle of all sorts worth £124-10s, 24 horses worth £65-5-0d and 96 sheep valued at £30. He was a considerable grazier and the heavy soils of Sykehouse were well suited to it. Yet Laverock also had an even larger interest in crops. He was, therefore, a mixed farmer

⁴⁷ The inventories cited in this section are all from the Borthwick Institute, Wills and Inventories, Deanery of Doncaster, 1686-1750 except where stated otherwise.

on a large scale and although he is one of the largest farmers in the Manor he is typical of all the large farmers in the width of his interests: dairying, breeding and fattening, horse breeding, and the growing of fodder, cereals and industrial crops for sale without specialising particularly in any branch.

The analysis of 196 probate inventories for the Manor, broken down into the separate townships contained in table V(2) suggests that the conclusion for the inventory analysis of Snaith parish before 1626 is still applicable to Hatfield into the eighteenth century and there was little change in the nature of pasture farming during that time. There was, therefore, little specialisation, nevertheless, as in Snaith, both individuals and townships had their own specialisms though these were within the context of mixed farming. None of the inventories indicated a specialisation in dairying. Steven Harmon, miller and husbandman, of Sykehouse (inventory d/d/ August 1702) with 12 calves and a red bull out of a total herd of 18 animals obviously had some specialisation in breeding. William Thornton of Hatfield Woodhouse (inventory d/d Sept 1690) with 13 young beasts and 6 steers out of a herd of 27 animals similarly aimed at supplying the butcher. But as a rule there was little sign of specialisation within the herds. There were rarely more milk cows than were required to keep a family in dairy products. The breeding was sufficient to maintain the herd and to keep the cows in milk and one or two dried out cows (drapes) would be fattening for the butcher. Often farmers had one or two beasts being fattened for slaughter or some young steers were being reared to sell lean to butchers for fattening. Although cattle ownership varied greatly this range of activity was very much the same in the group which had larger numbers of cattle.

Table V(2) does, however, reveal considerable differences between the townships. The small median range of Thorne herds is accounted for by the large number of very small husbandmen, labourers and dual occupation tradesmen. The very large figure for Tudworth similarly reflects the fact that the land was divided into two or three farms. In Sykehouse and Stainforth too the inventories tend to represent a larger scale of farming than in the major settlements of Fishlake and Hatfield. In Stainforth oxen were still very significant for haulage whereas their use had almost died out in the rest of South Yorkshire except among a few of the larger farmers on the heavier soils. Some of the Stainforth soils were heavier and more fertile than the

sands of the rest of townland Hatfield but they were not as heavy as Thorne and Sykehouse soils. The tendency of the Stainforth farmers to be bigger than in some other townships does not explain their adherence to oxen as they were not as big as Sykehouse farmers where only two farmers still owned them. The continued popularity of oxen in Stainforth cannot be explained by these factors. Explanation must probably be sought in local fashion and tradition.

Sykehouse stands out in the Manor as the breeding and rearing township. The inventory average of cows is only 4.1, little different from the rest of the Manor, but an average of 9.5 calves and other young animals is higher than the rest, except for Tudworth which was a very different community. The Sykehouse breeding interest is also reflected in the number of bulls. The seven bulls in Sykehouse is more than in the whole of Hatfield parish, with its four townships, where it seems that, as in Fishlake, the breeders were content to allow their cows to be served by the town bull. In Fishlake the bull was provided by the owners of the great tithes, the Dean and Chapter of Durham Cathedral. There is no evidence that the owners of the tithes in the rest of the Manor had a similar obligation but the small number of bulls suggests that they did.

Only four inventories in the Manor made no mention of cattle, but 44 did not mention horses. Nevertheless, they were important, much more so than sheep. As was the case with cattle, however it is difficult to isolate any form of specialisation in horse breeding or rearing. Table V(3) confirms, as table V(2) did, that farming operations were on a small scale in Thorne and a much larger scale in Sykehouse and Tudworth. The small average and median figures for Stainforth, 4.8 and 4 respectively, reflect the popularity of oxen for draught which was commented on previously. Again the inventories show individuals with some interest in breeding such as William Thornton of Hatfield Woodhouse who had four draught mares, three foals and six young horses. This does not represent specialisation as Thornton has already been mentioned as having more than a usual interest in fattening cattle. Francis Killam of Hatfield Woodhouse (inventory d/d March 1719/20) had seven mares and seven foals and Thomas Hoyland of Thorne (inventory d/d October 1697) had four mares, six foals and two colts in addition to six horses, but, as in Thornton's case, their interest in breeding was part of several farming interests. In general in the

TABLE V(3)
HORSES IN THE TOWNLANDS OF THE MANOR OF HATFIELD 1690-1746

Township	No. of inventories	Types of horses mentioned in inventories								Total	Average	Median
		horses ¹	stoned ² horses	mares	geldings	foals & young horses	colts	galloways	naggs			
Hatfield	24	44	2	41	13	35	6	3	2	146	6.3	6
Woodhouse	17	33	1	37	1	30	2	0	0	104	6	5
Stainforth	13	17	0	27	9	7	3	0	0	63	4.8	4
Tudworth	4	10	0	10	8	11	0	0	0	39	9.75	7/8
Fishlake	25	31	1	35	7	19	1	0	0	94	3.76	4
Sykehouse	32	103	2	77	16	51	6	0	0	255	17.79	7
Thorne	41	60	1	82	12	32	11	0	0	198	4.8	4
Totals	156	298	7	309	66	185	29	3	2	899	5.76	5

¹ Appraisers occasionally lumped all the horses together without distinction.

² Stallions.

Manor mares were kept for draught as the possession of a number of them was usually accompanied by only one or two foals or young horses. Though it is possible that foals were sold soon after birth. Table V(3) shows a large total of foals, young horses and colts but an inventory average of only 1.3 indicates that most horse breeding was to maintain the working stock on the farms.

Sheep were the least important of the major animals of English husbandry on the Manor. Previous reference has been made to this fact which is surprising on two counts. Firstly the Manor was primarily an area of small farmers, dual occupation craftsmen and labourers with small farming interests. Although a cow was considered to be the most desirable possession of a poor man a few sheep were also valuable. Fitzherbert in the sixteenth century considered them the 'most profitablist cattle that a man can have'.⁴⁸ Nevertheless, as table V(4) clearly shows the poorer men and those with small agricultural interests tended to be the ones who did not keep sheep. Secondly the sandlands of Hatfield parish were an extension of the poor sands of Sherwood Forest and it should have followed that the sheep fold was the basis of arable husbandry there.⁴⁹ There is slight evidence that some Hatfield and Hatfield Woodhouse farmers folded sheep and it is difficult to believe that in a parish which was so near to the sheep folding parishes of Armthorpe, Cantley and Barnby Dun the sheep fold had not entered into the custom of the Manor in the decades after the end of the Forest Law, which in theory had restricted it.

Table V(4) shows that a minority of agriculturalists in the Manor kept sheep, 85 out of an inventory total of 196. Quite clearly it was not the custom for small men to keep them as only 22 out of the 97 inventories among the smallest categories of farmer did so. Even among small graziers who, presumably, made their livelihood from exploitation of common rights only one in five had sheep. This evidence makes nonsense of the complaint previously quoted of the over-use of the commons by the sheep of poor men. Sheep farming was overwhelmingly an activity of the large farmers in the Manor. These men had large herds of cattle, many horses and large arable interests. Sheep were yet another example of the width of their mixed farming.

⁴⁸ Thirsk (ed) *C.A.H.E.W.*, Vol IV, p187 citing Fitzherbert, p42

⁴⁹ *Ibid.*, p95

TABLE V(4)
DISTRIBUTION OF SHEEP OWNERSHIP IN THE TOWNLANDS OF
THE MANOR OF HATFIELD

OWNERS

Townships	I	II	III	IV	V	Total
Hatfield	3	0	0	3	5	11
Woodhouse	0	2	3	3	7	16
Stainforth	0	0	0	0	5	5
Tudworth	0	0	0	0	4	4
Fishlake	4	0	1	0	6	11
Sykehouse	0	0	0	4	13	17
Thorne	5	2	2	4	8	21
Total	12	4	6	14	49	85

NON-OWNERS

Hatfield	3	3	4	3	4	17
Woodhouse	3	1	2	1	0	7
Stainforth	2	0	3	3	3	11
Tudworth	0	0	0	0	0	0
Fishlake	6	3	3	3	1	16
Sykehouse	2	1	3	5	4	16
Thorne	14	8	14	3	5	44
Total	30	16	29	18	17	111

- Groups:**
- I** Professionals, rentiers, tradesmen, widows all with very small farming interests.
 - II** Very small graziers, inventories under £35.
 - III** Very small farmers, i.e. both arable and grazing interests.
 - IV** Farmers with inventories between £50 and £100.
 - V** Farmers with inventories over £100.

Groups IV and V include members of group I if their farming interests merited it.

Again none of them could be called specialist sheep farmers. Few of the flocks were large and only ten out of the inventory totals were above 100. Richard Walton of Tudworth (inventory d/d May 1722) had the largest at 220. Two of the largest flocks, of 218 and 128 belonged to Thorne butchers.

It seems that wool and meat were the chief objects of sheep farming in the Manor, as only a few of the Woodhouse owners had sheep bars and only one of the Hatfield inventories had them. Edward Hople one of the Thorne butchers mentioned in the previous paragraph had sheep bars in addition to his 218 sheep of various kinds but no arable interests according to his inventory of February 1690/1. It is possible that larger Woodhouse farmers folded their closes but there is no evidence of folding the open fields in Hatfield. The most likely place for folding to take place was in Tudworth with its small open field and sandy soils. All the Tudworth inventories refer to sheep in some quantity and given the small number of farmers a feeding system would have been easy to organise once the restrictions of the Forest Law had gone. Tudworth, Hatfield Woodhouse and Sykehouse were the townships where sheep owners outnumbered non-owners. In Sykehouse it was only 17/16 and there, of course, the heavy soil made the sheep fold unnecessary, as it was in Thorne. Indeed in 1770 Arthur Young wrote in his section on Thorne that there was 'no folding in this country'.⁵⁰

The tithe case evidence on pasture farming on the townland confirms the impressions derived from inventory analysis. Unfortunately the evidence only relates to Hatfield parish even though the same tithe owner also owned Thorne tithes.⁵¹ The complexity of pasture farming and the lack of any specialisation comes out clearly but in addition there are sufficient details to show how the farmers maintained their stock. All the defending farmers claimed that their dairy herds were small, between two and five animals, and only enough to keep their households in dairy products. William Newsome was the only one to admit selling any milk which, he claimed, was worth

⁵⁰ A. Young, *Northern Tour*, Vol I, p243

⁵¹ W.Y.A.S. WYL 100, TN/HC/B19 Tithe Case. The tithe case evidence is from the written statements of the defendants.

only about £4-10s. (per year?) All of them bred calves but only on a small scale and mostly for the maintenance of their own herds. One of the largest owners of cattle in the group, John Hatfield, said at the time of giving his evidence, i.e. 1736-38 that he had '42 beast young and old bred out of those I had before Jackson's time'. At the same time William Jackson claimed that he had 'a small store of cattle chiefly bred out of those I had before Mr Jackson became the tithe gatherer'. Nevertheless the evidence shows that the defendants were buying and selling cattle fairly regularly. William Jackson, who seemed to recall his transactions clearly,⁵² stated that in November 1729 he bought two steers at Bawtry Fair one of which he sold a few days later and the other about six weeks later, along with a cow to a butcher 'in town'. Two years later he bought another two steers at Bawtry which he sold lean the following April with a lean cow which had had several calves. In 1734 he sold lean four steers and two heifers about Lady Day (25 March). The following Lady Day he sold a drape cow and a lean steer and bought two heifers which he later milked for his family's use. A similar range of activity was exhibited by the other defendants, Hatfield, for instance, had two oxen in 1732 in addition to his normal stock. He worked them on his land from 1 June to November and sold them at Candlemas (2 Feb). In addition to his breeding he bought in seven half-year-old calves in 1730 and five in 1732, all of which he kept in his herd. Between them the defendants had a large number of transactions (possibly more than they were prepared to remember) but even the largest farmers among them, Hatfield and Dickenson, showed no clearly marked specialism in either breeding or fattening, or keeping stores though all these activities were more important than dairying.

The plaintiffs in the tithe case were particularly interested in 'unprofitable' cattle and horses, i.e. animals which produced no milk or young or work during the year and which were not, therefore, tithable unless they were sold. The defendants were questioned separately on these animals and their answers for cattle are tabulated on tables V(5) and V(6). The only cattle mentioned in these answers were steers, being fattened for later sale or domestic use, and heifers, as yet too young to breed and give milk. The tables show interesting features such as the marked rise in the average number of both steers and heifers during the years of the case. Unfortunately the

⁵² The others, deliberately or not, claimed to have difficulty in remembering their transactions

TABLE V(5)
NUMBERS OF 'UNPROFITABLE' CATTLE KEPT BY TITHE CASE
DEFENDANTS, 1729-1734
STEERS

Farmers	1729	1730	1731	1732	1733	1734	Yearly average
Atkinson ¹				4	6	5	5
Dickenson	4	5	6	6	5	6	5.3
Fox	6	8	10	7	7	7	7.5
Hatfield	2	1	2	4	7	9	4.2
Jackson	1	1	4	4	4	5	3.1
Killam	7	7	5	6	6	7	7
Newsome ²			2	3	2	1	2
De la Pryme ¹				7	6	6	6.15
Youdal	6	5	6	7	4	5	5.5
Total	26	27	35	48	47	51	5.08
Group average	4.3	4.5	5	5.33	5.2	5.66	

TABLE V(6)
NUMBERS OF 'UNPROFITABLE' CATTLE KEPT BY TITHE CASE
DEFENDANTS, 1729-1734
HEIFERS

Farmers	1729	1730	1731	1732	1733	1734	Yearly average
Atkinson				5	7	6	6
Dickenson	6	2	8	4	7	7	5.66
Fox	5	5	7	7	7	7	6.33
Hatfield	2	4	4	6	8	11	5.8
Jackson	2	6	5	5	5	7	5
Killam	5	6	8	8	8	7	7
Newsome						3	3
De la Pryme				8	8	8	8
Youdal	3	3	4	3	4	2	3.16
Totals	25	26	36	46	54	58	5.7
Group average	4.18	4.2	6	5	6.75	6.6	

¹ Atkinson's answers start in 1732. De la Pryme was a marshland farmer until 1732.

² Newsome's answers start in 1731. He appears to be a grazier only, but his Hatfield farm was probably a sideline as the Newsomes were large farmers in Armthorpe.

period is not long enough to point to any long term change. Both Charles Fox and John Youdal were more inclined to keep steers than heifers which might be an indication of a stronger interest in fattening but by and large the tables are further evidence of lack of specialisation in the Manor with an even balance between heifers and steers.

All the defendants were engaged in horse breeding and rearing. They also bought young stock bred in the parish or from local fairs. On the whole their breeding, as of cattle, was to maintain their stock. The 'unprofitable' horses tended to be few, for example, Francis Killam had two colts and two fillies in 1729, 1731-33 and one of each in 1730 and 1734. John Youdal's growing stock was smaller than Killam's presumably because he preferred (unlike most of the other defendants) to sell them. In 1729-1731 he sold nine fillies and colts in the parish and outside. After 1731 he only sold animals he had bought. Only two of the defendants claimed that they did not keep sheep but most of them claimed to have only 'a small stock'. Killam in one year bought 'about 100 hogs from off ye Wolds one Spring (ye year now forgot)'. Charles Fox bought 40 in 1731 and 'sold them to a neighbour'. He stated that he 'kept no others, though his children had a few kept in a neighbour's flock'. Only Cornelius Dickenson 'kept a considerable flock of sheep' which he bought and sold mostly within the parish.

The more detailed information in the tithe case correlates well with the probate inventory analysis and the two sources show that although pasture farming was very important to the farmers of the Manor there was no real specialisation. The tithe case, however, gives additional information on the way the pasture resources of the parish were used. It was claimed previously that the curtailed commons presented problems to the farmers of shortage of hay and grass. By the 1720s these had been partly overcome, at least, by the larger farmers who figured in the tithe case who used the new crops and by rented pasture both in the parks and in the drained land. The sequence of feeding cattle was: five months until 'Lammas' (end of August) on the commons. They were then moved into the 'fog and aversedge' on the meadows, the open fields and the closes. After this milk cows and young stock were put into turnips on the open fields or closes. Finally the mature animals were wintered in the parks and the others at straw in the folds. Cattle and sheep appear to have followed a

similar routine although Charles Fox put the sheep he had bought in 1731 into 'his rapes' and John Newsome had three acres of clover in Millfield in one year, mostly eaten by cattle.

These references to clover and turnips indicate a change of enormous and lasting importance to arable farming in the sandlands. Early in the century Hatfield Town Book has entries indicating declining fertility in the open fields. There is, however, some indication that the Manor was on the brink of modernisation in inventories. At his death in 1691 Robert Moore of Hatfield Woodhouse had 'Certain rye and turneps on ye ground', but there are only four other inventory references to turnips in the next forty years and no inventory mention of clover until 1719. Yet the evidence arising from the tithe dispute shows both crops to be an established part of the open field cropping course by 1729-34 and a very important crop in the closes. Presumably the new crops had proved their value in the closes before the decision to introduce them to the open fields was made in 1713-14.

The meeting which approved the decision was well attended with thirty seven townsmen signifying their agreement to several proposals. The most important was that

... the West Feild and Hundoake feild be sown with Turnipps and ye same be sufficiently fenced in before ye first day of July noe seed sowne before ye 25th day of... July by each owner or occupier in ye said Fields.⁵³

Haddam Field was to be fenced in the Autumn in preparation for turnips and the other fields in succession. The change was necessary, according to the introduction to the decision, for

... ye better management of our Town fields for destroying of tares go [missing] and Other pernicious Weeds subject tu ye sd Land and for ye better Encouragement of Husbandry and Good of ye publique.

The agreement also controlled the eating of the turnips. Entry to the turnip field was confined to the occupiers of the land and carefully stinted according to every half

⁵³ Hundoak was a furlong within the West Field, it was not a town field

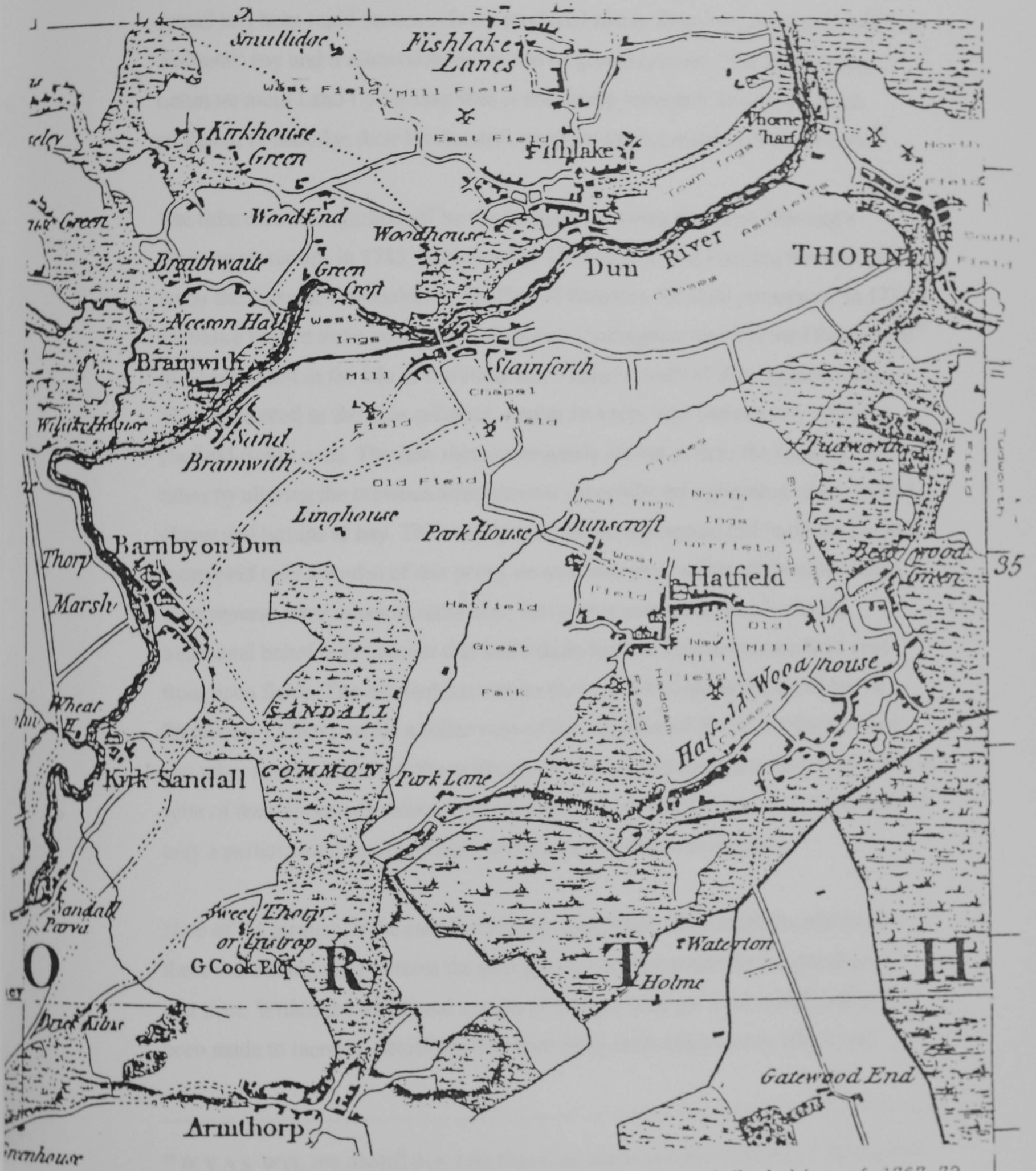
acre cultivated. No animals were to be allowed in until 1 November. On this day cattle to be admitted were to be brought to:

ye Lords folde... to have ye field Brand sett upon them which shall be a Staggs [Head?] and when so branded to be admitted into ye feild by ye Bylawmen paying them the summe of sixpence for every acre and rateably for a lesser quantity which said summe ye said bylawmen shall Imploy as shall be directed at some towns meeting towards ye charge of scouring ye said field and turnippes ye keeper of ye... field to be at the By lawmens choice.

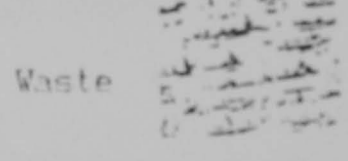
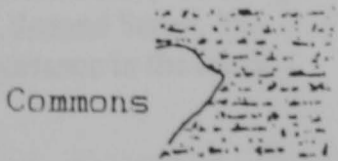
As the new system was so open to fraud, a system of fines was devised for smuggling in unbranded animals and for pulling turnips for sale or feeding to pigs. Occupiers were allowed to pull them for their 'own boyling' or for 'setting for seed' but had to pay sixpence a peck. The work involved for the bye-lawmen was recognised by the payment of half the two shilling fine paid for every unbranded animal found in the field in addition to being allowed to put one animal into the field above their stint. In an attempt to anticipate the objections of those who lost fallow grazing the turnip field was to be opened up on 1 March and no occupier was to begin ploughing until 2 February. This was poor compensation and undoubtedly encouraged the illegal grazing of animals and theft of turnips which bedevilled the change. To assist the project the Hatfield men who farmed the tithes from the Duke of Devonshire, William, Thomas and Henry Moore and Cornelius Dickinson, 'promised to give up all their right of tythe of Turnips in ye said Fields'. A decision of some importance when the Duke sold the tithes in 1729.

At a meeting in January 1720 the important decision was made to divide the Mill Field into two parts. The new boundary was to be fenced and hedged with quicksett, the eastern part to be called Old Mill Field and the western part New Mill Field. The division of the field indicates that the new cropping pattern could not be accommodated within the existing four fields. A course was laid down as part of this agreement which included barley in two fields every year, a choice of clover or peas and rye and turnips in the other fields. In 1722 the course was amended and clover was not mentioned but clearly it remained an alternative to peas. By the time of the tithe dispute, of which clover and turnips were at the centre, clover had ousted peas from the course and in 1736 a Town meeting agreed 'yt ye Clover field should not be broken as usual but be eaten by horses belonging to ye owners of the Lands in ye said Clover field'. Clover had become a very important crop as an undated letter of

THE TOWN FIELDS OF THE MANOR OF HATFIELD



Adapted from Thomas Jeffrey's Map of Yorkshite of 1767-72



c.1741 from Frank Moore to Lord Irwin's Steward at Temple Newsam illustrates. Moore, who claimed to have introduced clover to the common fields, wrote that its spread had been rapid because clover produced two to three times as much fodder as 'nathural' hay and it allowed more corn to be grown because 'The Parishioners Lettin no more Land Ly for Hay than is absolutely necessary to Keepe a stock sufficient to manidge their Husbandry', used the former meadow land for corn.⁵⁴

The tithe case was sparked off by the changes following the Town Meeting's decision on turnips in 1713. In November 1728 the tithes of Hatfield Rectory were let by the Duke of Devonshire to the Earl of Portmore for £600 per annum. In 1731/2 Portmore bought them outright.⁵⁵ Portmore's local agents were Richard Popplewell⁵⁶ of Temple Hall in the Isle of Axholme and Thomas Healy of Burringham, Lincs. They appointed as the tithe collector, Paylor Jackson, who had recently settled in Hatfield from Leeds. The new men immediately set out to raise the income from tithes by altering the previous arrangements especially the agreement which treated clover and turnips as hay. The consequence of this agreement had been that the new crops paid only a modus of one penny an acre instead of a tithe of the crop. There were several other issues at stake also, the most important of which was the traditional belief in the Manor that individuals had the right to enclose land even from open fields. The detailed answers to the long list of questions asked by the Exchequer Office provide a fuller view of the activities of Hatfield's farmers than any other source. Although the evidence only covers six years it clearly shows that in spite of their enormous value to the agricultural historian probate inventories present only a partial picture and probably understate innovation in cropping.

Nine of the farmers in the case farmed the open fields. Their evidence shows how these were being used to meet the changes which were occurring in agriculture at that time. Within the traditional system of a single crop per field modifications had been made to increase flexibility. The five fields followed a course which was

⁵⁴ W.Y.A.S. WYL 100, TN/HC/B19, Tithe Case Frank Moore to Robert Hopkinson, 1 January 1741

⁵⁵ *Ibid.*, TN/HC/B19 Tithe Case

⁵⁶ B.A. Holderness, 'The English Land Market in the Eighteenth Century: the case of Lincolnshire', *Ec.H.R.* Second Series, Vol. XXVII, No. 4, November 1974 pp 565-6. Shows Popplewell's wealth and importance in the locality.

dominated by barley. Barley always occupied two of the fields and thus appeared twice in the five year course which was: barley, clover/rape, wheat/rye, barley, turnips. Tradition was maintained in that all the farmers appeared to follow a common decision, presumably of the Bye-Law court, when barley or wheat/rye were to be grown in a field. As barley occupied two fields the other two provided the flexibility. In the fourth year farmers could grow either clover or rape depending on their need for fodder or cash from the sale of rape seed and in the fifth or fallow year turnips could be grown towards the end of the fallow. Some appear not to have done so but those who did, as turnips were always fed in the field to 'cows and young stock'⁵⁷, benefited from the manuring this gave before the sowing of the spring barley. In 1729, the first year of the evidence, rape predominated in the rape/clover year but, by 1734 and 1735, clover had completely ousted rape except for one crop of six acres by Cornelius Dickenson, who grew three acres of clover along with it. The new system was made possible by addition of the fifth field (part of Mill Field) by permitting the emphasis on barley and fodder. The large differences in size between the West Field and Furth Field and the division of Mill Field which clearly had made the acreages given to different crops very variable from year to year do not seem to have been considered an obstacle to the division, possibly because open field land was relatively unimportant in the parish when compared with the acreages of enclosed land that the local farmers held.

Table V(7) shows that all the open field farmers held larger acreages of townland closes, parkland or level land than they had in the open fields (and one, Atkinson, only held townland closes). Although much of the enclosed land was used for grazing, a very significant amount was used for crops. It is the evidence from the closes which shows how well established the new crops were and it also suggests that condemnation of Hatfield agriculture based on observation of the open fields and the commons is unsatisfactory. Ten of the witnesses in the tithe case gave evidence on their use of them. One, William Newsome, who was purely a grazier, only rented closes in the fallow year and 'had turnips all the years 1731 to 34'. Another, John Hatfield, only held New Close which he had 'enclosed from the West Field about 16 years ago' and in which he followed the West Field course. Two of the witnesses, de

⁵⁷ *Ibid.* All the witnesses agreed that turnips were never pulled but eaten in the fields

TABLE V(7)
LAND HELD BY TITHE CASE DEFENDANTS

Name	Open Field	Enclosed Townland	Levels	Parks	Ings	Total
Atkinson	-	50ac ½r	-	-	-	50ac ½r
Dickinson	12ac 2r	15ac 2r	145ac	72ac	-	285ac 3r
Doughty	-	7ac	20ac	-	-	27ac
Fox	24ac 2r	44ac 2¾r	-	-	-	70ac 3½
Hatfield	22ac ¼r	3ac 1r	'all in possession of his tenants'	225ac	-	363ac
Jackson	4ac 1½r	10ac 1r	31ac 1r	35ac	3ac 3r	83ac 2½r
Killam	26ac 1¼r	25ac 1r	-	40ac	-	91ac 2½r
Lelew	-	-	220 ac to 1732 158 ac after	-	-	
Newsome	1 to 4 acres	Many closes - acreages not given		-	-	-
Pryme	from 33 1lac 3r	up to 32 7ac from 33 27ac	up to 32 276 ac -	-	-	53ac 3r after 1732
Youdal	21ac 2r	11ac 2r	120ac	-	4ac 32	157ac 3r

TABLE V(8)
STATE OF CULTIVATION OF SOME TOWNLAND CLOSES IN HATFIELD, 1729-1735

Cereals	No.	Fodder crops and pasture	No.	Seeds	No.	Other	No.
Barley	61	Turnips	25	Rape	9	Potatoes	1
Wheat	21	Clover	24	Linseed	2	Fallow	8
Rye	17	Oats	8				
Corn	3	Peas	5				
		Beans	5				
		Hay/Meadow	26				
		Pasture	8				
		Grass	1				
Totals	102		102		11		9

Number of closes 56 of which 23 were used solely for hay, meadow or pasture.

Of the other 33 there were 30 occasions when closes were let off or the witness could not remember the use.

NB: The number of uses in the table totals 224 which is 56 more than there were closes available. This is because many were used for two or three crops in the same year, eg, Charles Fox's Nettleholmes Close in 1732 had three acres in fallow, nine acres in beans and six and a half acres meadow.

TABLE V(9)**NUMBER OF PROBATE INVENTORY REFERENCES TO CROPS IN HATFIELD PARISH, 1690-1746**

	Sample	Wheat	Rye	Barley	Oats	Peas	Beans	Rape	Turnips	Clover
Hatfield	22	10	17	13	14	6	5	1	0	2
Hatfield Woodhouse	17	9	13	13	10	6	0	2	2	0
Stainforth	12	10	11	10	9	9	5	0	0	3
Tudworth	4	4	4	3	4	2	2	0	2	3
Totals	55	33	45	39	37	23	12	3	4	8

TABLE V(10)**VALUE OF CROPS ON PROBATE INVENTORIES IN HATFIELD PARISH, 1690-1746**

	Wheat	Rye	Barley	Oats	Peas	Beans	Rape
Hatfield	87-17-00	230-17-00	141-15-00	157-3-00	13-9-00	17-6-00	5-0-00
Hatfield Woodhouse	31-5-00	89-2-00	84-16-10	43-16-00	20-10-00	-	not stated
Stainforth	137-6-6	111-14-00	136-7-6	54-5-00	41-5-00	20-19-00	-
Tudworth	70-0-00	85-0-00	74-0-00	153-1-00	10-4-00	11-0-00	-
Totals	326-8-6	516-13-00	436-19-4	408-5-00	95-8-00	49-5-8	5-0-00

la Pryme and William Atkinson, only held closes for the last three years of the case and several claimed to have 'let off' closes for odd years. Sometimes the witnesses could not remember how a particular close was used. Nevertheless the evidence refers to 56 separate closes. Of these 23 were permanently in hay, meadow or pasture, the other 33 were used for a variety of purposes as table V(8) shows. The new crops were quite clearly an important part of the husbandry of the parish and the table shows that arable farming was no mere subsistence addition to a primarily pastoral region.

Tables V(9) and V(10) present simple aggregations of the number of probate inventory references to crops and their values in the parish of Hatfield. They do not appear to support the evidence drawn from the depositions in the tithe case. They show that rye was more important than wheat and barley but this conclusion needs some comment. Rye was almost certainly the main bread corn in the parish as it was in the rest of the north at this time, but wheat was more important than it appears to be, simply because it was grown as a cash crop and often sold soon after harvest thus reducing both its frequency of appraisal and its value in the aggregation. The tithe case evidence appeared to show that wheat was taking over from rye and the inventories support this view as there are 18 references to wheat out of 31 inventories appraised after 1720 compared with 19 references to rye. Barley too was sold off for malting, when the quality was good enough, in the local market towns or to the Hatfield maltsters or it was malted on the farm,⁵⁸ which reduces its value in the aggregation. The true importance of barley is shown by table V(11) which is based on those inventories which were drawn up at harvest time before the crop had been sold or turned into malt.

Table V(11): Value of Cereal Crops in Autumn Inventories

Number of References	Wheat	Rye	Barley	Oats
13	£39-0-0	£95-5-0	£138-0-0	£94-0-0

⁵⁸ Several of the larger farmers had quantities of malt on their inventories. James Midleton of Hatfield, yeo, dated 7 Feb 1703/4 had 43 quarters, valued at £40.

All three inventory tables show that oats was a significant crop whereas table V(8) only shows eight references to oats and it seems likely that the townland farmers were renting marshland closes to grow this crop to feed the considerable number of horses that were being kept on townland farms (table V(3)). The biggest contrast between the evidence drawn from the tithe case and the inventory aggregation, however, is in the significance of the new crops on the townland. The tithe case arose largely because of disagreement about methods of tithing turnips and clover and those farmers who were charged with tithe irregularities were mostly growers of the new crops. The correspondence associated with the case makes it clear that the new crops were widely adopted. The inventories appear to show that there was little interest in them, especially in the case of turnips with only three references from 55 inventories over a period of 56 years. There were inventory references in 1710 and 1712 which indicate that the 1691 reference was not just an isolated experiment. Indeed it is likely that turnips had been grown in the area for some time before 1691. At Clayworth in North Notts they were already grown by the Rector in 1676 when the Rev W. Sampson began to write *The Rector's Book* and in spite of the heavy nature of the land there they were still being grown at the end of the century.⁵⁹ Clayworth is only a dozen miles to the south of Hatfield and the farmers met at local fairs and markets, but there was a closer connection as the will of Thos. Woodcock of Hatfield Woodhouse, gent. shows. The will dated March 1698/9 referred to 'all my lands in Claworth, Notts.' which he left to his son William.

It seems likely that turnips were widely grown in the parish in the fourth quarter of the seventeenth century although they were not of great value. Brown's comments on their low value per acre was quoted earlier and Arthur Young was similarly critical of turnip cultivation in an adjacent parish, Bawtry, a quarter of a century earlier than Brown.⁶⁰ Both were complaining that the root was not hoed and was, therefore, very much smaller than the best Suffolk and Norfolk cultivation. The explanation of the failure to hoe given to Young was that:

⁵⁹ H. Gill and E.L. Guilford (eds), *The Rector's Book of Clayworth*, Notts (Nottingham 1910). Thanks to Dr B.A. Holderness for bringing it to my attention.

⁶⁰ A. Young, *A Six Month's Tour of the North of England* (London 1770), Vol I. pp 107-8

the butchers of that neighbourhood prefer turnips that never were hoed... the apples of which are not larger than a double fist, than for one whose products are as large as a peck loaf... cattle, they assert, when feeding upon turnips in a field, bite large ones, and if the flavour does not please them, leave them for others, when the first presently decay and are rotten.

He comments that 'The Bawtry butchers must be capital fools indeed and the farmers equally ridiculous if such prejudices ever become a rule of management'.⁶¹ This practice was not, however, as foolish as Young thought, nor was it confined to this area. To grow good turnips was known to be costly in labour, which did not matter on farms where labour was contracted for the year and was not required for more important jobs, but in Hatfield turnips seem to have been used to save labour and not to make more.⁶² In Hatfield and possibly in the adjacent parishes turnips were grown as a 'catch crop' at the end of the fallow year with the intention of providing additional fodder but also of reducing the cost of maintaining the fallow. Sandlands are prone to rapid weed infestation and turnips, it was believed, could inhibit weed growth, '... if we believe William Ellis, turnips could even save labour. He considered them 'weed destroyers' in that when broadcast they would smother weeds and so 'save the farmer the expense of employing weeders'.⁶³ And, as Overton points out, 'a weedy fallow is of less value than a crop of turnips or clover, even if the new crops were given fairly scant attention'.⁶⁴ Feeding to stock in the fields was also a great saving in the expense of pulling and carting. Half eaten large turnips fed this way were, as the Bawtry butchers claimed, left by the animals to rot and further labour had to be employed to pull the rotting remains.⁶⁵ Saving labour could have been important at this time in the Hatfield region as it was claimed a few years before Young made his criticisms that labourers in Yorkshire and Lincolnshire 'are hardly to be got for money at this busy season of the year and what adds to the evil is that the hoeing of turnips falls in harvest'.⁶⁶

⁶¹ *Ibid.*, p108

⁶² M. Overton, 'An Agricultural Revolution, 1650-1750', *Papers presented to the Economic History Conference, Canterbury 1983*, p10

⁶³ R. Morgan, 'The Root Crop in English Agriculture, 1650-1870', unpublished Ph.D. Thesis, Reading, 1978, pp 43 and 169

⁶⁴ M. Overton, *op cit*, p11

⁶⁵ T. Hardy, *Tess of the d'Urbervilles* (1891), Papermac edition 1973, p322 'The upper half of each turnip had been eaten off by the livestock, and it was the business of the two women to grub up the lower or earthy half of the root with a hooked fork called a hacker, that it might be eaten also'

⁶⁶ C. Varley, *A treatise on agriculture entitled the Yorkshire farmer I*, (Dublin, 1766), p241 Quoted by Morgan, *op cit*, p224

The ideal of the large carefully cultivated turnip as part of the true Norfolk four-course rotation which Young and Brown were preaching has been shown by Dr Morgan's researches to be a relative rarity even by the end of the eighteenth century. Dr Morgan suggested that the full system of turnip husbandry as a basis for barley on light land fertilised by folded, turnip fed, sheep was rarely used except occasionally in the sheep corn area of Norfolk before 1750 and that 'In most areas a different system was followed with roots as a supplementary fodder or as cattle fodder',⁶⁷ as in Hatfield. Even in the late eighteenth century, when Brown was making his comments, 'there were still few areas outside the lightlands of Norfolk, Suffolk and Essex where [turnips were] a full and regular shift in the course of crops and intensively tilled in the manner necessary to clear and restore the fertility of the land.'⁶⁸ Brown's comments, of course, related to the open fields and there is no evidence on how turnips were cultivated in the closes of Hatfield to which the farmers gave the greater attention. However, in the late eighteenth century, as in most areas, the turnip acreage continued to be small. Brown's correspondent told him that 'Perhaps 300 acres of the fallow is sown with turnips' out of a total fallow acreage of 1,151.⁶⁹

Table V(8) shows that clover was grown as widely as turnips in the townland closes of the defendants in the tithe case. Once again there are relatively few references to the crop in the probate inventories although with eight there are over twice as many as for turnips and they all relate to the period after 1719, nearly two decades after the first reference to turnips, which indicates a later introduction and a more rapid adoption although five of the references are in the late 1730s. The tithe evidence not only indicates an earlier spread than this, it also gives some detail on clover cultivation as clover was more central to the dispute than turnips were, as it involved putting down to hay, which paid one penny per acre modus, land which had previously been arable which paid tithes in kind.

The earliest inventory reference to clover is 10 October 1719 when the appraisers of

⁶⁷ Morgan, *op cit*, p177

⁶⁸ *Ibid.*, p191

⁶⁹ Brown, *op cit*, Appendix p93

the goods of William Hudson of Hatfield, yeoman, valued his hay and clover at £12. The sporadic later references would not suggest much interest were it not for the tithe evidence. This evidence confirms the date of introduction suggested by the inventories and shows also how soon clover spread. A statement of the defendants' case, undated, but probably of c. 1735 claims that 'within this 20 years past clover grass has been sown pritty much in the antient Inclosures' and adds 'about 12 years ago Clover grass was begun to be sown in the Comon fields, Frank Moore was the first'.⁷⁰ In 1741 Frank Moore himself wrote to Robert Hopkinson, Lord Irwin's agent, who was advising the defendants, why he thought the tithe impropietor had benefited from the introduction of clover and implies why it had been introduced into the common fields and why its spread had been rapid:

1. From ye Increase of foder clover Cutting two or three times over as much in Quantity as natherall hay
2. That ye more clover is sown [the more] corn is sown. The Parishioners lettin no more Land Ly for Hay than is absolutely necessary to Keepe a stock sufficient to manidge their Husbandry.
3. Since foder hath beene got by sowing clover allmost all of ye Inclosed Ground that is fit for tillage is converted into Come Ground
[4. and 5. refer to increases in tithe value.]
6. That although all ye Clover pay 1 penny pr acre the Easter Book will have fewer acres of midow under the modus 10 acres of land being Clover will cut more foder than 20 of natherall hay⁷¹

Moore was, of course, making his points to defend the parishioners' objections to paying clover tithe in kind but it seems that he was making a fair statement of clover's advantages and that his neighbours agreed with him for, as John Hatfield had written to Hopkinson nine years earlier, all the parishioners were interested in the clover issue:

we desire youl please to state ye case and preserve the sume of all things in it as to clover, with all Querrys, for theres not one but what hits some of the neighbours, we think it will not be worth referring anything but Clover, so desire youl take two of the best Councells opinions... for ye neighbours satisfactions.⁷²

⁷⁰ W.Y.A.S. WYL 100, TB/HC/B19 Tithe Case

⁷¹ *Ibid.*, Frank Moore to Robert Hopkinson, 1 July 1741

⁷² *Ibid.*, John Hatfield to Robert Hopkinson, 3 March 1732/3

By the end of the century 762 acres were being employed to grow clover in Hatfield,⁷³ well over twice as much as for turnips. It appears from the evidence that Hatfield farmers thought of both new crops as ways of maintaining or increasing their fodder supplies and at the same time of increasing the amount of land they could give to cereals. As yet there was no realisation of the improvements in the soil that these crops were supposed to bring. To many it must have seemed some compensation for the loss of the traditional meadow and pasture land a century earlier.

v. Arable farming in the Parish of Fishlake

As the other parishes in the Manor were not involved in the tithing dispute the detailed evidence available for Hatfield does not exist and probate inventories must be the major source on agricultural history. Inventories give little indication of change during the short period for which they are available. However, as has been shown in Hatfield parish, innovation could occur without showing up on inventories. They do show how the parishes differ from each other, and indeed how the townships within the parishes differed in their cropping patterns and in the relationship between arable and pasture farming.

Table V(12)

Number of references and Value of Crops in Fishlake Township in 25 Inventories

Wheat		Rye		Barley		(Malt)		Corn		Oats	
No	Value	No	Value	No	Value	No	Value	No	Value	No	Value
17	71-10-4	1	5-10-4	7	51-10-0	3	16-0-0	3	40-0-0	7	31-5-0
Beans		Turnips		Clover		Hay		Hemp		Lime	
No	Value	No	Value	No	Value	No	Value	No	Value	No	Value
11	54-15-0	0		0		15	46-2-8	0		3	10-10-0

The table above clearly shows that Fishlake was a wheat growing township. Table V(13) shows this to be true for Sykehouse township also. Rye which was so important in Hatfield and Thorne was hardly grown at all. Barley was the second in importance among the food crops and, for reasons suggested above, might have been

⁷³ R. Brown, *op cit.* Appendix p93

more important than it appears on inventory analysis. The small amount of malt does not encourage this view, however, beans were the most important fodder crop, though obviously hay was more widely referred to. With only three references to line and none at all to hemp or rape there is little evidence of interest in the industrial crops that are believed to be so important in this region. The new crops are not mentioned.

There is, therefore, little indication of innovation to be gained from the inventories. The Bye-Law Book referred to the 'wheat field' and the 'peas field' as early as 1599.⁷⁴ Later references in 1689 and 1716 to the 'white corn field' and the 'bean field' show that wheat and pulses dominated the two cultivated fields throughout the seventeenth century although peas had been dropped in favour of beans during that period. The Bye-Law Book also suggests a rigid maintenance of old traditions on fallowing and the breaking of the fields after harvest which might have inhibited innovation in contrast to the flexibility shown by the tithe case in the management of the Hatfield open fields.

Table V(13)
Number and Value of Crops in Sykehouse Township, 1694-1737 in 32 Inventories

Wheat		Rye		Barley		(Malt)		Corn	
No	Value	No	Value	No	Value	No	Value	No	Value
30	1,044-7-0	5	77-18-0	11	39-2-0	3	16-10-0	4	49-15-0
Blendcorn		Oats		Peas		Beans		Rape	
No	Value	No	Value	No	Value	No	Value	No	Value
3	23-0-0	27	528-5-0	1	0-15-0	27	114-10-6	2	118-0-0
Turnips		Clover		Hay		Hemp		Line	
No	Value	No	Value	No	Value	No	Value	No	Value
0		3	20-0-0	19	171-13-8	1	1-15-0	27	442-19-0

In Sykehouse the dominance of wheat both in the number of references and in value is even more marked. Beans again are the most important of the fodder crops, as in Fishlake, but thereafter all similarity between the two townships ends. Whereas, according to the inventories, Fishlake had only two crops of any significance, Sykehouse had four, oats and flax in addition to wheat and beans. Also a third of the

⁷⁴ Doncaster Archives, Fishlake Bye-Law Book

farmers grew barley. The growing of rye, blendcorn, rape and clover although only by a few farmers at the times of their death does show a width of agriculture and a readiness to innovate that is lacking in Fishlake.

This is almost certainly accounted for by the larger scale of activity which the inventories show in Sykehouse compared with Fishlake and the other large townships of the Manor. Not only were Sykehouse farmers working on a larger scale they were not confined by a rigidly operating open field system as Sykehouse only had three very small and very scattered fields. The Fishlake rentals of the eighteenth century⁷⁵ show hundreds of very small closes often called 'pighills' or 'purprestures' and these seem to have been used for pasture farming unlike many in Hatfield which were used for arable. Many of the pre-parliamentary enclosures in Sykehouse were large.⁷⁶

The contrast in the range of farming activity between Fishlake and Sykehouse is not just a matter of scale. The one farmer in Fishlake to compare with those in Sykehouse was Thomas Perkins, gent. His inventory dated April 1692 included crops stored and growing worth £96. Even so wheat accounted for £62 of the total and his other crops were barley worth £16, oats worth £14-10-0 and beans worth £14. This range of crops, with some hay, appears to be the full Fishlake range. Even the farmer/craftsmen in Sykehouse had a bigger range than this, for example, Robert Beaumont, weaver and yeoman, had, at his death in April 1715, wheat (£18), barley (£6-10-0), oats (£6-10-0), beans (£10), rape (£8), and line (£2-12-6). The Laverocks, who were very large farmers, had a wide range and huge crops. Robert had wheat worth £106, rye worth £66, oats worth £43, beans worth £10, rape worth £110 and line worth £133-10-0 as well as hay worth £66. His large range and value of stock has been cited before but his crops totalled a staggering £594-10-0 and was well over twice the value of his stock. Sixteen years later his son Nathan's inventory (January 1736/7) was smaller in range and value and nearer to the other large but it still included wheat worth £80, oats worth £145, beans 15/- and line £118-1-0 making a total of £280-1-0 which was also over twice the value of his stock. Quite clearly

⁷⁵ e.g. Doncaster Archives, Fishlake PR 27/29, 1719

⁷⁶ Sheffield Archives, Pre-Enclosure Map Fishlake and Sykehouse, 1811

these large farmers in Sykehouse were mixed farmers with a leaning towards arable farming and while this was also true for the larger Fishlake farmers pastoral interests dominated the farming of the small farmers and craftsmen/farmers.⁷⁷

The Fishlake townlands were the only ones in the Manor to be adversely affected by Vermuyden's activities in the 1620s. At the end of the seventeenth century flooding began again. In 1698 a 'Petition of the Inhabitants of Fishlake and Sykehouse' was directed to parliament.⁷⁸ The petition recited the events following the closure of the old Dun and stated that Vermuyden had paid £1,800 to the inhabitants in 1634 or 35 in restitution for flood damage and 'several other payments'. But with the 'construction of the New River and a tidal sluice at the end and another such sluice at Turnbridge on the Aire and the good maintenance of the banks, the neighbouring country was pretty free from Damage by Land floods'. However 'the said sluices being neglected and some years since being driven away by the water the tydes have now found a new Course and come directly up the new River and upon meeting of any land floods never faile to drowne and overflow yo^r Orators Lands'. The petition also claimed 'that the Banks at Sykehouse have beene suffered to run wholly out of repaire and fall in decay' and that they could not use 'the good commons across the Dun' because Vermuyden had not built the bridge over the Don which the decree of 1630 required him to do. The final stimulus to the petition was the great flood of 1697 which, the petition claimed, did damage worth £2,265.

There seems to be no evidence of the outcome of this petition but as the bulk of the one hundred pages to which it runs consists of complaints of the inefficiencies of the Court of Sewers it can be assumed that the situation in Fishlake, as in the drained lands to the east, improved or deteriorated according to the efficiency and vigour of the commissioners. Certainly no bridge was built until the twentieth century. However, much of the flooding of Fishlake township came from Kirk Bramwith and the villages to the west of Sykehouse and from the river Went. Both of these areas were outside Vermuyden's scheme though the flooding in the west was attributed to

⁷⁷ There is no mention of the old cereal crops being grown in Fishlake parish but obviously they had been in the early seventeenth century as a Hensall inventory of 1602 includes a debt to Henry Lawson of Sykehouse for a mett of skegg and a mett of oats

⁷⁸ York City Library, Archives Dept, Agar Estates

Vermuyden. A consequence of this was the building of a high bank to keep the western waters out of Fishlake which started near the Don and went along the south of East Field and the West of Mill Field. When it was built and by whom does not seem to be recorded.

Not all the inhabitants of Fishlake and Sykehouse suffered as a result of the changes in the early seventeenth century. For, just as the Park became available for Hatfield farmers to rent, so demesne ings became available in Sykehouse. Lords Ing and Hope Ing were two such lands in the north east corner of the township on the junction of the rivers Don and Went. Lords Ing consisted of 88 acres, 3 roods and hope Ing 27 acres 1 rood though they were always treated as one on rentals. A lease of 1700⁷⁹ described the land as 'that parcel of meadow and pasture' but it is clear that in spite of its proximity to the rivers and its likelihood of flooding it was used for arable purposes. In the same lease to John Smith of Wormley Hill, Sykehouse, he agreed to pay a forty shilling penalty if he ploughed any in the last two years of the lease. Another lease five years earlier stated that the lessee, Robert Laverock, was 'not to plow or convert into tylladge but he forfeit three shillings an acre'.⁸⁰

In spite of the lease to Smith in 1700 for most of the late seventeenth and eighteenth centuries the lands were leased to the Laverocks and this 116 acres might have been the source of their crops of oats, line and rape. In 1653 a John Walker rented the ings for £20 though the rent was described as 'lost' presumably because of flooding. In 1667 a two-man partnership paid £15 which was reduced to £12 in the 1670s. In the 1680s the lands were rented in small parcels for £15 in total but in the 1690s there were several years when no tenant could be found.⁸¹ Timothy Moore, the Ingram's under-steward, tried hard to find a tenant and his correspondence shows his difficulties. 'As for Lords Ing I cannot lett it above 2/6 an acre this year and for aught I know considering the casualty of the weather it might be as well to lett it'.⁸² In the year after he wrote 'We cannot get goyst to stock Lords Ing'⁸³ and in 1694 he feared

⁷⁹ W.Y.A.S. WYL 100, TN/HC/A 82 Deeds

⁸⁰ *Ibid.*, TN/HC/A Deeds

⁸¹ *Ibid.*, TN/HC/C5 Rentals

⁸² *Ibid.*, TN/HC/C1 Correspondence, Moore to John Roads 27.7.1692

⁸³ *Ibid.*, 29.5.1693

that the hay from Lords Ing 'will not be good enough' to provision Lord Irwin's horses during a proposed visit to Hatfield.⁸⁴ These difficulties are very similar to those in Hatfield Park during the same period and as the Park did not suffer from flooding it can be assumed that the agricultural depression of the period must have contributed to the problems as well as the bad weather. In 1695 Moore made the lease previously mentioned with Robert Laverock for six years at £12 a year and in spite of the lease of 1700 with John Smith the Laverocks held the lands at low rents until at least 1763.⁸⁵ Nathan accepted a lease in 1728 for 21 years at £16-14-0 and his widow still held it at the same rent in 1763. The history of these lands parallels in some ways the history of the drained lands. They suffered badly in wet years especially during the 'little ice age' but in good years, still let at low rents the land could be very productive which helps to explain the great wealth of the Laverocks as indicated by their inventories.

vi. Arable Farming in the Parish of Thorne

Whilst Sykehouse clearly had the wealthiest farmers with the widest interests in the Manor, Thorne had the poorest with the narrowest interests. Thorne farming more than any other in the Manor merits the term 'pastoral'. Table V(14) below shows

Table V(14)

Number of references and value of crops in in 62 Thorne Inventories, 1694-1737

Wheat		Rye		Barley		(Malt)		Corn		Maslin	
No	Value	No	Value	No	Value	No	Value	No	Value	No	Value
23	125-5-10	27	90-9-6	24	61-19-2	8	*	10	*	1	5-0-0
Oats		Beans		Rape		Hay		Hemp		Lime	
No	Value	No	Value	No	Value	No	Value	No	Value	No	Value
25	138-10-4	7	9-13-6	3	10-10-0	32	83-4-10	1	0-17-0	3	0-11-0

*The values for malt and corn were so mixed with other items on the that even an estimation was impossible.

clearly that crops were unimportant to Thorne farmers. Every crop in the table is recorded on less than half the inventories, except hay. No one crop stands out as

⁸⁴ *Ibid.*, 17.8.1694

⁸⁵ *Ibid.*, TN/HC/A Deeds

more important than the rest as wheat, rye, barley and oats appear on about the same number of inventories although wheat and oats appear to be the most valuable. A surprising feature of the table is the small importance of pulses for fodder and the insignificance of the industrial crops, rape, line and hemp.

In all the other townships of the Manor a comparison of the value of crops and animals on inventories shows a rough balance. For the Laverocks of Sykehouse and the other large farmers the difference tends to favour crops. For the smaller farmers it tends to favour animals except in those inventories appraised near harvest time when crop value was at its highest. In Thorne the balance is entirely in favour of animals even with the largest farmers at harvest time. Thomas Hoyland, yeoman, (inventory October 1697), had considerable wealth. He had animals worth £134 and crops worth £81-15-4 at his death. Robert Feriby, yeoman, (inventory September 1727) had animals worth £104-3-4 and crops worth £74-16-0. The only inventories to show a higher value for crops than animals belong to John Coulman, husbandman and possibly a webster, whose values were 54-5-0 and 61-15-0 and John Darling, mercer, (inventory May 1716) who had crops worth £100 (wheat £25 and oats £75) he also had malt worth £40. His animals were only worth £10 and the implications of his inventory is that the crops were bought and not grown by him. Most farming was on a very small scale. Six had no crops on their inventories, seventeen had crops worth under five pounds and another eight had crops worth less than ten pounds. Half the farmers (31) had little value in crops.

This situation was a result of the small amount of land available for arable in the parish. The two open fields were very small and it seems likely that their insignificance had led to the breakdown of traditional management as Robert Walton was in May 1719 growing barley 'in both fields' according to his inventory. Also the area of townland above the still frequent floods was also very small and consequently the pressure to convert land into arable was great. Two areas where this happened on some scale were Ashfields and Thorne Moors. Ashfields had been the area between the arms of the Don before Vermuyden cut off the southern arm. It was traditionally pasture and meadow land and it was still often flooded. Nevertheless parts were being cultivated in the eighteenth century. John Coulman in February 1719/20 had four acres of wheat and rye growing there and George Wagsaff, tanner, in April 1720

had 'wheat alias corn in a close in Ashfields over and above the discount of rent £12'. The main area of expansion was the turf moors. The inventories show that the right of turbarry was more prized in Thorne than elsewhere in the Manor and there were many more references to 'turves graved' and stored. Not only was it an important item of commerce its clearance opened up new arable or pasture ground. One of Sir Arthur Ingram's complaints in 1640 was that 'under colour of Turfe Moore the tenants... [had] good arable, meadow or pasture grounds'. Arthur Young on his northern tour found 'the greatest curiosity to be met with in this country is the vast moor, which are three, four and five miles over'. He described the turf as five to six feet deep lying on 'a bed of stiff blue and black clay'. The clearance had left 'many little strips of cultivated land, generally an acre (28 yards) broad'. He noted that the strips 'consisted of many closes... gained in the course of many centuries from the moors, it is a good rich clay, that yields fine crops of corn and grass... but is liable to be overflown in winter'. Young thought that it could be made into 'good meadow ground'⁸⁶ but whilst it was used as such by the inhabitants it was more important to them as arable, as indicated by Cornelius Prole's map of 1669. The previously mentioned John Coulman had half an acre of rye and two acres of rape in the Moors but by the eighteenth century the cleared moors were not just an adjunct to townland farms. James Didier's inventory of Oct 1715 describes him as 'who lived in the moors'. His wealth lay mainly in animals (£50-7-6) but his crops were worth £24-5-0 and included wheat, rye, corn and rape as well as hay. He also had '3 chalders of lime fetching'. Lime was one of Young's suggestions for the improvement of this stiff land.

The exploitation of these lands did not however solve the problem of shortage of arable and Thorne farmers rented lands in neighbouring parishes. Richard Hall (inventory July 1732) had beans and oats in Fishlake Moors and George Wagstaff had 'corn on the ground in Broadhurst Moor and Fishlake Moor over and above the discount of rent £10'. Fishlake Moors were pasture and meadow according to Prole's map but they were nearer to Thorne than they were to Fishlake and without a bridge they were troublesome to exploit from Fishlake and they were, therefore, a natural area for Thorne farmers to exploit. Other inventories show land rented in Hatfield

⁸⁶ A Young, *Northern Tour* 1, pp 239-241

Woodhouse and, of course, they rented small parts of the drained lands. Some rented land from bigger farmers and, as the inventory of Francis Mitchell (dated November 1737) shows, the amount was sometimes very small even for someone described as 'husbandman'. Mitchell had 'Seed and Tillage of some ground in William Mitchell's farm' worth £2-17-6. He also owed thirteen shillings in rent. This appeared to be his only arable land and the renting of that was possibly a favour from a relative. In this situation Thorne alone among the parishes of the Manor can be described as 'pastoral' and it is, therefore, hardly surprising that the inventories of Thorne townland farmers give little indication of cropping innovation. Young's comments on Thorne moor were only part of a much longer description of the agriculture of the parish. He commented on the strong clayey nature of the Thorne soil and the use of river warp mixed with lime as a manure. He reported that he had been informed that the 'medium rent' was ten shillings an acre but that it could be twenty to twenty eight shillings on the open fields, an exception to the usual situation of lower rents for open field land that clearly reflects the shortage of good dry arable in the parish. Flax land, he was told, could fetch up to four pounds an acre. He thought the arable course in Thorne to be 'The most infamous... I have met with since I have been out' – turnips, barley, wheat, oats, clover and wheat. On the non-open fields he also thought the course 'very bad' – fallow, wheat, oats, wheat.⁸⁷ He also criticised the non-hoeing of turnips especially as three cereal crops were grown in succession and 'the land never fallowed'. He gave four examples of farms in 'this country' all of them large in comparison with the majority of those in the inventories of the first part of the century. This does not mean that farms had grown appreciably larger in Thorne but that these farmers were largely farming level land although three of them were technically townland farmers as they had right of common.

⁸⁷ N. Riches, *The Agricultural Revolution in Norfolk*, (2nd ed, 1967) p82, points out that Young was 'a little meticulous' on the true Norfolk system. Complaining of barley following wheat whereas Kent and Marshall were much more flexible

Young's examples:

		1	2	3	4
Farm size		120 acres	170 acres	70 acres	87 acres
Arable acreage		100 acres	130 acres	60 acres	57 acres
Crops	wheat	15 acres	30 acres	25 acres	
	oats	30 acres	60 acres	25 acres	
	beans	20 acres			
	rape		10 acres		
	turnips		10 acres		
	grass	20 acres	40 acres	10 acres	
Animals	horses	6	10	6	
	cows	7	12	66	6
	sheep	200 (on the common)		300 (on the common)	200 (on the common)

Thus in Thorne, as in the rest of Manor, larger farmers leaned to arable farming though without specialising. These examples suggest that rape and other new crops were not widely grown through turnips and clover appeared in the course he so disliked on the non-open field arable.

vii. The Lords of the Manor and Agricultural Change

Although much of the townland of the Manor was copyhold and the lords of the Manor had almost no control over it there were also many acres of leasehold lands over which successive lords attempted to exert their control by means of leases. They attempted to do the same over their few hundred acres of level land also. The series of leases in the Temple Newsam collection shows two main themes. Firstly a persistent attempt to prevent conversion of pasture and meadow land to arable. Secondly, especially after the Stainforth rebellion of 1727, an attempt to use leases to compensate for what the Ingram's considered to be a loss of income and power from their failure to end copyholding and the tenants' claim to ownership of the commons. The attempt to prevent the loss of meadow and pasture appears to be in response to the desire of both townland and levels farmers to put as much land under the plow as

possible by means of long leys after having pared and burned the turf.⁸⁸ The earliest leases in the series were drawn up on behalf of Sir Edward Osborne to stop tenants from plowing or breaking up any more than half the holding in the last two years of the lease or 'in any one year of four of the last years of the lease'. These leases refer to level land but later leases drawn up by the Ingrams show the same limitations in the Parks and the townlands also. For instance, in a lease of 1695, John Hatfield agreed not to 'dig, payre or plow or sow with any kinde or sort of come, graine seed or plant without licence of the Lord Irwin in writing'. Otherwise he had to pay a fine of two pounds an acre. In 1717 Francis Moore had to accept a similar clause in the Parks. After Simpson's abandonment of the Parks lease in 1678 there is a gap of some years but when leases begin again in the 1690s Park leases were very concerned that arable put down to pasture should be 'in good heart' – obviously a belated recognition of the damage done to the Parks pasture by Simpson's attempt to turn it into arable.⁸⁹ Moore had similar restrictions placed on his use of four closes taken from the north and west ings. He had to pay forty shillings for every acre of the meadow plowed in the last three years of the lease and a similar sum for every acre pared and burnt 'during the whole term'. By the late seventeenth century this severe penalty for paring and burning was usual though sometimes the fine was three pounds. Ash from paring and burning was supposed to be the ideal seedbed for rape and the prohibitive fines for this practice might explain the decline in rape growing in the levels noticed earlier. The variation in the amount of the fines and in the time allowed for plowing indicates that the nature of the land was taken into account when the lease was drawn up and after 1727 when the printed lease form came into use sometimes a tenant could have the penal clauses cancelled. In 1729 William Jackson's lease carried the note 'Notwithstanding any covenant within writt to the contrary It was agreed that [he] is to pare and Burn part of the Premisses... if hee thought fitt upon his Entering into a p.per Covnt not to Hollow any part there, and to manure and lye down the same without Damage or Impoverishing... and to lye downe the parcells he shall so pare and burn in a good and husbandmanlike Manner and not to make any part thereof worse'⁹⁰

⁸⁸ Young, *op cit*, p 237. Thorne farmers 'pare and burn... [and] generally sow rape on the land'

⁸⁹ W Y A.S. WYL 100, TNHC/A Deeds. 16, 18, 19, 22, 57 and 113

⁹⁰ *Ibid.*, p144

Concern for the proper management of the soil is obvious from the earliest leases. In 1639 William Ash agreed to maintain the land 'in good and sufficient manurance and husbandry according to the course of husbandry there used and shall at the expiration of the said Termes... soe leave the p.misses well and sufficient manured and husbanded'.⁹¹ With the coming of the printed leases requirements became much more specific and stringent. The printed form included the following clauses. The lessee should:

for every Days Work with a Plough of the said Premisses which he... shall at any time during the said Term, Plow, Grave, Rive out and sow with any Corn, Grain or Seed... twenty four sufficient Horse Loads of well-burnt and unfallen Lyme, or sixteen Wain Loads of good Manure and shall not take above three Crops for every such Liming or Manuring, and for better Husbandry shall... in every year of the said Term, spend, Consume and Eat upon some part of the said Premisses all the produce thereof, and spread and lay thereupon all the Compost, Dung and Ashes which shall Yearly come... upon the said Premisses... and at the End of the said Term leave all such Compost, Dung, Fodder and Manure as shall be bred and not spead (sic) thereupon... to the use of the said lord Viscount... and shall Till, Manure and use the ... Premisses... in a good Husband-like Manner and not impoverish and make worse the same in any kind whatsoever... and will three years and a half before the expiration of the said Term lye down and not sown down with Clover all... the Plowing ground... in good Order and Condition to lye for Grass and Pasture and shall... Pasture one Moiety thereof at least two of the last years of the said Term and for every acre... which they shall Plow, ... or use... in any other way than in Grass or Pasture in the last three Years and a half... pay... five pounds... and in an Orderly and Husbandman like Manner lye and spread... upon every Acre of... Premisses which they shall Plow... Use or Convert into Tillage at such Time as they shall lye the same down again for Grass and Pasture, Twenty wain Loads of good Manure or forty Horse Loads of... Lime and so after the same Proportion for every greater or lesser Quantity thereof, and shall not pair and burn any part at any time during the said Term, nor Sow down any of the Plowing Ground with Clover Seed for more than one Year together before the same be Plowed up again in every place where Clover Seed be sown without... Special Lycence... of the said Lord Viscount... in writing.⁹²

A few tenants were given exemption from some of these clauses in writing on the outside of the deed by the printed form continued in use until the late 1750s and it suggests that whatever the state of farming on the copyhold lands the leasehold lands were subject to a vigorous campaign to keep the land in good heart though the

⁹¹ *Ibid.*, Deeds, 27

⁹² *Ibid.*, p 146

prohibitions suggest an estate suspicion of the new husbandry and especially of the use of long leys. It is not, therefore, possible to claim that the Ingrams were improving landlords of the stamp of the Walpoles or the Cookes of Holkham. The leases suggest much more a family concerned 'to protect the property against tenant's malpractices and negligence, and in a general way to safeguard the fertility of the soil'.⁹³

The other main aim of the leases it was suggested was to compensate for the loss of income and power over the land that the continuation of the copyhold system caused. Whilst this might appear to have been unfair to leaseholders it must be remembered that such was the state of landholding in the Manor that all the leaseholders would also be copyholders or sub-tenants of copyhold land. Some of the clauses do, however, suggest an element of revenge against the tenantry for their continued opposition to Ingram claims and especially to the recent attempt to charge tolls for the movement of goods across the river at Stainford. In addition to clauses on the maintenance of fences, scouring of ditches, landlord's rights to minerals under the ground and to hunt animals over it, the printed leases contain clauses which indicate Ingram frustration with the copyhold system. The most obvious of these was the clause aimed at building up the timber stocks on the Manor, depleted by the depredations of the copyholders over centuries. From the 1720s leaseholders had to 'Preserve and Succour all the Timber and other Trees now growing... and all the Spring Woods thereupon' and also to plant annually a number of 'young oak, Ash or Elm trees' according to the size of the holding. It is significant in this context that in 1714 and 15 records survive of Ingram wood sales from Hatfield.⁹⁴ Tenants also had to agree to terms which can only be described as medieval in their wording. They had to 'grind all their Corn, Grain and Malt at the Mill or Mills of the said Lord Viscount and shall... pay the usual toll or Moulture for the Grinding thereof'. To perform a certain number of 'Days Work or Boonings with a Team and two men' or else pay a sum upwards of five shillings. They also had to 'Maintain and Keep one Hound, Greyhound or Spaniel for and to the liking of the said Lord Viscount' and to return it to him on demand 'without requiring anything therefore'.

⁹³ G. Mingay, *English Landed Society in the Eighteenth Century*, (1963), p 170

⁹⁴ W. Y. A. S. WYL. 100, TN/HC/A 104 and 105, 1714 and 1715, Deeds

The bitterness caused by this new form of leasing document and the attempt of Lord Irwin to make all the tenants sign an oath of non-resistance to him is well expressed in the following letter from Thomas Perkins of Fishlake whose family had been in the Manor since the sixteenth century and had held office in the Chase under the Crown. He wrote, 'I am amazed (Mr Hopkinson) such a thing should proceed... Indeed for my part (Sr) I am a neighbour, a Tent. to my Lord Irwin one of the Eldest I aver it he has in being and 200 years or 300 (I am ashamed to boast but upon such occasion) my family has paid dues and Dykes in the Lordshipp, before my Lord Irwin was ye owner of ye manner... The Stewards in Yorkshire here (and no where else in England) Impose a kind of an Oath of Vassalage upon us'.⁹⁵

The increasing stringency of the leasing documents was a consequence of the reopening of the dispute over the soil of the commons. It was part of a toughening of conditions going back to the 1690s and in all the Ingram estates as the printed deeds were used outside Hatfield. In the 1690s the Estate successfully shifted the payment of the land tax onto the leaseholders though it continued to pay the drainage rates and the fee farm rent on the level land. As the land tax rose to four shillings an acre during the war years it would have eaten up the whole of the rent of the poorer park and level land. Similarly the demand for boon work was probably more a means of increasing income by fines as the land in hand was usually pasture. About 1727 leases began to involve fines in the form of 'foregifts' on renewal. In that year a lease of 1718 was renewed and a note on the outside of the 1718 lease recorded on renewal that the tenant paid a 'foregift for the said lease of 18 guineas and promises to observe all the covenants'. The amount was one year's rent which seems to have been usual.⁹⁶ The printed form and the return to 'vassalage' that it implied was used until the late 1750s and possibly later but the series peters out after that decade. By that time landholding on the non-copyhold land of the Manor had been reorganised.

Some copyhold land had been enfranchised under Sir Edward Osborne in the 1630s, more by Sir Arthur Ingram when he first bought the Manor and some tenants

⁹⁵ *Ibid.*, TN/HC/C1 Correspondence. Thomas Perkins to Mr Hopkinson (Lord Irwin's Steward). 10 Dec 1727

⁹⁶ *Ibid.*, TN/HC/A 122, Deeds

enfranchised their copyhold later,⁹⁷ but hundred of copyholders still existed until all the copyhold was enfranchised as part of the process of parliamentary enclosure after 1811. On the rest of the land owned by the Ingrams the tendency in the eighteenth century was for the many small tenants, holding a few acres of level or park land, often in partnerships, to disappear. They were replaced by medium sized farms containing a mixture of level land, park land and open field land. The decrease in the number of tenants and the increase in the size of their holdings is shown in the list of leases of c.1743 and more clearly in the Estate Survey of 1774, table V(15).

Table V(15)
Number and Size of Tenancies in the Ingram Lands 1743 and 1774⁹⁸

	Over 200 acres	100-200 acres	50-99 acres	10-49 acres	Under 10 acres	Number of tenants
1743	3	5	2	8	2	20
1774	3	6	6	11	3	29

The tenancies were now leasehold, usually for eleven or twenty-one years compared with the yearly basis which had been normal for most of the small tenants previously. The attempt of the Ingram stewards to rationalise the estate was accompanied in the Manor by pressure from the wealthier inhabitants to remove the obstacles to modern farming provided by the open fields, the commons, the copyhold lands and the hundreds of small, often inaccessible closes. The pressure was successfully resisted for several decades but the opponents of enclosure were eventually defeated as the area entered a period of change as significant as the period of the drainage. It included, as well as parliamentary enclosure, new attempts to make the drainage of the levels effective by remedying the errors of Vermuyden but also in making the poorer level land much more fertile by means of artificial warping which was pioneered in the parish of Snaith from c.1750.

⁹⁷ *Ibid.*, TN/HC/C 11/2 a receipt for £12-5s paid by Thos Woodcock of Hatfield Woodhouse and John Cooke of 'Dousthorpe' for composition fines on land in Sykehouse (Dowsthorpe) TN HC C 1 a letter from Saml. Mellish of Blyth, Notts, d/d 15.6.1689 complaining that land he inherited was forfeit in the Manor Court for non-payment of a copyhold fine had been enfranchised in 1654 for £40

⁹⁸ *Ibid.*, TN/HC 5 Rentals. In 1653 a rental list included 52 tenants, in 1696, 55 tenants, not including many partners.

viii. Agriculture in the Manor on the eve of Parliamentary Enclosure

In the thirty years before the enclosure act was passed in 1811 the pros and cons of the issue were a matter of great debate in the parish as the two sides pressed their views through the local press. By this period the making of inventories had largely died out and the series of records in the Temple Newsam papers had also come to an end. Fortunately the issue of enclosure and other forms of agricultural improvement were by this time debated in a wider context than the Manor of Hatfield. From the outbreak of the war with France the agricultural publicists like Young were able to make improvement a matter of urgency and the foundation of the Board of Agriculture and the making of a national survey of agriculture were important results.⁹⁹ Surveyors were sent in the mid-1790s to all regions of the country to report their findings to the Board. The reporter for the West Riding of Yorkshire, Robert Brown, did not like much of what he found in Hatfield and his comments have been previously quoted. Fortunately he had more to say than criticism of the commons and the open fields. Relying on correspondents he was able to give some factual information of the agriculture of parts of the Manor though it is given in such a generalised way that its value is much reduced. For instance, he gives no information on Sykehouse and nowhere does he indicate that there was any distinction between the farming practices of the townlands and the levels.

Arable and Pasture Land in the Parishes of the Manor, c. 1794

	Hatfield ¹⁰⁰	Fishlake ¹⁰¹	Thorne ¹⁰²
Parish acreage	8,830	3,992	6,086
Arable	4,972	3,992 (sic)	4,150
Grass	3,858	1,185	1,936

⁹⁹ R. Mitchinson, 'The Old Board of Agriculture 1793-1822', *Eng. Historical Review* 74, No 2⁰⁰ 1959, pp 42-69

¹⁰⁰ R. Brown, *op cit.*, Appendix, p 93

¹⁰¹ *Ibid.*, Appendix, p 104. Brown's figures seem to be incorrect. White's Directory (1837) gave the Fishlake acreage as 3,662 acres and the total for grass and crops by Brown is over 4,000 acres

¹⁰² *Ibid.*, Appendix, p 106

Crops in the Parishes of the Manor c. 1794

	Hatfield	Fishlake	Thorne
Wheat	1,180 (with Rye)	854	1,000 (with Rye)
Oats	1,145	530	1,000
Beans & Peas	75	446	150 (and c.)
Barley	592	55	300
Turnips	300	20	c. 150 (on fallow)
Potatoes	67	29	150
Clover	762	125	700
Flax		48	
Fallow	1,151	700	850

In 1801 parish clergy were asked to make a return of crops for their parishes. Unfortunately only the return for Fishlake is available and even that does not include Sykehouse although Sykehouse was still a chapelry of Fishlake. The incumbents of Hatfield and Thorne did not make returns or their returns have been lost. The return for Fishlake showed that Fishlake farmers grew the following crops: wheat 923 acres, oats 448 acres, beans 330 acres, barley 80 acres, turnips/rape and potatoes 26 acres, rye 17 acres and peas 9 acres.¹⁰³ The two surveys show, although Brown's was much criticised, that the conclusion of the earlier inventory survey that Fishlake was 'a wheat growing township' was still true and that little had changed in the order of significance of other crops. Brown's figures show that Hatfield and Thorne were still substantial growers of rye and although barley appeared to have lost significance in Hatfield this is relative as Brown's figures relate to the levels as well as the townland and barley was not grown on the levels at all. In both townships turnips continued to be grown on only a small scale and as a fallow crop. Potatoes which had received one mention in the tithe case evidence in Hatfield was now established on a small scale in both parishes but it was essentially a warp land crop and its further spread was a consequence of nineteenth century warping. Rape was of little importance in

¹⁰³ D.G. Hey, 'The Crop Returns for South Yorkshire', *Y.A.J.*, 168, 1970, p462

any of the townships but one new crop of real significance was clover in Hatfield and Thorne.

Brown followed his summary of Hatfield's crops with some remarks by a correspondent to the effect that landlords were forcing tenants to put all their land down to grass: 'not letting their tenants occasionally plow even a small part of their farm'.¹⁰⁴ It is not clear from the context whether this is supposed to apply to Hatfield though the fear of over-plowing was clear enough in the Ingram leases quoted earlier. But it is evident from Brown's own figures and the incumbent's figures for Fishlake that the pressure of the farmers of the Manor not to plow had not been effective. Arable occupied the majority of the land in every parish with grass occupying less than fifty per cent of the land of Thorne. Throughout the period of nearly two hundred years covered by this chapter this movement towards arable appears to be going on. The main aim of the drainage was to turn traditional pasture and meadow into plow land. Francis Simpson's attempt to develop the Parks centred on conversion of traditional grazing and coppice land and the aim of Hatfield's farmers in introducing clover was to reduce the amount of land given to hay so that more could be plowed. The tendency seems to be independent of cereal prices as Simpson even persisted in it in the Park during one of the worst periods for cereal prices in the whole seventeenth century.

Nevertheless wholesale change in the Manor was impossible because of the continued wetness of large parts of the levels, the extensive common grazing and the survival of large numbers of small owners and small tenants who could not innovate as the large and middling farmers did. The tendency towards larger farms noted earlier on the Ingram leasehold lands did not, therefore, affect all the Manor as the figures derived from the land tax returns show:

¹⁰⁴ Brown, *op cit.*, p93

Table V(16)**Land Tax Assessment in Hatfield 1811¹⁰⁵**

Category of Taxpayers	Amount of Tax					
	Up to 5s	5s to 10s	10s to 15s	15s to 20s	20s to 30s	Over 30s
Owner Occupiers	64	23	9	5	3	6
Non-occupying Owners	96	28	19	13	10	16
Tenants	120	22	21	11	13	24

This chapter began with an attempt to evaluate the changes brought about in the Manor by the drainage of the marshlands and the consequent loss of commons and the change from Crown to private ownership. It was a great upheaval and it was many years before the disputes consequent upon the change died away. When they did, a new farming system emerged in which the larger farmers, at least, farmed all the areas of the Manor, townland, parks and levels though the old system of small townland/common farms based on renting and sub-letting of copyhold land also continued.

Summing up the agricultural changes in the very large Manor of Hatfield with its three large parishes and two large chapelries in addition to smaller settlements is not an easy task. It can be confidently claimed that by the end of the seventeenth century the area had recovered from the shock and dislocation caused by the drainage of the early seventeenth century. Indeed, although the enclosure of a large part of pre-drainage land had reduced their opportunities, townland farmers were able to rent drained land as the descendants of the original settlers had largely departed and the townland and the drained land increasingly became one farming region as, particularly after 1750, the drained land was improved.

This unity did not make the farming regimes the same but it signified the wider range of farming opportunities as the tithing evidence of the 1730s showed. Tenants were able to rent townland, the old Hatfield Park and large cheap areas of former marsh. The differences between townland and drained land were very great but so were the differences between the townlands which included the poor sands of Hatfield, the good soils of Stainforth and the heavy land of Sykehouse. Despite soil differences

¹⁰⁵ D. Holland (ed), *Hatfield in History* (1970), p18

the farming in all the settlements was a mixture of the staple elements of English agriculture in the seventeenth and eighteenth centuries although the emphases varied. The main crops were wheat, rye, barley and oats. In Sykehouse the main crop was wheat, in Thorne it was oats, in Hatfield it was, until the early eighteenth century, barley and rye. Wheat was important in all of the Manor townships and during the eighteenth century it began to be the dominant cereal. All the townships kept large numbers of cattle and horse breeding became increasingly important in the later seventeenth century. Sheep were fairly important in Sykehouse and Thorne but not many were kept elsewhere. This is surprising on the sands of Hatfield but the poverty of these soils resulted in the development of turnip and clover cultivation. The amendment of the open fields to accommodate the crops which were new to the area indicated the importance attached to the change. Line, a long established crop, continued to be important, especially in Sykehouse, and the appearance of potatoes in Hatfield closes in the early eighteenth century indicated the beginning of a new crop of later significance. The soils in the other parts of the Manor were not suitable for turnips though clover spread. The initiative for the adoption of new forms of agriculture came from the landowners and larger tenants who controlled the Hatfield Town Court and it indicates the growing tendency to think seriously about moving away from tradition particularly in the farming of light lands.

The second half of the eighteenth century is a very important period of change with the drained land benefiting from new drainage and especially from artificial warping (Chapter VIII). The other very important change, parliamentary enclosure, affected much of the Chase; although it was not completed in the Manor until 1825, pressure to bring it about grew in the late eighteenth century. This chapter, therefore, illustrates the emergence of an area wrongly described as backward and shattered by the destruction of its ancient landscape into one with many indications of modernisation.