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RURAL RESEARCH



**The State of Farming on Dartmoor 2002:  
Final report on research to inform the  
“moor futures” initiative**

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# **The State of Farming on Dartmoor 2002: Final report on research to inform the 'moor futures' initiative**

*Commissioned by*

**Dartmoor National Park Authority**

**Martin Turner  
Donald Barr  
Mark Fogerty  
Kaley Hart  
Michael Winter**

*Centre for Rural Research  
University Of Exeter  
Lafrowda House  
St German's Road  
EXETER EX4 6TL*

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## Foreword and Acknowledgements

Farming on Dartmoor currently faces important challenges from a variety of sources. Maintaining a viable farming industry on Dartmoor requires specific policy support because of the natural handicaps to farming on the moor. It is widely recognised that, in addition to the moor's traditional role in producing food, hill farmers have a key role in maintaining its social and countryside environment. Increasingly, policy aims to ensure that this role is properly rewarded.

Farming on Dartmoor today takes place against a background of change: changing markets for food, changes in the 'food chain', international pressures for the reform of farm support policy and new expectations of farmers as land managers from the public. Moreover, last year's FMD epidemic caused further damage to struggling farm and tourism businesses.

Recognising the need for an independent source of information on the current state of farming on Dartmoor, the Dartmoor National Park Authority commissioned the research on which this report is based. It is hoped that the findings and recommendations will inform the 'Moor Futures Initiative' and assist the future development of Dartmoor farming.

The Centre's research team comprised Donald Barr, Allan Butler, Mark Fogerty, Kaley Hart, Hilary Thomas, Martin Turner and Michael Winter, all of whom made important contributions to the work. The authors acknowledge with sincere thanks the support and assistance of the Authority throughout, particularly Dr Nick Atkinson for defining the study and Phil Markham for his guidance as Project Manager. Nell Cruse provided a valuable input as research assistant and Russell Luscombe also made an important contribution. The staff of DEFRA's Statistics (Censuses and Surveys) Division efficiently provided the sample for the postal survey. The presentation of this report has been the responsibility of Marilyn Wills who has our grateful thanks for a job well done.

However, without the support of Dartmoor's farming community none of this could have proceeded. We especially thank farmers for finding the time to respond to the postal survey at a very busy time of year, and also the fifty farmers who put aside other commitments to take part in the telephone survey. The research was guided by an Advisory Group which comprised, under the chairmanship of Maurice Retallick, Philip Cleave, Bridget Cole and Mike Malseed (Dartmoor farmers), Peter Morris (National Farmers' Union) and staff of the Authority and the Centre for Rural Research. It is our hope that this research will prove to be of significant help in informing policy development, to both the farming community and the Authority, over the coming months and years.

Professor Michael Winter  
Centre for Rural Research  
University of Exeter  
9th September 2002

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## ABBREVIATIONS USED IN THIS REPORT

AES	Agri-environment Schemes
AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
BSE	Bovine Spongiform Encephalopathy
CLA	Country Land and Business Association
CRR	Centre for Rural Research
CSS	Countryside Stewardship Scheme
DCA	Dartmoor Commons' Association
DCC	Devon County Council
DEFRA	Department for Environment, Food and Rural Affairs
DETR	Department for Environment, Transport and the Regions
DTI	Department for Trade and Industry
ERDP	England Rural Development Plan
ESA	Environmentally Sensitive Area
ESU	European Size Units
FBAS	Farm Business Advice Scheme
FMD	Foot and Mouth Disease
HELM	Hill Environmental Land Management
HFA	Hill Farm Allowance
HLCA	Hill Livestock Compensatory Allowances
HTF	Hills Task Force
LFA	Less Favoured Areas
LMI	Land Management Initiative
LUPG	Land Use Planning Group
MAFF	Ministry of Agriculture, Fisheries and Food
NCC	Nature Conservancy Council
NFU	National Farmers' Union
PIU	Policy and Innovation Unit
RDA	Regional Development Agency
RWP	Rural White Paper
SAPS	Sheep Annual Premium Scheme
SSSI	Site of Special Scientific Interest
SWQM	South West Quality Meat
WCL	Wildlife and Countryside Link

## EXECUTIVE SUMMARY

### **The background to the study**

1. Farming on Dartmoor currently faces a number of significant challenges from a wide variety of sources. It has long been recognised that the maintenance of a viable farming industry in upland areas such as Dartmoor requires specific policy support. Dartmoor hill farming faces undisputed natural handicaps because of factors such as relief, climate and, for much of the moor, remoteness. Moreover, against a background of changing market requirements and structures in the food sector, declining profitability in agriculture, international pressures to reform farm support policy and developing public perceptions of the role of farming (which is increasingly seen as providing environmental ‘goods’ in addition to high quality food) hill farming faces a period of considerable uncertainty and change. The recent epidemic of foot-and-mouth disease (FMD) caused further damage, of course, to struggling farm and tourism businesses.

2. The Authority recognised a need to undertake research to provide authoritative information on the current position of hill farming on Dartmoor, linked to the perceptions and aspirations of local farmers. In addition it was important to establish what may be expected of farmer and business-led groupings in taking advantage of new resources available under various rural development programmes such as Objective 2, the England Rural Development Plan and Leader Plus, and from a number of agency and partnership sources.

### **The aims and objectives of the research**

3. The research project was designed to meet both the Authority’s immediate needs for better information about Dartmoor’s farming economy, and also contribute to an informed understanding of the industry’s possible development over time. Thus, the research had two specific aims:

(a) to establish a sound information base on Dartmoor’s farming industry in order to inform the Authority of its current structural and socio-economic position; and

(b) to explore the possibilities for group and co-operative approaches to a range of development opportunities.

4. In pursuing these aims the research project focussed on a number of specific objectives, which were defined at the outset of the study:

- Identify the key trends shaping Dartmoor hill farming over recent years and, where possible, the principal drivers of those trends;
- Provide a sound statistical database relating to the current state of farm businesses on Dartmoor;
- Explore farmers’ current involvement in, and perceptions of, co-operative marketing initiatives relevant to the area;

- Establish a clear understanding of a range of socio-economic indicators related to the future development possibilities of Dartmoor hill farming;
- Assess the need for external agency assistance to support and/or develop new approaches to business development and the economic regeneration of the sector;
- Advise on the most promising areas for Authority intervention - under ‘Moor Futures’, for example – in consultation with farmers and the Authority.

5. The primary role of the research on which this report is based, therefore, has been to establish a comprehensive baseline of information relating to the state of farming on Dartmoor in the immediate aftermath of the FMD epidemic of 2002. This comprehensive review of statistical and research sources, policy developments and directions and, importantly, a sounding of the views and aspirations of those who make their livings in farming the moor, provides just such a baseline on which local and regional policy initiatives can be built.

### **Research methodology**

6. The research comprised four distinct components:
- *A postal survey of 500 Dartmoor hill farmers, stratified by farm size to ensure an adequate representation of all full-time and part-time farmers on the moor;*
  - *A telephone survey, based on a sub-sample of 50 postal respondents, designed to explore key issues in greater depth than would be possible in a postal questionnaire;*
  - *A desk review of all relevant information sources relating to the hill farming sector on Dartmoor, including recent studies and statistical sources;*
  - *Consultation with a range of representatives of Dartmoor hill farmers and other key stakeholders including, for example, English Nature and the Countryside Agency.*

### **The policy context of hill farming**

7. The policy focus in the uplands centres around trying to ensure appropriate policy mechanisms to achieve both a financially viable farming industry alongside protecting, maintaining and enhancing the physical, biological and social environment. As farming incomes have declined in recent years so the issue of how to manage and enhance uplands such as Dartmoor as a ‘public good’ has become more pronounced and challenging in the policy debate. Dartmoor is multifunctional and its farm economy provides not only income for farmers and traditional food commodities but a wide range of other goods and services for society as a whole. The research identified a number of key issues in the uplands:

8. Farmers and farm incomes: farm incomes are extremely low in upland areas and upland farming also suffers from a declining workforce with few new entrants. In an attempt to boost farm incomes, and encouraged by support schemes, farmers have tended to increase flock size to attract larger subsidies, encouraged in this by the CAP’s sheepmeat regime from 1980. However, increased sheep numbers have not

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provided sufficient returns to maintain incomes and the late 1990s witnessed a collapse in incomes for LFA cattle and sheep farms in England.

9. Hill farms remain dependent for their viability upon direct subsidies, particularly livestock subsidies, HFA payments and, increasingly, agri-environment scheme payments. The threat to farm incomes has wider social implications, of course. The cultural and social significance of farmers and the role they play within rural communities are increasingly recognised as important parts of the fabric of rural areas. Increasingly, of course, Dartmoor farmers are turning to diversified activities and other sources of external income. Moreover, although planning restrictions are perceived by some to limit the opportunities for change and/or growth of farm businesses, DNP has a positive record in respect of farm diversification prospects.

10. Habitat loss: in general, the increase in average flock sizes in the UK encouraged more intensive use of moorland and unimproved pastures, and this overgrazing has led to the degradation of semi-natural habitats and a loss of biodiversity in the uplands. The primary cause of overgrazing is high stocking levels, but the timing of grazing, the nature of supplementary feeding and the lack of shepherding are also important factors. The upland heathlands of Dartmoor are one of the region's most valued landscapes and its biodiversity is a tremendous asset, giving the National Park its distinctive character. Dartmoor supports a range of species of plants and animals characteristic of both upland and lowland areas. On behalf of the Dartmoor Biodiversity Steering Group, DNP recently published *Action for Wildlife: the Dartmoor Biodiversity Action Plan*.

11. Current local initiatives to facilitate entry of common land into ESA agreements may well serve to solve many of the remaining problems associated with overgrazing. These issues are highlighted in the Dartmoor Biodiversity Action Plan which reports the primary causes of habitat loss on Dartmoor as being:

- Heavy grazing and/or frequent and extensive burning – causing upland heath to be replaced by grass moorland;
- Frequent swaling (burning) of areas containing purple moor grass, preventing heather regeneration;
- Bracken invasion;
- Heather beetle damage;
- Human disturbance – recreational activities and military training;
- Nutrient enrichment from atmospheric deposition

12. Current policy debates: in terms of rural policy current debates and options for the future sustainability of upland areas are set within the context of the Government's vision for rural areas, as set out in the Rural White Paper (RWP) in December 2000. In order to achieve this living, working, protected and vibrant countryside the Government has set itself a number of Rural Policy Objectives that aim to '*sustain and enhance the distinctive environment, economy and social fabric of the English countryside for the benefit of all*'. In particular, and of particular relevance to Dartmoor, the RWP places increasing emphasis on:

- the importance of community strength - ‘*prosperous, sustainable and inclusive rural communities*’;
- local partnerships;
- community strategies;
- increased co-operative working between farmers and others in the food chain;
- putting environmental and social objectives closer to the heart of farming policy;
- land based businesses and local products as key to continued rural prosperity;
- ‘thriving economies in all rural areas which provide good quality employment opportunities and exploit the versatility, entrepreneurial tradition, and, increasingly local green business potential’.

While the budgets for agri-environment schemes were significantly increased, perhaps the most fundamental change for Dartmoor was the redefinition of the objectives for the uplands at a European level and the changes to upland payments from a headage to an area basis.

**13. Environmental management:** the Government is currently consulting on the future of agri-environment schemes. There seems to be a good deal of consensus about the general direction they should take from both farming and environmental organisations. Key messages that come through include:

- a basic broad and shallow scheme needs to be introduced which is applicable to all farmers nationally;
- a combined ESA/Countryside Stewardship scheme to target environmental management;
- the need to strengthen the links between Agri-Environment Schemes and other rural development initiatives;
- provision of integrated business and environmental advice;

**14.** The Government’s Task Force for the Hills, which reported in 2001, recommended the introduction of a Hill Environmental Land Management (HELM) payment available to all farmers within the LFA which would be based on compliance with specific environmental criteria. It is generally agreed that whatever is put in place needs to be delivered through a single delivery point to enable integration with other rural development support available. The need to strengthen rural development links and to integrate business and environmental advice in the hills has been recognised as essential for the long-term sustainability of hill farms.

**15. Quality local food and drink:** South West Quality Meat uses the traditional, extensive grass based rearing methods as a marketing tool to give livestock products from Devon and Cornwall a competitive edge over other parts of the country. While production methods may give the region a competitive advantage, other aspects, including the cost of inputs, distance to markets and processing centres as well as the scale of production and ability to adapt to new techniques put the region at a disadvantage. The development of the organic livestock sector in upland areas is something that has been proposed by a number of commentators. However, markets Centre for Rural Research, University of Exeter.

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for organic produce also need developing and there needs to be more co-ordination between both producers and the marketing initiatives already in existence. This issue needs further research and reflection before firm guidance for policy can be given.

### **Farming change on Dartmoor**

**16.** The most significant recent influence on the farming systems of Dartmoor was its designation in 1994 as an Environmentally Sensitive Area (ESA). This scheme was introduced by MAFF in 1987 to encourage farmers to farm in ways which help to safeguard the natural environment and the historical features of the landscape. The influence of the ESA scheme over time will ensure further change in the pattern of farming on Dartmoor over coming years.

**17.** Over the last thirty years there has been significant change in the structure of Dartmoor farms. There is now a much greater proportion of small holdings (less than 20 ha) and a proportionately greater role for larger holdings (50 ha and over). Detailed statistics of farming on Dartmoor, drawn from the Agricultural Census and covering the period since 1990, are given in Appendix 1. Key points are as follows:

- The total number of registered agricultural holdings has steadily increased over the last decade, rising from 1005 in 1990 to 1135 in 2000;
- The enclosed agricultural area appears to have fallen slightly, standing at 46,659 hectares in 2000;
- Consequently, average holding size has declined from 48.9 to 41.1 hectares;
- Although the proportion of larger holdings (over 50 hectares) has remained at about 20 per cent, the proportion of small holdings has risen from 47 to 62 per cent.

**18.** The total number of cattle and calves on Dartmoor farms continued to grow well into the 1980s, but since then has declined and numbers are now lower than in 1972. Sheep numbers, however, are very substantially higher than thirty years ago, with a significant increase occurring during the 1980s after the establishment of the CAP's sheepmeat regime in 1980. However, numbers peaked in the early 1990s and there have been steady reductions since then. During the 1990s total cattle numbers fell by about 6 per cent, while sheep numbers fell some 4 per cent. The overall stocking rates also fell.

**19.** The general trend in the numbers of people employed on Dartmoor farms is very apparent: a steady decline in the total numbers of people employed in agriculture, which fell by more than six per cent during the 1990s. However, while the numbers of people working on a full-time basis on Dartmoor farms fell from 844 in 1990 to 795 in 2000, as a proportion of the workforce they still represent about 42 per cent. These results largely mirror those elsewhere in UK agriculture, except that the more general trend has been a continuing proportional fall in the input of the full-time labour categories, and a commensurate increase in the significance of part-time and seasonal categories.

### **The state of farming on Dartmoor: full-time farms**

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**20.** Land tenure and farm structure: a key finding is that more than one in three farmers are responsible for at least some land outside the National Park. Overall, the proportion of land located outside the Park but farmed in conjunction with holdings on the moor amounted to more than ten per cent of their farmed total, a figure which is not insignificant in itself. However, for those farmers with land in that category it represented a very significant part of their business, covering 22 per cent of the total area farmed.

**21.** The postal questionnaire asked farmers about whether or not their holdings had increased in size in recent years and what changes in size they anticipated for the future. The key findings were:

- larger farms were most likely to have increased their area in recent years;
- smaller farms were most likely to have reduced their area;
- fewer farms of any size category expect to expand in the future;
- the 120 to 250 hectare group is by far the most inclined to expand (27 per cent);
- most farmers (75 per cent) anticipate no change in the size their holding *within* the Park before 2005;
- 40 per cent expect there will be no change in the area of land they farm outside.

**22.** The use of commons grazings: the issue of the use of commons grazings is complex since the nature and degree of use of commons grazings is at the heart of the ‘farming and the environment’ debate. The key findings were:

- 66 per cent of farms with cattle made no use of commons grazings;
- the overall proportion of farms making any use of commons grazings was 48 per cent;
- the proportion of farmers planning to reduce their use of common grazings over the next few years is greater than the proportion which increased their use over the last few years.



23. Away wintering as a farming practice: on the basis of the postal survey it is clear that the ‘away wintering’ of cattle and/or sheep is not carried out by the majority of holdings in the Park. Indeed, 90 per cent of farmers with breeding cattle and 82 per cent with breeding sheep indicate that no away wintering takes place on their systems. Most farms which do off-winter livestock do so for less than 20 per cent of their animals, but there is a small percentage of farms on which *all* their animals are removed. The survey also found that the present pattern of away wintering is unlikely to alter much over the next few years.

24. A review of farming systems: of those farms with hill-type livestock, some 60 per cent produce store cattle or sheep, while 37 per cent produce finished livestock. Farms which have at least some lowland-type livestock produce a higher percentage of finished stock, at 48 per cent. Although there are other farming systems found within the Park boundary, including both dairy and arable, these are of minor significance only.

25. In terms of change in farming systems, the survey found that 30 per cent of farmers with breeding cattle and 19 per cent with breeding sheep reported that they had increased their livestock numbers over recent years, while fewer reported a reduction. However, during the period to 2005 there is a clear switch expected in the balance between the ‘expanders’ and the ‘contractors’: twice as many farmers of breeding cattle expect to *reduce* their cattle numbers compared to those planning to increase them. The switch is even more marked for breeding sheep, strongly suggesting an overall reduction in total sheep numbers. Changes with regard to the numbers of livestock sold as finished were considered. The survey found that over recent years there has been a steady increase in the proportion of Dartmoor farms selling some finished cattle and sheep, and this trend seems likely to continue although at a slower rate. While few farmers expected to stop producing finished stock, it appears that some farmers are considering reducing the proportion of stock taken through to finishing.

26. The significance of environmental payments: the survey confirms that the vast majority of farms in the Park receive some kind of environmental payments. Over three-quarters of farms are in receipt of either the extensification premium or the HFA while two-thirds receive payments for land that they have entered into the Dartmoor ESA scheme. Far fewer farms currently gain from ESA payments in respect of common land, although it is likely that this will change over time as more of the Dartmoor commons are brought into the scheme. It was found that the proportion of farms participating in agri-environment schemes rises with increasing farm size although even the smallest category of farms has a participation rate as high as 72 per cent.

27. Non-farming business activities: overall more than two thirds of the farmers reported some sort of non-farming economic activity, with off-farm income being both the most commonly cited and the most frequently regarded as being ‘crucial’. Diversified activities that are regarded as ‘very important’ or ‘crucial’ on at least one in ten of Dartmoor farms include ‘processing and retailing’, ‘tourist accommodation’, ‘rents from properties not connected with tourism’ and ‘contracting’. Looking to the future, although the majority expect no change in the level of non-farming activity a significant proportion (25 per cent) expect to receive an increase in their income from

non-farming activities. Moreover, although smaller farms tend to have a higher dependence on external earnings than larger ones, a very significant proportion of the larger farms are also highly reliant on external income.

**28.** The employment pattern on Dartmoor farms: the survey found that principal farmers and their spouses provide two thirds the workforce on the farms in the Park, while only 15 per cent of the total labour force is provided by regular paid workers and managers. This highlights the central role of the farm family in the operation of Dartmoor's farms, and the importance – in terms of providing employment - of supplementary economic activities both on and off-farm. Regular, unpaid family workers provide a further 6 per cent. There are several other important findings:

- Approximately 10 per cent of all farmers, partners and directors, and their spouses, have remunerative work off the farm;
- A further 5 per cent are involved, often on a full-time basis, with diversified business activities on their farms;
- Some 8 per cent of the total workforce (including family members, regular and casual workers) are involved in diversified activities on the farm;
- Just over half of the total 'farm' labour force is employed on a full-time basis in agriculture, with about 48 per cent working for a greater or lesser proportion of their time in diversified activities or, indeed, off the farm.

**29.** When changes in the use of labour and contractors between 1995 and 2000 are compared it can be seen that while 10 per cent of farms increased their use of labour during this period, on 30 per cent total employment declined. Looking to the immediate future, fewer farmers expect to reduce their labour but the trend towards an increased use of contractors looks set to continue, albeit at a lower rate than in the last few years.

**30.** The postal questionnaire looked at the issues of succession and established that about half of the surveyed farms have a potential successor aged between 20 and 50 years. The average age of potential successors was twenty-four, while 54 per cent of farms reported having at least one successor. The average age of the current generation of Dartmoor farmers is 55 years.

**31.** Involvement in group or co-operative activities: overall the survey found that 42 per cent of Dartmoor farmers are involved with at least one group or co-operative activity. The most popular form of such activity is participation in one or more discussion groups, for either or both the farming and non-farming sides of their business, at 23 per cent and 9 per cent respectively. Collaborative activities which require a higher degree of commitment, however, are notably less popular: only 10 per cent are involved with a selling or marketing group, 9 per cent with labour sharing and 8 per cent with the sharing of machinery.

**32.** The role and potential of livestock markets: farmers' views of the current and potential future role of livestock markets were gathered. Livestock markets are seen as providing vital information on the price of store stock with 95% of farmer agreeing with this statement, and to a slightly lesser extent markets are valued with respect to the prices of finished stock. In addition, the majority of farmers also look on livestock

markets as serving an important social function as well as, to a lesser degree, providing a forum for discussing new agricultural developments.

**33. Farming and countryside management:** given the importance of countryside management in preserving the character of the farmed landscape of Dartmoor farmers were asked to identify the issues they regarded as barriers to the implementation of more countryside management activities. The key findings were:

- not surprisingly, given the continuing agricultural recession, farmers consider inadequate financial returns from farming to be the greatest single restriction to more and better countryside management (83 per cent);
- the (lack of) availability of appropriate grants (52 per cent);
- the (insufficient) availability of labour (46 per cent);
- the availability or cost of appropriate advice (28 per cent);
- the availability of the necessary skills (23 per cent);
- 71 per cent of farmers consider they have, or have access to, the necessary skills for countryside management;
- 62 per cent do not regard the availability or cost of appropriate advice as a barrier.

**34.** A total of nearly one in five of the postal respondents on full-time farms keep ponies. However, *most* farms anticipated no change over the coming years. 23 per cent expect to reduce their pony numbers and a further 9 per cent suggest that they will no longer keep ponies by 2005. More than three quarters of Dartmoor's farmers regard ponies as providing a positive image of the moor although 68 per cent of farmers consider that the breeding of ponies should be improved. As might be expected, farmers' opinions on whether or not subsidies should be paid for the keeping of ponies differ between farms that keep them and those that do not! Over half of the farmers who keep ponies support the idea that subsidies should be paid, compared to less than a quarter of farmers that have no ponies.

### **The state of farming on Dartmoor: specialist farms**

**35.** Of the 1,122 agricultural holdings in the National Park more than a quarter (311) are classed as either 'specialist grass and forage' or 'specialist horses'. Although these holdings may be involved in *some* agricultural activity, it is not at a level sufficient to allow classification into one of the main livestock (or crop) farm types. Many are occupied by retired, or semi-retired, farmers, while others are run as part-time activities. These holdings were included within the survey because of their commercial significance on Dartmoor.

**36.** With the exception of a small number of *commercial* equestrian enterprises, the survey found that much greater proportions of respondents on both specialist farm types are dependent on non-farming sources of income – 47 and 42 per cent respectively identified such income as 'crucial', with a further 25 and 20 per cent respectively regarding it as 'very important'. However, substantial proportions of both groups reported no other business activity.

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37. The essentially part-time nature of many of these holdings can be seen in that only a fifth are operated on a full-time basis. Few have any hired workers. There are quite marked differences with full-time farms in respect of attitudes to countryside management issues. Respondents on these specialist holdings consider themselves to be much less restricted in fulfilling their countryside management intentions, although nearly two thirds of those on 'specialist horses' holdings recognise inadequate financial returns from farming as a barrier to better countryside management. In terms of their attitudes to Dartmoor ponies, occupiers of both of these farm types are, in general, more 'pro-pony' than full-time farmers.

### **Facing the future: the telephone survey**

38. The research included structured telephone interviews with fifty full-time Dartmoor farmers who had responded in the postal survey. The interviews explored (a) the factors which have driven recent changes on the moor; (b) farmers' attitudes to collaborative activity; and (c) farmers' views of the strengths and weaknesses of their farms, and the opportunities and threats which they face.

39. Changes over the last five years: roughly, a third of the interviewees fall into each of the following categories: no change, increased activity and reduced activity. From these, the most frequently cited reasons for change are:

#### **Increased activity**

Response to fall in farm incomes (54%)  
Acquisition of additional land (52%)  
Increase in off-farm activity (39%)

#### **Reduced activity**

Contraction prior to retirement (32%)  
Response to fall in farm incomes (23%)  
Moving to environmentally friendly farming (23%)

40. Collaborative activities: respondent farmers hold quite mixed views ranging from 'essential' to 'impossible.' The most popular views on collaborative activities are:

- Allows farmer involvement in the supply chain (46 per cent);
- A good idea if agreement can be reached (31 per cent);
- Farmers are too independent (22 per cent); and
- Essential to balance the power of buyers (21 per cent).

Aside from those concluding that collaborative activities offer no attraction at all (34 per cent) their principal draw is seen to be the economic advantage they may offer (42 per cent) and the access to knowledge and experience (14 per cent).

41. Help needed in running farm business: three areas of potential additional help needed in running their businesses were explored, namely staff training needs, management needs, and access to rural development funds. The findings are as follows:

- About a quarter of the interviewees said they have staff training needs, with over half of the cases in relation to the use of computers;

- About a quarter of the interviewees said they require help with business management. Alongside use of computers, areas identified include managing diversified enterprises and marketing;
- Those who feel that they are able to access rural development funds see these mainly as relating to environmental issues or schemes;
- DEFRA is the most frequently suggested agency for assisting with rural development funds (30 per cent) closely followed by ‘not sure’ (28 per cent).

**42. State support for farming:** the view that current policy needs refining to better target support is widely held (47 per cent) along with backing for the move to area payments (21 per cent) and modulation / rural development (14 per cent). Participation in agri-environment management agreements was also explored:

- Four fifths of those interviewed are participating in agri-environment schemes;
- Nearly all believe that the schemes have helped *sustain* the environment, in particular hedges (49 per cent), field boundaries (17 per cent) and biodiversity (14 per cent);
- Sixty percent feel the schemes had *improved* the environment, principally in the same areas;
- One quarter identify some negative impact on their businesses, in particular through the loss of flexibility in production and the restriction of stocking levels.

**43. Strengths, weaknesses, opportunities and threats:** the main strengths, weakness, opportunities and threats identified by the telephone sample of Dartmoor farmers are summarised below:

<p><b>Strengths</b>            Quality livestock product (30%)            Family labour (25%)            No borrowings (20%)</p>	<p><b>Weaknesses</b>            Small farm size (23%)</p>
<p><b>Opportunities</b>            Diversification (20%)            Direct marketing (15%)</p>	<p><b>Threats</b>            More regulation/government policy (60%)            Imports / world trade (38%)            Disease (20%)            Supermarket control (18%)</p>

**44. Level and sources of income:** the telephone survey enquired about the levels (in broad terms) and sources of farmers’ incomes. Of those who answered this question:

- Over sixty percent of those who gave an answered this question reported pre-tax profits from farming of £10K or less, with the great majority of these falling into the £0-£5K band;
- Nearly half report having either off-farm income or income from non-farming activities on the farm, or both;

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- Off-farm and non-farming on-farm activities are equally prevalent at about thirty per cent of respondents but profits from off-farm activities are three times as likely to exceed £10K as those from non-farming activities.

45. Impact of the FMD crisis: although 20 per cent of the interviewees reported no ongoing FMD-related problems others are still concerned about:

- The volume of paperwork (35 per cent);
- Difficulties with the 20 day standstill (25 per cent); and
- Bio-security at markets (20 per cent).

### **Recommendations for future action**

46. Participation in the ESA scheme is very high at about two thirds of full-time farmers, which reflects well on all concerned with implementing the scheme as well as on the community of Dartmoor farmers. The research has found, moreover, that Dartmoor farmers are generally very positive about environment-friendly farming (providing they can make a reasonable living) and about the impact of the ESA on their businesses. Negotiations are currently underway to extend the take up of the ESA on the commons of Dartmoor.

*The ‘Moor Futures’ initiative should consider ways in which these findings can be used (a) to strengthen the extension of ESA take up on the commons and (b) to encourage further uptake among the third of farmers still not involved. Particular attention should be given to knowledge transfer activities such as demonstrations and farmer discussion groups.*

47. The research has provided further evidence, if any were needed, that the Dartmoor farming community is ageing at the same time as economic pressures are encouraging further reductions and ‘casualisation’ in the workforce with greater reliance on contractors. The continuing lack of involvement in labour sharing schemes and machinery rings seems hard to explain, therefore, other than in terms of a lack of appreciation of their potential role.

*The ‘Moor Futures’ initiative, therefore, should explore ways in which it could co-ordinate and develop such schemes on Dartmoor, using a pilot project backed up by good dissemination of the experience gained.*

48. The research focussed particularly on group and collaborative activity among Dartmoor farmers. While the findings show that, to date, this is not a common practice among Dartmoor farmers (only one in four respondents involved in any sort of Discussion group, for example), it is clear that there must be considerable potential for improvement. As an objective of the ‘Moor Futures’ initiative this could make a very significant difference to the adaptation to the changing economic and policy environment in which Dartmoor farmers will increasingly find themselves over the coming years, through strengthening mutual support in the farming community.

*Our recommendations cover several different aspects:*

- Co-operation needs to start with bringing farmers together. It appears that the Dartmoor Hill Farming Discussion Group is not entirely open and, in any case, it probably has a large enough membership. The possibilities for facilitating new groups should be actively pursued (e.g. through PROSPER or SWARD; or setting up a group for younger farmers).
- Such a group(s) will need the continuing support of a suitable facilitator, for which funding will be required. Ideally such a person will not be too closely associated with any formal organisation. We are aware of excellent (even pioneering) work being done by staff at the Duchy College in establishing farmers discussion groups (funded by Objective 1 and by the MDC), and by the Exeter Diocese of the Church of England. The advice of Duchy staff and the Diocesan Rural Officer should be sought.
- There is an evident need for a co-ordinated approach to the provision and uptake of training. The research found a widely recognised need for training in computing for example, and a perception that this isn't readily available, yet we understand that there is a range of potentially suitable courses available.
- There may be a potential role for developing the future range of functions at livestock markets serving the moor. Given the need to foster group activity and co-ordinate training, and markets' traditional role as a meeting place and opportunity for social contact, the possibility of improving links with training provision and of initiating group activity is worth exploring. In this context the involvement of the auctioneers KVN on Bodmin Moor is noted.

49. The possibility of Dartmoor farmers making effective applications for ERDP funds is not strong, because of a great lack of understanding about their purpose (and potential value in farming) and the application criteria and method. This may be contrasted with farmers' relative familiarity with agri-environment schemes, for example. This situation should be remedied as soon as possible.

The 'Moor Futures' initiative should be pro-active in examining the potential for greater use of the ERDP in furthering the economic development of the moor. Its most useful role needs further discussion, but one possibility is to facilitate Dartmoor's access to this funding through a 'pump-priming' approach.

50. The SWOT analysis identified a widely held perception of the high quality of Dartmoor livestock and of the potential for an increased involvement in direct marketing. Clearly, there are only so many opportunities for successful lone farmer-initiated enterprises of this kind; but, equally clearly, there is considerable potential for the development and commercial exploitation of the Dartmoor product. An initiative which is researching the market potential is already underway, and there are other similar initiatives elsewhere in the Southwest.

In conjunction with existing regional initiatives, 'Moor Futures' should encourage, if not actively make possible, the co-ordination of a Dartmoor meat marketing initiative with the aim of identifying the best way forward in this very competitive market.

**51.** There are a number of the **recommendations made by the Task Force for the Hills** which this research has identified as of continuing relevance for Dartmoor:

- Number 1 (short term) – explore the local impact of Hill Farm Allowance payments in terms of winners and losers;
- Number 7 (short term) – encourage the uptake of the ESA scheme as the best way to enhance both farming and the environment;
- Number 10 (medium/longer term) – reward for the production of environmental outputs;
- Number 13 (short term) – investigate the local application of ERDP funds for farming infrastructure;
- Number 18 (short/medium term) – support business and environmental appraisal funded by the FBAS;
- Number 20 (short term) – appraisal (under FBAS) of farm business viability and its interface with farm diversification;
- Number 21 (short term) – re-examine the scope for funding public sector involvement under the ERDP;
- Number 26 (medium term) – delegated grant funds to a ‘first stop shop’ advisory service;
- Number 27 (short/medium term) – encourage the SWRDA to take on (as a matter of urgency) the regeneration of the Dartmoor economy;
- Number 33 (short/medium term) – the broader development of auction markets;
- Number 34 (short/medium term) – assist in developing more collaboration between farmers!

*As part of the ‘Moor Futures’ initiative each of these recommendations should be addressed in the context of the current state of farming on Dartmoor. Through both pro-active and reactive input into policy development, through lobbying, and in the facilitation of specific direct action, ‘Moor Futures’ has an important role in the pursuit of all the foregoing recommendations arising from this research.*

Centre for Rural Research  
University of Exeter  
9 September 2002



# CHAPTER 1

## INTRODUCTION

### **The background to the study**

Farming on Dartmoor currently faces a number of significant challenges from a wide variety of sources. It has long been recognised that the maintenance of a viable farming industry in upland areas such as Dartmoor requires specific policy support. Dartmoor hill farming faces undisputed natural handicaps because of factors such as relief, climate and, for much of the moor, remoteness. In addition to the commercial commodities produced by Dartmoor farmers for established markets, principally store (and some finished) livestock, hill farming systems have a key role in maintaining the physical, biological and social and recreational environment of the moor. These are regarded as public goods or services and, in the absence of natural ‘markets’ for such outputs, policy development is increasingly directed towards providing the necessary economic incentives to ensure these public goods are provided.

Against a background of changing market requirements and structures in the food sector, declining profitability in agriculture, international pressures to reform farm support policy and developing public perceptions of the role of farming (which is increasingly seen as providing environmental ‘goods’ in addition to high quality food) hill farming faces a period of considerable uncertainty and change. The recent FMD epidemic has caused further damage, of course, to struggling farm businesses.

In response to these deep-rooted problems afflicting hill farming, the Dartmoor National Park Authority announced in December 2000 proposals to facilitate a package of aid and assistance to the hill farmers, and the wider rural economy, of Dartmoor. The ‘Moor Futures’ initiative aims to “...stimulate ideas, practical help, co-operative working and enterprise support, thus generating a brighter future for working life and for the environment of Dartmoor”. As a first stage the Authority felt the need to undertake research to provide authoritative information on the current position of hill farming on Dartmoor, linked to the perceptions and aspirations of local farmers. In addition it was important to establish what may be expected of farmer and business-led groupings in taking advantage of new resources available under various rural development programmes such as Objective 2, the England Rural Development Plan and Leader Plus, and from a number of agency and partnership sources.

### **The aims and objectives of the research**

The research project was designed to meet both the Authority’s immediate needs for better information about Dartmoor’s farming economy, and also contribute to an informed understanding of the industry’s possible development over time. Thus, the research had two specific aims:

- (c) to establish a sound information base on Dartmoor’s farming industry in order to inform the Authority of its current structural and socio-economic position; and

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- (d) to explore the possibilities for group and co-operative approaches to a range of development opportunities.

In pursuing these aims the research project focussed on a number of specific objectives, which were defined at the outset of the study:

- Identify the key trends shaping Dartmoor hill farming over recent years and, where possible, the principal drivers of those trends;
- Provide a sound statistical database relating to the current state of farm businesses on Dartmoor;
- Explore farmers' current involvement in, and perceptions of, co-operative marketing initiatives relevant to the area;
- Establish a clear understanding of a range of socio-economic indicators related to the future development possibilities of Dartmoor hill farming;
- Assess the need for external agency assistance to support and/or develop new approaches to business development and the economic regeneration of the sector;
- Advise on the most promising areas for Authority intervention - under 'Moor Futures', for example – in consultation with farmers and the Authority.

The research undertaken augments information already available from the annual Agricultural Census (DEFRA), the Farm Business Survey (University of Exeter) and other recent studies to provide a definitive review of the current state of hill farming on Dartmoor. It includes analyses of recent trends in the agriculture of Dartmoor and identifies likely developments directly linked with hill farming on the moor. In particular, the research examines in depth the changing policy framework and the principal causes of those changes, considers the perceived impact of changes in policy instruments at farm-level, and reviews the extent and nature of structural change at farm business level over recent years.

The primary role of the research on which this report is based, therefore, has been to establish a comprehensive baseline of information relating to the state of farming on Dartmoor in the immediate aftermath of the FMD epidemic of 2002. This comprehensive review of statistical and research sources, policy developments and directions and, importantly, a sounding of the views and aspirations of those who make their livings in farming the moor, provides just such a baseline on which local and regional policy initiatives can be built.

## **Research methodology**

The research comprised four distinct components:

- 1. A postal survey of 500 Dartmoor hill farmers, stratified by farm size to ensure an adequate representation of all full-time and part-time farmers on the moor;*

This survey will use a fairly simple and straightforward questionnaire, piloted to ensure clarity and precision, which addressed issues such as: the nature of farm

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business changes over recent years; the current and possible future extent of farm business diversification; the level of farmers' involvement in a range of group activities; the age range of farmers and aspects of anticipated succession; the structure of the farm sector and farming systems and the longer term effects of FMD in the wake of last year's epidemic.

2. *A telephone survey, based on a sub-sample of 50 postal respondents, designed to explore key issues in greater depth than would be possible in a postal questionnaire;*

This survey involved 50 farmers who had responded in the postal survey and focused on several key groups. It was designed to address issues such as: farmers' attitudes to conservation and environmental problems; some aspects of the dynamic nature of farm business development and fragmentation; perceived shortcomings in existing policy instruments; farmers' involvement in and attitudes to collaborative initiatives; and a broad assessment of financial performance. A number of other key issues identified under the postal survey were also explored.

3. *A desk review of all relevant information sources relating to the hill farming sector on Dartmoor, including recent studies and statistical sources;*

This part of the study drew together and, where appropriate, critiqued, all key studies and information sources related to hill farming on Dartmoor. This review comprised also a wide range of other research studies of issues related to hill farming in general, including a number of major national studies. A distinct area of the desk research focussed on the broader policy context, including the 'Curry report', because of the key importance of new directions in national policy in the development of local (Dartmoor) initiatives.

4. *Consultation with a range of representatives of Dartmoor hill farmers and other key stakeholders including, for example, English Nature and the Countryside Agency.*

It was clearly important to take into account, to the extent that this was practical, a wide range of views and aspirations relating to the future development of hill farming on Dartmoor. It was considered important to seek the views of key stakeholders in order to aid the development of as consensual a programme for 'Moor Futures' as possible. To that end an Advisory Group, comprising both farmers and farmers' organisations, was set up which provided guidance throughout the project. The desk research also reviewed the policies of other stakeholders, such as the bodies with formal responsibility for broad aspects of the natural and social environment. In order to make best use of the available resources the project did not launch a completely independent round of consultations, the views of non-farming stakeholders being gathered mainly through secondary sources.

### **Survey methodology: the literature review**

The purpose of this part of the research activity was to contribute to one of the two primary functions of the project ('establish a sound information base on Dartmoor's Centre for Rural Research, University of Exeter.

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farming industry’) by reviewing the results and recommendations of a wide range of recent studies of UK hill farming in general and the Dartmoor hill farming sector in particular. The method involved identifying appropriate studies, papers and reports of potential relevance, and locating and accessing the document. The main findings of this part of the research have been summarised and underpin the discussion of the policy context of hill farming in Chapter 2.

### **Survey methodology: the postal survey**

#### *Description of the sample*

According to the June 2000 Agricultural Census, there were 1,122 agricultural holdings within the Dartmoor National Park. However, although it is known that the number of farm businesses is rather less than this, since businesses sometimes comprise more than one holding, there is no definitive information available from the Census about the actual number of businesses.

The postal sample was drawn from DEFRA’s Census database which provided, in addition to the information on names and addresses, the standard classification of holdings by farm type and size<sup>1</sup>: (pre-determined farm types, which are related to the dominant activity on each holding, and business size, as full-time or part-time holdings). These attributes were used to stratify the Postal Survey sample, in order to optimise its overall size. Table 1.1 compares the National Park population as given by the June 2000 Agricultural Census compared to the structure of the sample used for the Postal Survey.

The highlighted figures in Table 1.1 are the ‘cells’ used in stratifying the sample: holdings classified as ‘specialist grass and forage’ and ‘specialist horses’ and then full-time and part-time holdings of all other classifications.

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<sup>1</sup> Using DEFRA’s UK farm classification system (revised 1994), which uses Standard Gross Margins (SGM) per hectare for crops and per head for livestock to estimate both total business size and the predominant farming system (details on DEFRA’s website: <http://www.defra.gov.uk/esg/default.htm>).  
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**Table 1.1 The relationship of the postal survey sample with the overall number of holdings in Dartmoor National Park, by size and type**

	Farm types			All farm types
	Main types	Specialist grass	Specialist horses	
National Park population				
Full-time	425	0	7	432
Part-time	386	175	129	690
All	811	175	136	1122
Postal survey sample				
Full-time	343	0	7	350
Part-time	27	55	53	135
All	370	55	60	485
Sampling percentages				
Full-time	81%	n/a	100%	81%
Part-time	7%	31%	41%	20%
All	46%	31%	44%	43%

Table 1.2 shows the breakdown of all the holdings in the sample, other than grass keep and horse-based systems. As would be expected, the analysis illustrates that cattle and sheep farming systems dominate both the full and part-time holdings, accounting for 82% and 78% respectively.

**Table 1.2 Analysis of farm types in the sample, full-time and part-time holdings, excluding ‘grass keep’ and ‘horse’ systems**

	Full-time		Part-time	
	Number in sample	% of sample	Number in sample	% of sample
Cereals	7	2		
Dairy (LFA)	17	5		
Dairy (Lowland)	18	5		
Specialist sheep (SDA)	24	7	4	15
Specialist beef (SDA)	86	25	7	26
Mixed cattle and sheep (SDA)	92	27	3	11
Cattle and sheep (DA)	8	2	1	4
Cattle and sheep (lowland)	71	21	6	22
Cropping cattle and sheep	11	3		
Cropping and mixed livestock	2	1	1	4
Mixed livestock	6	2		
Specialist goats	1	0		
Non-classifiable holdings			5	19
	343	100	27	100

Focusing on the cattle and sheep farm types, Table 1.3 compares the full-time and the part-time status of holdings. Although part-time cattle and sheep farms are by no means insignificant, it is clear from Table 1.3 that their importance is minor as compared to their full-time counterparts.

**Table 1.3 Full-time and part-time cattle and sheep holdings compared**

	Full-time	Part-time
Average area farmed (Ha)	99	19
Average number of cattle	123	11
Average number of sheep	653	81
Average output (ESUs)	37	3

#### *The postal survey questionnaire*

The overall structure and scope of the postal questionnaire was discussed by the project Advisory Group, and piloted using a small number of farmers on the moor known to the CRR. As a result some changes were made to ensure the questionnaire was as clear and unambiguous as possible. A copy of the final questionnaire used is included in Appendix 1.

### *Response rate of the postal survey*

The requested sample was 500 Dartmoor holdings, randomly selected from DEFRA's census database to ensure statistical validity; in the event some 485 names and addresses were received. Examining the postal survey sample revealed that some holdings were being farmed with other holdings in the sample, including six instances of full-time holdings being associated with other full-time holdings and five instances of 'grass keep' holdings being associated with full-time holdings. Therefore, to account for these multiple holdings and avoid troubling the farers concerned unnecessarily, the number of questionnaires sent was reduced by eleven giving a final (posted) sample of 474.

**Table 1.4 The postal survey response rate, by farm type and size**

	Main types		Specialist grass	Specialist horses	All farm types
	Full-time	Part-time			
Population	425	386	175	136	1122
Sample	343	27	55	60	485
less multiples	-6		-5		-11
Sent out	337	27	50	60	474
Total response	206	15	32	41	294
% total response	61%	56%	64%	68%	62% <sup>2</sup>
Incomplete questionnaires	-5	-5	-15	-13	-38
Net response	201	10	17	28	256
% usable response	60%	37%	34%	47%	54%

Table 1.4 gives the overall response rates in terms of returned and usable questionnaires. Of the 294 returned, thirty-eight (13 per cent) had not been fully completed. Of these, twenty-seven were from holdings that were no longer being farmed by the person to whom the form had been sent and the remaining eleven respondents had chosen not to complete the form, with most indicating they felt that information about their holdings was not relevant to a survey regarding the state of *farming* because they were not engaged in any agricultural activity. It should be noted that all but one of these came from the horse or grass farm types. Deducting these incomplete questionnaires reduced the usable sample to 256, 54 per cent of the mailed sample.

Initial analysis of the response showed that five of the full-time (and one of the part-time farms) were no longer engaged in any agricultural activity. Since the analysis concentrates on full-time holdings, the analyses for this category are based on the reduced sample of 196 rather than 201, all of whom are actively engaged in

<sup>2</sup> A further six questionnaires were returned after the analysis was under way, taking the total response to 63%.

agricultural activities. It should be noted that none of the analyses based on the questionnaire responses are weighted in any way.

The combination of careful design and piloting of the postal survey, with strong support from farmers’ organisations, the Dartmoor national park Authority and the Advisory Group, produced a good response. The results of the postal survey, therefore, should be regarded as a reliable indication of the views of Dartmoor’s farmers and will provide a sound basis for policy development for some time to come.

### **Survey methodology: the telephone interview survey**

#### *Structure of the sample*

The telephone interview sample was drawn from the 196 full-time holdings noted above. The sample was stratified to allow further investigation of those farmers planning to start or increase their involvement in group activities. However, to avoid these cases having an undue influence, the interview survey results were weighted to reflect their importance within the overall postal response ‘population’, as shown in Table 1.5.

**Table 1.5 The postal and telephone interview samples: weighting fractions**

	Planning to start or increase group activities	Others	Total
Postal responses	19	177	196
Interview sample	9	41	50
Weighting	2.11	4.32	

The telephone interview survey provided a good opportunity to discuss and record farmers’ views of certain key aspects of interest in this research project, particularly with regard to attitudes to collaboration and business development. Although these responses were necessarily collected from a much smaller group than the postal survey, it is important that users of this report have confidence in the findings, and a comparison of the two samples was undertaken.

#### *Characteristics of the postal and telephone interview samples compared*

The comparisons between the basic characteristics of the telephone interviewees and those of the postal respondents for all full-time farms are given in Table 1.6. In all important respects the two samples are reasonably closely matched and it is considered, therefore, that there is no indication of any undue sample bias being introduced at the telephone interview stage. Consequently, and to the extent that the postal survey itself was representative of the total population of Dartmoor farmers, it may be expected that the information gathered in the telephone interviews is a fair reflection of the current views of full-time farms in the Dartmoor National Park.



**Table 1.6 Characteristics of the postal and telephone interview samples**

	Postal response <sup>1</sup>	Interviewees <sup>2</sup>
<i>Farm type</i>		
Cereals	2%	0%
Dairy (LFA)	5%	4%
Dairy (Lowland)	6%	5%
Specialist sheep (SDA)	6%	4%
Specialist beef (SDA)	28%	33%
Mixed cattle and sheep (SDA)	24%	19%
Cattle and sheep (DA)	3%	2%
Cattle and sheep (lowland)	22%	30%
Cropping cattle and sheep	3%	2%
Cropping and mixed livestock	1%	0%
Mixed livestock	2%	0%
<i>Tenure</i>		
Wholly owned	45%	36%
Mainly owned	28%	31%
Mainly tenanted	14%	12%
Wholly tenanted	13%	21%
<i>Farm size</i>		
<40 ha	24%	26%
40 to <80 ha	36%	40%
80 to <120 ha	14%	7%
120 to <250 ha	15%	19%
250 ha or more	11%	9%
Average area	124 ha	108 ha

<sup>1</sup> As per cent of usable response; percentages individually calculated and may not total to 100 due to rounding.

<sup>2</sup> As per cent of interviewed sample; percentages individually calculated and may not total to 100 due to rounding.

## Structure of the report

Aside from this introductory chapter, the report consists of five major chapters covering the current policy context of hill farming, aspects of farming change on Dartmoor, two chapters examining farming on Dartmoor today and a chapter which focuses on the prospective changes in Dartmoor's farming over the next few years. The final chapter sets out the detailed conclusions and a number of recommendations for future discussion and, hopefully, action. In addition, there is a substantial statistical appendix which presents more detailed findings for future reference.

A report such as this always needs to satisfy a number of quite distinct, and not necessarily mutually compatible, purposes. Clearly it has to make available the detailed work undertaken throughout the project period, not only to underpin any conclusions and recommendations presented in the report but also to provide the results for future reference by policy makers, researchers etc. However, such a report will also tend to be longer, sometimes considerably so, than most users require. Consequently the report is structured with a reasonably detailed executive summary at the beginning, which provides cross-references to the main body of the report to aid accessibility. This extended summary is designed to be publishable in a separate 'stand alone' format so that the principal findings of the research can be made as widely available as possible.

## CHAPTER 2

### THE POLICY CONTEXT

#### Introduction

It is widely acknowledged (e.g. Hills Task Force 2001; Winter et al 1998) that hill farming faces serious economic, social and environmental problems. The uplands are characterised by very poor soil fertility, low productivity, a harsh climate, difficult terrain and remoteness. These handicaps have long been recognised through the provision of agricultural support in the form of headage payments for breeding livestock throughout those areas designated as Less Favoured Areas (LFAs), which cover 2.2 million hectares of England, approximately 1 per cent of English agricultural land.

Between 1975 and 2000 subsidy payments were made through the Hill Livestock Compensatory Allowances scheme. Initially intended to be social in nature, these payments have caused environmental concern as they were seen to encourage intensification of management practices, thereby reducing the environmental quality of upland areas. The CAP reforms of 1999 introduced a new Hill Farm Allowance scheme to replace the headage-based HLCAs with payments now being made on an area basis.

The uplands of England are recognised as being of high environmental, biodiversity, amenity, archaeological and cultural heritage and landscape value and as such tend to be covered by designations such as national parks, SSSIs and AONBs. As the Hills Task Force (HTF, 2001) declared, they are also priority areas for agri-environment schemes such as Environmentally Sensitive Areas (ESA) designations and the newer Countryside Stewardship Scheme (CSS). All these qualities serve to reinforce the public perception of the hills and uplands as a special place (Bullen 1998).

The policy focus in the uplands, therefore, centres around trying to ensure appropriate policy mechanisms to achieve both a financially viable farming industry alongside protecting, maintaining and enhancing the physical, biological and social environment. As farming incomes have declined in recent years so the issue of how to manage and enhance the uplands as a 'public good' has become more pronounced and challenging in the policy debate. Without any shadow of doubt, the English uplands are multifunctional.

Dartmoor is no exception to this and its farm economy provides not only income for farmers and traditional food commodities but a wide range of other goods and services for society as a whole (Cahill 2001, Pretty et al 2001). These include, inter alia:

- agricultural and other employment;
- food security;
- contributions to the local economy and to the social fabric of rural communities;
- the aesthetic value of the built environment and landscape;
- recreation and amenity;

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- wildlife and biodiversity;
- water accumulation and supply;
- nutrient recycling and fixation;
- soil formation;
- storm protection and flood control;
- carbon sequestration by trees and soils.

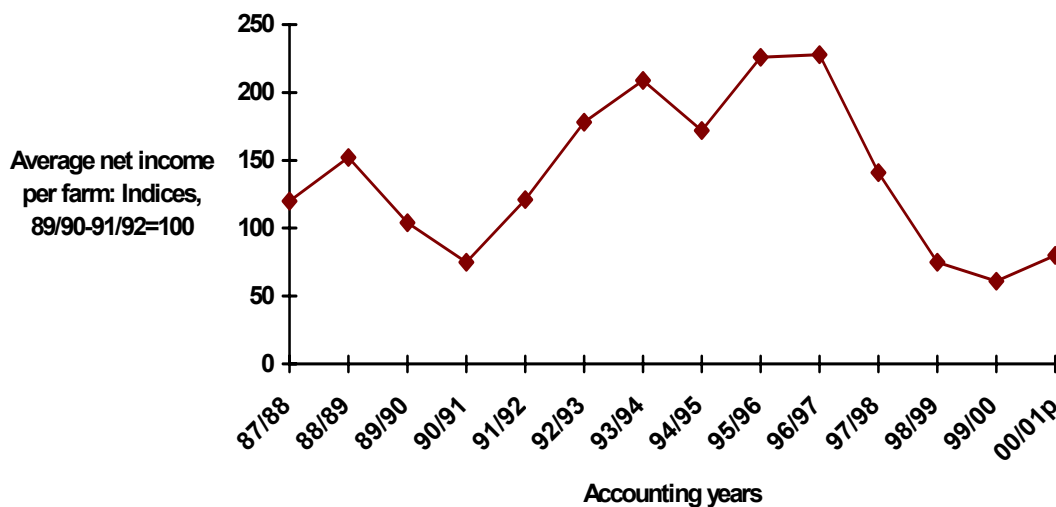
## Key issues in the uplands

### *Farmers and farm incomes*

Farm incomes are extremely low in upland areas. Upland farming also suffers from a declining workforce with few new entrants. In an attempt to boost farm incomes farmers have tended to increase flock size to attract larger subsidies through the Sheep Annual Premium Scheme (SAPS) and HLCA payments. After the introduction of the European Community's sheepmeat regime in 1980 there was a sharp increase in sheep numbers in the UK – 40 per cent in England alone (Egdell et al, 1993). Thus when ewe quotas were introduced following the MacSharry reform of the Common Agricultural Policy (CAP) in 1992, though they helped to stabilise sheep numbers, they did so at historically high and, arguably, unsustainable numbers. It should be noted that this was not the same story uniformly across Europe, where countries such as France, Hungary and Poland suffered from falling flock sizes.

Increased sheep numbers did not provide for sufficient returns to maintain incomes in the hills. The late 1990s witnessed a collapse in incomes for LFA cattle and sheep farms in England, with average incomes between 1998 and 2001 lower than those for any other year since 1977 (HTF, 2001) as illustrated in Figure 2.1.

**Figure 2.1 Cattle and sheep (LFA): Net farm income in England, Current prices**



Hill farms are dependent for their viability upon direct subsidies (Drew Associates and Exeter University, 1997), particularly livestock subsidies, HFA payments and, increasingly, agri-environment scheme payments (HTF 2001). Devon's Agricultural Strategy (DCC, 1999) shows that for the LFA cattle and sheep sector (the third largest sector in the county and badly affected by BSE and more recently FMD) subsidies make up approximately 50% of incomes.

The threat to farm incomes has wider social implications, of course. The cultural and social significance of farmers and the role they play within rural communities is increasingly recognised as an important part of the fabric of rural areas.

Increasingly, of course, farmers are turning to diversified activities and other sources of external income. Tourism has been well established in LFAs for many years and in the early 1980s it was estimated that 20 per cent of LFA farms in England and Wales were involved in tourism in some sense (Davies, 1983, University of Exeter, 1981). The scale of tourist activity on farms appeared to be small, though, with involvement predominantly through the provision of holiday accommodation.

In Devon, many of the farms on Dartmoor have already diversified. Planning restrictions are perceived by some to limit opportunities for change and/or growth of farm businesses (DCC, 1999).

### *Habitat loss*

The increase in average flock sizes encouraged more intensive use of moorland and unimproved pastures, and this overgrazing has led to the degradation of semi-natural habitats and a loss of biodiversity in the uplands (Hester, 1996, Hills Task Force, 2001). Although empirical evidence for this appears to be limited and fragmentary, experiments in Wales and elsewhere have established a clear link between heavy grazing and heather decline (Hester, 1996). The primary cause of overgrazing is high stocking levels, but the timing of grazing, the nature of supplementary feeding and the lack of shepherding are also important factors. English Nature has assessed that some 70 per cent of upland SSSIs are in an unfavourable condition due largely to overgrazing, associated in part with the decline in traditional shepherding which has largely become uneconomic. Reduced shepherding has also led to undergrazing in some areas, again with adverse consequences for the semi-natural environment.

The upland heathlands of Dartmoor are a regional target habitat of the South West Biodiversity Action Plan and one of the regions most value landscapes (English Nature and Dartmoor National Park Authority, 2001; Dartmoor National Park Authority, 2001). They support a range of species of plants and animals characteristic of both upland and lowland areas. It is estimated that Dartmoor has 11,600 ha of upland heath, 12,000 ha of blanket bog and 5,300 ha of acid grassland accounting for 63% of the total area of upland heathland in the South West (Cordrey, 1997). It is further estimated, however, that overgrazing has created about 5,300 ha of grass moor and 4,900 ha of bracken (TWTs, 1996).

One of the ten 'headline results' of the Countryside Survey 2000 concerned the fall by 10 per cent of the area of semi-natural acid grasslands in the UK between 1990 and Centre for Rural Research, University of Exeter.

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1998 and the evidence of an increase in nutrient levels or eutrophication in dwarf shrub heath and bog, suggested by an increase of plant species more typical of lowland grasslands. Most of the loss of acid grasslands was concentrated in England and Wales, especially in the uplands. Although some of the loss can be attributed more positively to gains in bog and dwarf shrub heath habitats, the majority of the losses were to improved grassland. This is a cause for concern since it goes against the BAP objectives set for this Broad Habitat (DETR, 2000).

While the area of bracken had shown a significant decline between 1984 and 1990, this trend seems to have either slowed or be in reverse, especially in the uplands. Its expansion seems to have been at the expense of Acid Grassland, Dwarf Shrub Heath and Bog and this is highlighted as inconsistent with current BAP objectives (DETR, 2000). In addition, the ecological quality of the Dwarf Shrub Heath habitat has declined over the 1990-1998 period, with changes in vegetation implying increased fertility levels. The report, however, was unable to establish to what extent grazing management and deposition of atmospheric nitrogen are the driving forces of these changes (DETR, 2000).

Despite much of Dartmoor being designated an Environmentally Sensitive Area and SSSIs covering most of the upland heathland (Cordrey, 1997), it appears these measures have not been very successful at preventing widespread overgrazing. 1999 figures show uptake of Dartmoor ESA covering only 25% of eligible land, attributed to the difficulty of securing common land under the scheme. Current local initiatives to facilitate entry of common land into ESA agreements may well serve to solve this problem to a significant extent.

These issues are highlighted in the South West Biodiversity Action Plan which reports the primary causes of habitat loss on Dartmoor as being:

- Overgrazing – causing upland heath to be replaced by grass moorland;
- Unsympathetic management – i.e. insensitive burning practices
- Bracken invasion
- Heather beetle damage
- Human disturbance, i.e. soil erosion
- Difficulty of establishing ESA agreements
- Impact of livestock subsidies
- Atmospheric pollution

Despite these records of environmental losses in the uplands, a regional evaluation study of the HLCA scheme in England (1998) showed that farmers in general felt that they were doing ‘a reasonable job’ contributing to countryside conservation in the hills (Drew Associates and Exeter University 1997, Midmore et al, 1998). In England, this seemed to relate particularly to preserving traditional field boundaries, maintaining traditional buildings and retaining natural vegetation. Environmental conditions attached to HLCA payments did not seem to have had an impact upon many farmers in England and over 75 per cent felt that HLCA’s were ‘either effective, or posed no difficulties at all in addressing landscape, habitat or conservation problems’, suggesting that the majority of HLCA claimants may have been operating within prescribed limits by coincidence rather than by design (Midmore, 1998). In

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addition, 21 per cent of farmers questioned had not heard of MAFF's Code of Good Upland Management at all, implying that significant parts of the LFAs were being farmed without explicit reference to good practice (ibid).

When alternatives to the HLCA scheme were explored in a survey in 1998, one in three respondents in England favoured payments linked to environmental outcomes (with a higher proportion amongst those already in agri-environment schemes) and the same proportion were in favour of area payments. It was the smaller farms that showed the strongest support for greening payments (40 per cent) compared with 25 per cent of larger farms (Midmore, 1998).

For many commentators, the key to conserving the landscape and biodiversity of the uplands has been fundamental reform of EU livestock policies. Since the early 1990s calls have been made (see, for example, NCC 1990) for reform of the HLCA system from a headage to an area based system and its integration with other land management schemes in the uplands (such as ESAs) as well as the introduction of a degree of regional flexibility within the regimes so that appropriate grazing levels across Europe can be determined (TWTs, 1996; LUPG, 1997)

### *Current policy debates*

Rural policy debates have shifted in recent years from operating 'within organisational and departmental silos' (PIU, 2000) to attempting to examine issues concerning rural areas in a more integrated and holistic way. This is particularly relevant for the uplands context where economic, social and environmental issues are so closely intertwined.

Current debates and options for the future sustainability of upland areas are set within the context of the Government's vision for rural areas, as set out in the Rural White Paper (RWP) in December 2000. In order to achieve this living, working, protected and vibrant countryside the Government has set itself a number of Rural Policy Objectives that aim to '*sustain and enhance the distinctive environment, economy and social fabric of the English countryside for the benefit of all*' (p6). These are very much in keeping with the findings of the PIU's *Rural Economies* report (1999) which argued that '*there was a mismatch between the reality of the English countryside today and the inherited policy framework (rooted in the realities and policy instruments of the late 1940s)*'. It advised that a new framework for rural areas was needed whose aim should be '*to encourage and support the creation of productive, sustainable and inclusive rural economies*' (PIU, 1999).

In particular the RWP places increasing emphasis on:

- the importance of community strength - '*prosperous, sustainable and inclusive rural communities*';
- local partnerships;
- community strategies;
- increased co-operative working between farmers and others in the food chain;
- putting environmental and social objectives closer to the heart of farming policy;

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- land based businesses and local products as key to continued rural prosperity;
- *'thriving economies in all rural areas which provide good quality employment opportunities and exploit the versatility, entrepreneurial tradition, and, increasingly local green business potential'* (p73);

One of the measures introduced as a result of the 1999 CAP reform under Agenda 2000, the England Rural Development Plan (ERDP), is intended to play a role in helping to achieve the objectives of the Rural White Paper and meet the needs of upland areas. Other new schemes were introduced (i.e. the Rural Enterprise Scheme, the Vocational Training Scheme and the Marketing and Processing Grant Scheme) and budgets were significantly increased for agri-environment schemes. Perhaps the most fundamental change for the uplands, however, was the redefinition of the objectives for the uplands at a European level and the changes to upland payments from a headage to an area basis.

The Rural Development Regulation redefined the objectives of LFA support to include a clearer statement of the importance of maintaining the countryside and protecting the environment. The objectives are stated as:

- To ensure continued land use and thereby contribute to the maintenance of a viable rural community;
- To maintain countryside; and
- To maintain and promote sustainable farming systems which, in particular, take account of environmental protection requirements.

The HLCAs were replaced by a new Hill Farm Allowance (HFA) scheme, paying farmers on an area rather than a headage basis. These payments are being phased in between 2000 and 2006. Concerns have been voiced about the redistribution of payments and the impact this will have on land managers, particularly the smaller farms in the west of the country. There is also particular concern about the declining budget (by 2006 the total level of subsidy will have reduced by 38.6 per cent compared with 2000, but to a level comparable with that paid in the mid 1990s), inaccuracies in defining the moorland line, the low level of the moorland payment and the area at which payments are to be capped (Hill Task Force. 2001).

Results of the recent assessment by DEFRA on the impact of the switch from HLCA to HFA on hill farms, however, indicate that the fears concerning the redistribution of payments do not seem to have been borne out in practice. The research seems to indicate that the change of payments from a headage to an area basis has benefited smaller more extensively run farms, with the main net losers appearing to be the larger farms. All farms with stocking densities of less than 0.9 LU/ha appear to have gained, while heavily stocked farms have lost payments. (DEFRA, 2002).

Under the HLCA system 70 per cent of the subsidy was paid to only 25 per cent of farms submitting claims, whereas under the new HFA scheme 70 per cent of subsidy is paid to 30 per cent of submitted claims. In the first year of operation 89 per cent of farms submitting claims were eligible for the 20 per cent environmental enhancement payment (ibid).



Opportunities for aiding the survival of farmers and the landscape of upland areas in the South West, both at county (DCC, 1999) and regional level centre around a number of common themes. These include:

- continuation and expansion of environmental management payments to enhance the quality of farmland landscapes and habitats;
- promotion of high quality local food and drink including organics;
- promotion of training to raise the skills base of the food and farming workforce;
- reconnecting farmers and food producers with local communities;
- support for diversification, where appropriate (such as tourism, farmers markets etc);
- looking at ways of making the planning system meet the dual aims of protecting the landscape while allowing for sustainable regeneration of rural areas.

The importance of regional partnerships is emphasised by the Task Force for the Hills. They call for greater involvement of the RDAs in regenerating the upland economy and call for them to ‘include in their annual reports a statement on how their funds have helped to address the problems of the upland economy’.

### *Environmental management*

The Government is currently consulting on the future of agri-environment schemes. There seems to be a good deal of consensus about the general direction they should take from both farming and environmental organisations. Key messages that come through include:

- a basic broad and shallow scheme needs to be introduced which is applicable to all farmers nationally;
- a combined ESA/CS scheme to target more onerous environmental management;
- the need to strengthen the links between AESs and other rural development initiatives;
- provision of integrated business and environmental advice;

The Task Force for the Hills recommends the introduction of a Hill Environmental Land Management (HELM) payment available to all farmers within the LFA which would be based on compliance with specific environmental criteria. Their vision is for ‘a four tier environmental payment system in the LFA, with HELM providing the basic management payment above Good Farming Practice: a new, more appealing basic stewardship scheme providing widely available agri-environmental and rural development payments; ESA/CSS as a higher tier for what is special either locally or nationally; and a top tier of special payments, like English Nature’s Wildlife Enhancement Scheme, for the most special sites and species.

It is generally agreed that whatever is put in place needs to be delivered through a single delivery point (WCL, 2001; HTF 2001). This would enable integration with other rural development support available. WCL (2001) emphasise the importance of strengthening these rural development links as ‘support for environmental

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management has a part to play in helping farmers build a more diverse and more sustainable future for their businesses.’ In addition, the need to integrate business and environmental advice in the hills has been recognised as essential for the long-term sustainability of hill farms (HTF, WCL). The HTF state that ‘the environment is part of the asset base and output of the farm, which can generate tourism revenue for the area and agri-environment payments for the farmer’. WCL (2001) also recognise this need, although not solely for upland schemes, claiming that ‘it should increasingly be ‘the norm’ for applicants to join a [agri-environment] scheme as part of an integrated business and environment plan for their holding, and for progress within the scheme to be reviewed in both environmental and economic terms alongside regular business reviews.’ WCL argues that this would encourage land managers to start to see their agreements as a legitimate and core part of their business operations. Examples of integrated advice already exist – for example the MAFF upland experiments in Bodmin and Bowland, National Park Initiatives in the North York Moors and Peak District and the Countryside Agency’s Land Management Initiatives.

This integration is not yet apparent as current concerns about the inability of the ERDP and revised Structural Funds to fund facilitation and advisory work indicate. As the Hill Task Force stated ‘MAFF has introduced a Farm Business Advisory Service (FBAS) operated by the DTI but it does not have a culture of environmental sensitivity or environmental skills’. Current concerns surround the lack of integration of environmental and business advice and the limited depth of analysis possible due to the short timescale given for the business surveys all of which fail to deal with the complexities of the farm business.

### *Quality local food and drink*

South West Quality Meat uses the traditional, extensive grass based rearing methods as a marketing tool to give livestock products from Devon and Cornwall a competitive edge over other parts of the country. While production methods may give the region a competitive advantage, other aspects, including the cost of inputs, distance to markets and processing centres as well as the scale of production and ability to adapt to new techniques put the region at a disadvantage.

The development of the organic livestock sector in upland areas is something that has been proposed by a number of commentators. Research into organic beef production in Wales, but applicable to hill farms generally, (Lampkin, 1998) suggested that increased awareness is needed of the opportunities and practicalities of converting to organic in order to boost the numbers of organic holdings and thereby increase the scale of production. This could be achieved through open days, technical seminars and increased exposure at shows, exhibitions, conferences. Markets for organic produce also needed developing – suggestions included developing the market for in-conversion beef or exploring the possibility of reducing the length of the conversion period as well as developing the store trade from dairy sector calves. He also felt that there needed to be more co-ordination between both producers and marketing initiatives already in existence. Improved consumer returns could be obtained by working towards better finishing weights (through breeding or feed use), contract rearing with protected pricing and/or co-operative selling through a producer group.

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## CHAPTER 3

### FARMING CHANGE ON DARTMOOR

#### **Half a century of farming change**

Dartmoor comprises an extensive, rolling upland on an exposed granite mass which rises to some 400 metres. In general terms there is little tree cover on the moor, and only on its eastern edge is good agricultural land found. Although in terms of intensive agriculture, therefore, Dartmoor has little to offer, farming on the moor has an extremely long history and its consequent historical heritage is internationally recognised. The moor is famous for the extensive features of Bronze Age agriculture, with the remains of field systems and land boundaries testifying to its former use. Dartmoor is characterised by a diversity of vegetation types, ranging from the semi-natural vegetation of the open moorland plateaux to the enclosed farmland comprising mainly pastures of both permanent and improved grassland.

Perhaps the most significant influence on the farming systems on Dartmoor has been, and will continue to be, its designation as an Environmentally Sensitive Area (ESA) in 1994. This scheme was introduced by MAFF in 1987 to encourage farmers to farm in ways which help to safeguard the natural environment and historical features of the landscape. Features of the scheme, and its policy background, are described elsewhere in this report but the point to note here is that its influence over time on the moor's farming systems will ensure that farming change will continue over coming years. The scheme is voluntary, with farmers and landowners receiving annual payments for entering into ten-year agreements which specify the ways in which they will manage their land. There are different tiers of entry, the higher the tier the more demanding the farming prescriptions. Other tiers are intended to encourage the recreation of permanent grassland while there is also the option of developing a conservation plan, which may provide grant aid for works to improve or protect particular landscape or environmental features.

The information on which this review of half a century of change in Dartmoor's agriculture is drawn from the annual Agricultural Census, undertaken by MAFF/DEFRA. Since the boundary of the National Park does not, for the most part, follow parish boundaries whereas, until recently, Census information was available only at parish, or aggregated parish, levels, it will be appreciated that the statistical data must be regarded as giving only broad indications of change. A further complicating factor is that the boundary of the national park has changed several times since it was originally designated in October 1951. Five aspects of the moor's farming are examined: the numbers and size distributions of agricultural holdings, their average size, their land use patterns, the livestock kept and, finally, the people recorded as working on the holdings.

#### **The size distribution of agricultural holdings**

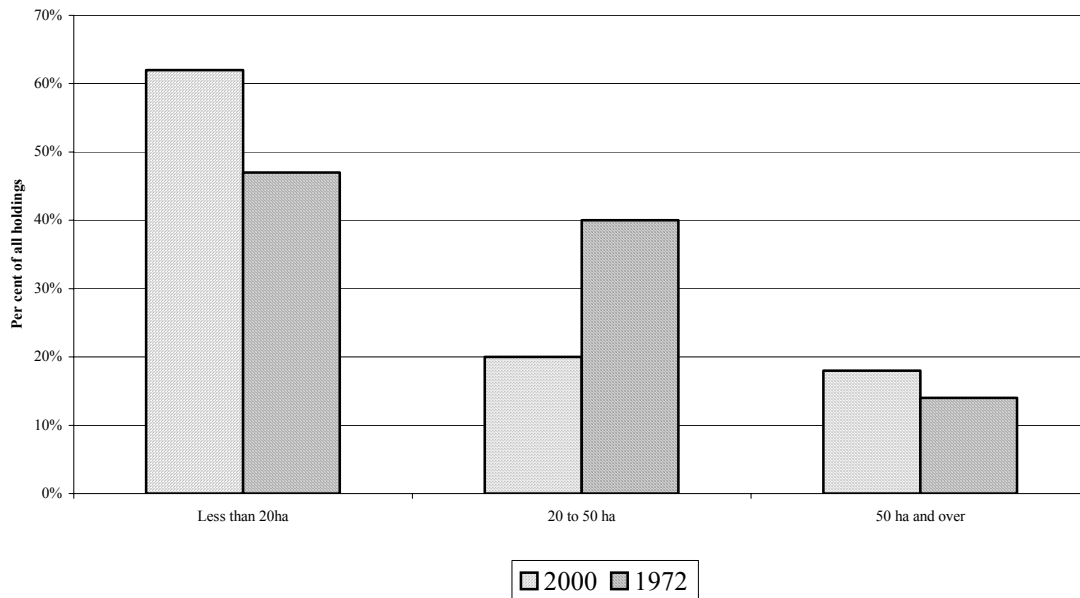
Over the last thirty years there has been significant change in the structure of Dartmoor farms, as Figure 3.1 illustrates. Within the total structure of agricultural holdings there is now a much greater proportion of small holdings, defined here as those of less than 20 hectares (about 50 acres) while larger holdings over 50 hectares

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(about 125 acres) represent a proportionately greater share of the total. The most dramatic change has been the significant decline in the proportion of mid-sized holdings, which has halved from 40 per cent to 20 per cent in thirty years. These figures underline the dualistic nature of agricultural adjustment over the recent past, with steady growth in the proportions of both small holdings (occupied by ‘also farmers’) and large holdings (commercial farms in a dynamic process of adjustment to market forces). These trends seem likely to continue for some time.

**Figure 3.1 Changes in the size structure of Dartmoor farms: 1972 and 2000**



Source: Authors’ estimates based on data for the annual Agricultural and Horticultural Census (MAFF/DEFRA).

Detailed statistics of farming on Dartmoor, drawn from the Agricultural Census and covering the period since 1990, are given in Appendix 1. The information relating to agricultural holdings is summarised in Tables 3.1 and 3.2. These statistics are based on DEFRA’s GIS system of defining the National Park and are consistent as between years. Other than the general trends shown above, detailed longer term comparisons are very difficult because of a dearth of consistent statistics. The census indicates that in June 2000 there were 1135 registered agricultural holdings, of which 210 were larger than 50 hectares. Key points are as follows:

- The total number of registered agricultural holdings has steadily increased over the last decade, rising from 1005 in 1990 to 1135 in 2000;
- The enclosed agricultural area appears to have fallen slightly, standing at 46,659 hectares in 2000;
- Consequently, average holding size has declined from 48.9 to 41.1 hectares;
- Although the proportion of larger holdings (over 50 hectares) has remained at about 20 per cent, the proportion of small holdings has risen from 47 to 62 per cent.

The numbers of registered agricultural holdings for 1990 to 2000 are shown in Table 3.1 for each of three size groups – under 20 hectares, 20 and under 50 hectares, and 50

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hectares and over. Table 3.2 summarises average size and the area of rough grazings over the same period.

**Table 3.1 Distribution of agricultural holdings on Dartmoor by size: number of holdings and proportional significance, 1990 to 2000**

Year	Size of holding						Average holding size (hectares)
	Under 20 hectares		20 hectares and under 50		50 hectares and over		
1990	474	47%	324	32%	207	21%	48.9
1995	531	51%	306	29%	214	20%	47.3
2000	702	62%	223	19%	210	19%	41.1

Source: MAFF/DEFRA, *Agricultural Census*.

**Table 3.2 Number of holdings on Dartmoor, average size and area of rough grazings, 1990 to 2000**

Year	Number of holdings	Average size (crops and grass)	Average area of rough grazings
1990	1,005	48.9	14.3
1999	1,051	47.3	13.3
2000	1,135	41.1	10.2

Source: MAFF/DEFRA, *Agricultural Census*.

### Changes in agricultural land use

This aspect is considered in more detail in Table 3.3, which shows changes in land use patterns. Crops other than grassland, a minor element of farming on Dartmoor, have declined slightly over the decade from 1990. There was a steady fall in the areas grown of both cereals and livestock fodder crops, albeit offset to some degree by a small rise in other crops. As classified by the Agricultural Census the grassland is predominantly permanent pasture (nearly nine tenths), although there seems to have been a fall in the area of enclosed rough grazings. There was a noticeable reduction in the total agricultural area recorded by the Census between 1999 and 2000, the reason for which is not clear.

**Table 3.3 Changes in agricultural land use patterns on Dartmoor, 1990 to 2000**

	Cereals	Fodder crops	Other crops	Grassland	Total grass and crops	Rough grazings	Total area
	‘000 hectares						
1990	2.2	0.4	0.3	29.5	34.8	14.4	49.2
1995	1.7	0.5	0.4	30.5	35.8	13.9	49.7
2000	1.5	0.3	0.6	29.7	35.0	11.6	46.6

Source: MAFF/DEFRA, *Agricultural Census*.

### Changes in livestock numbers and stocking rates

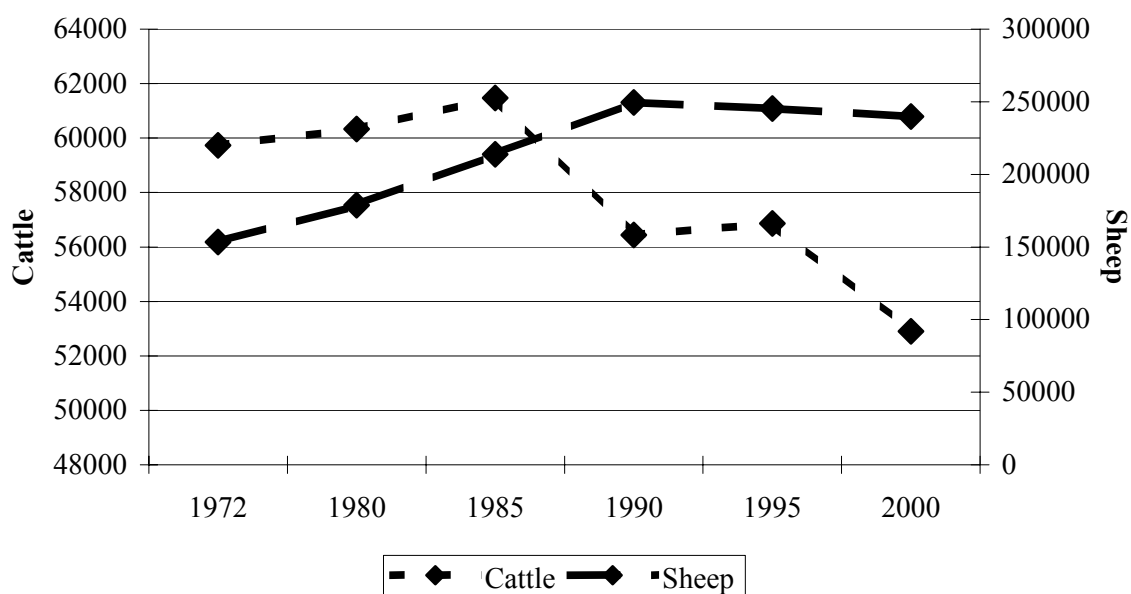
There have been some quite dramatic changes in livestock numbers over the past thirty years as Figure 3.2 shows. The period under review has witnessed very dramatic changes in agricultural potential and methods, as the results of a great deal of research began to be applied throughout the industry. Even on Dartmoor, where farming systems have changed less significantly it is clear that, in aggregate as well as at farm level, intensification proceeded.

The total number of cattle and calves on Dartmoor farms continued to grow well into the 1980s, but since then has declined and numbers are now lower than in 1972. Sheep numbers, however, are very substantially higher than thirty years ago, with a significant increase occurring during the 1980s after the establishment of the CAP's sheepmeat regime in 1980. However, numbers peaked in the early 1990s and there have been steady reductions since then.

Table 3.4 sets out the total numbers of livestock by class over the period, and also an indication of changes in the intensity of stocking. In more recent years a proportion of the animals recorded in the annual census as part of Dartmoor's farms will have been partly supported, in terms of their winter fodder, from the increasingly common practice of using lowground land (i.e. off Dartmoor). This may be under one or more of several different arrangements for off-wintering. Even so, it is also evident that increased stocking on Dartmoor as a whole has occurred over many years.

During the 1990s total cattle numbers fell by about 6 per cent, while sheep numbers fell some 4 per cent. The overall stocking rates also fell, although the apparent increase in that for sheep in 2000 has clearly been affected by the unexplained decrease in the farmed area recorded in that year.

**Figure 3.2 Trends in livestock numbers on Dartmoor farms: 1972 to 2000**



Source: Authors' estimates based on data from the annual *Agricultural and Horticultural Census* (MAFF/DEFRA)

**Table 3.4 Changes in livestock numbers and stocking densities on Dartmoor, 1990 to 2000**

	Cattle	Sheep	Pigs
1990	56,442	249,503	4,887
1995	56,861	245,312	4,153
2000	52,899	239,930	3,345
1990	114.8	507.5	9.9
1995	114.3	493.1	8.3
2000	113.4	514.2	7.2

Source: MAFF/DEFRA, *Agricultural and Horticultural Census*.

### Agricultural employment

Finally, the analysis turns to the changes in the numbers of people employed on Dartmoor farms (Table 3.5). The general trend is very apparent: a steady decline in the total numbers of people employed in agriculture, which fell by more than six per

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cent during the 1990s. However, while the numbers of people working on a full-time basis on Dartmoor farms fell from 844 in 1990 to 795 in 2000, as a proportion of the workforce they still represent about 42 per cent. These results largely mirror those elsewhere in UK agriculture, except that the more general trend has been a continuing proportional fall in the input of the full-time labour categories, and a commensurate increase in the significance of part-time and seasonal categories.

**Table 3.5 Numbers of people on Dartmoor recorded in the Agricultural Census, 1990 to 2000**

Year	Total number of people		
	Full-time	Part-time, seasonal and casual	All categories
1990	844	1,161	2,005
1995	839	1,205	2,044
2000	795	1,085	1,880

Source: MAFF/DEFRA, *Agricultural and Horticultural Census*.



## CHAPTER 4

### THE STATE OF FARMING ON DARTMOOR: FULL-TIME FARMS

The purpose of this chapter is to provide the baseline results from the postal survey so as to provide a statistically robust profile of full-time farmers and their farming activities on Dartmoor. All data in this chapter are derived from the postal survey.

#### **Agricultural land tenure and farm structures**

Based on the respondents to the postal survey the average size of farm, its location in relation to the DNP boundary and its tenure are set out in Table 4.1. These figures exclude the use of common grazings. A key finding is that more than one in three farmers are responsible for at least some land outside the National Park. Overall, the proportion of land located outside the Park but farmed in conjunction with holdings on the moor amounted to more than ten per cent of their farmed total, a figure which is not insignificant in itself. However, for those farmers with land in that category it represented a very significant part of their business, covering 22 per cent of the total area farmed. Approximately four out of ten farms take at least some grass keep, averaging 12 per cent of their total area farmed.

**Table 4.1** Average farm size, its location and tenure

	Average area (ha)	As % of total area
Within the DNP	110.2	89
Outside the DNP	13.4	11
Total	123.6	100
<i>Of which</i>		
Owned	63.3	51
Tenanted	49.9	40
Grass keep	10.4	8
	123.6	100

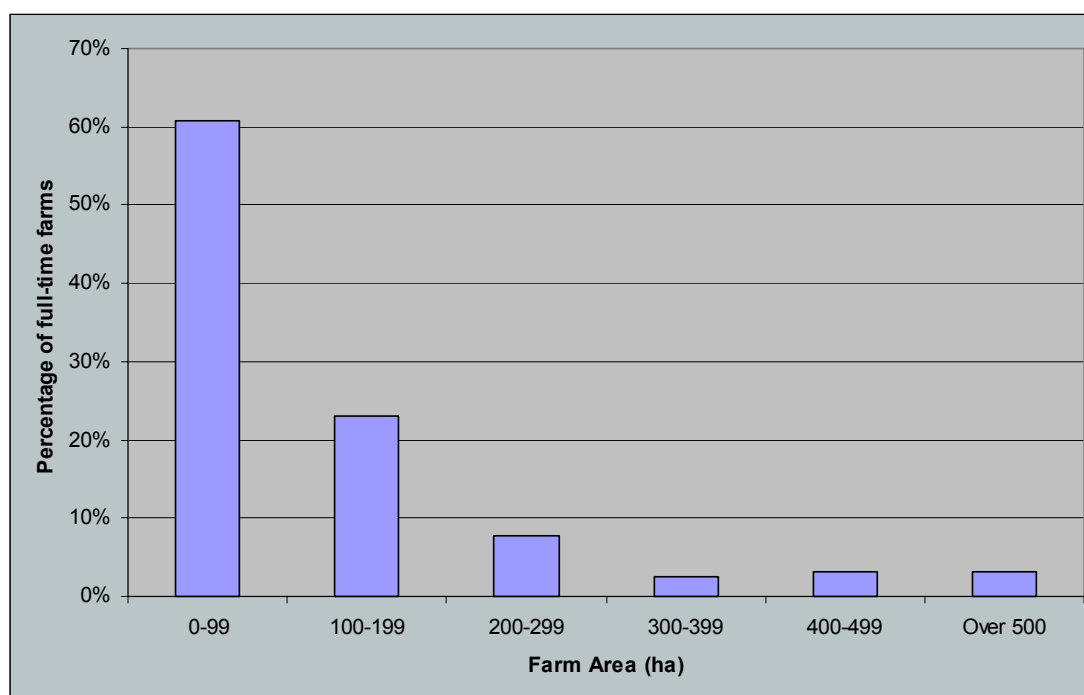
The issues of land tenure is considered further in Table 4.2, which shows that the majority of respondents' farms are owner-occupied. Note that this analysis excludes any grass keep and other short term use of land that farmers might take.

**Table 4.2 Land tenure category of the sample farms**

	<b>As % of postal respondents</b>
Wholly owned	45
Mainly owned	28
Wholly tenanted	13
Mainly tenanted	14
	<i>100</i>

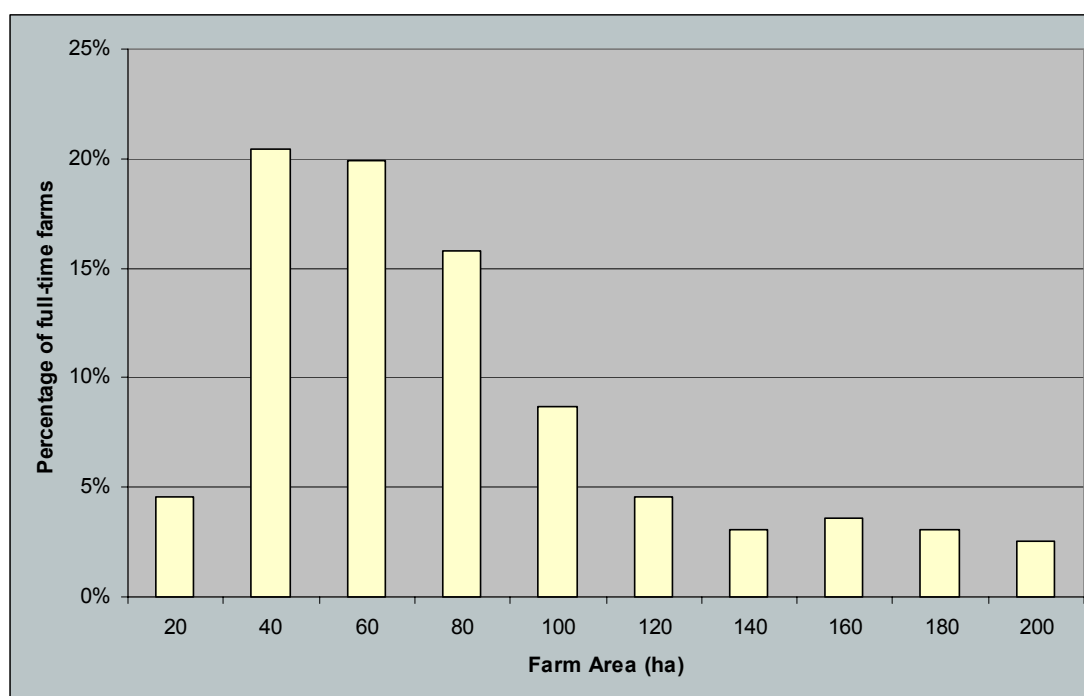
The distribution of respondents' farms by average farm size is illustrated in Figure 4.1. Clearly this shows that smaller holdings – those comprising less than 100 hectares - are dominant in the Park, this group accounting for 61 per cent of all respondents. Furthermore, over 90 per cent of holdings are less than 300 hectares.

**Figure 4.1 Distribution of farms by farmed area**



A more detailed break down of the smaller size category - farms less than 200 hectares – is provided in Figure 4.2. Analysing the distribution of farmed area more closely shows that farms that are between 40 and 80 hectares comprise half of those in the Park.

**Figure 4.2 Distribution of farms of 200 hectares and under, by farmed area**



While the distribution of farm sizes in the Park is inclined towards smaller holdings, there is no strong relationship between farm size and type-of-farming category (Table 4.3). For instance, while as would be expected it is the Cattle and sheep (SDA) category which is most common, there is no evident relationship between farm size and type.

**Table 4.3 Analysis of Dartmoor farms by type and size group**

	<40 ha	40 to <80 ha	80 to <120 ha	120 to <250 ha	250 ha or more
Dairy (LFA)	2%	7%	4%	3%	10%
Dairy (lowland)	6%	7%	4%	7%	5%
Cattle and sheep (lowland)	19%	25%	30%	20%	14%
Cattle and sheep (DA)	6%	0%	4%	3%	0%
Cattle and sheep (SDA)	64%	51%	59%	57%	67%
Cereals, cropping and mixed livestock	2%	10%	0%	10%	5%

Table 4.4 shows that, apart from the smallest farms, the proportion of the farmed area lying outside the Park seems to be fairly uniform across farm sizes. Put in another way, the findings suggest that the likelihood of a farmer being responsible for farming at least some land outside the Park increases with the area farmed, rising to an average of two thirds of their total area for the largest farms. Although this does not prove cause and effect, it does support the commonly expressed view that the many farmers

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who are set on expansion for economic or other reasons prefer to take on land outside the Park.

Although the smallest farms are the least likely to take any grass keep, at 34 per cent as a group, by comparison with larger farms it accounts for the highest proportion of their farmed area. This suggests that for those farms in this group who do take grass keep it is a relatively important aspect of their farming system. Regarding their own land, the smallest farms are much the most likely to be fully owned.

**Table 4.4 Land tenure and location by farm size group**

	<40 ha	40 to <80 ha	80 to <120 ha	120 to <250 ha	250 ha or more
Number in group	47	71	27	30	21
Percent of total farmed area outside DNP	3%	11%	15%	15%	12%
Any land outside DNP	17%	28%	41%	53%	67%
Grass keep as percent of total farmed area	21%	14%	9%	10%	3%
Any grass keep	34%	44%	44%	47%	38%
Tenanted land as percent of total owned or tenanted	19%	24%	27%	35%	66%
Any tenanted land	36%	56%	44%	73%	76%

The postal questionnaire asked farmers about whether or not their holdings had increased in size in recent years and what changes in size they anticipated for the future. It should be noted that, although the data are for the period 1995 to 2000, farmers' views on future prospects undoubtedly will have been influenced by the events of 2001. Table 4.5 shows a clear pattern of change. Not surprisingly, given well established trends of amalgamation and increasing farm size, larger farms were most likely to have increased their area in recent years and smaller farms most likely to have reduced. However, looking to the future the pattern is significantly different, with fewer farms of any size category expecting to expand. The 120 to 250 hectare group is by far the most inclined to expand (27 per cent) but even here the proportion has fallen by comparison with the immediate past five-year period during which 43 per cent expanded.

As shown in Table 4.6 the majority of farmers (75 per cent) anticipate no change in the size their holding *within* the Park before 2005, while 40 per cent expect there will be no change in the area of land they farm outside. Furthermore, there is likely to be a slight shift away from the established trend towards increasing farm areas, with fewer farmers expecting an increase in the total land they farm (both within and outside the Park) as compared to the actual pattern in the period 1995 to 2000.

**Table 4.5 Past and anticipated future changes in total farmed area, by farm size**

	1995 to 2000		2001 to 2005	
	Started farming or increased size of farm	Reduced size of farm	Increase size of farm	Reduce size of farm or cease farming
Land within the National Park				
<40 ha	18%	9%	7%	11%
40 to <80 ha	24%	7%	12%	14%
80 to <120 ha	19%	0%	4%	12%
120 to <250 ha	43%	0%	27%	10%
250 ha or more	29%	0%	10%	15%
Land outside the National Park				
<40 ha	12%	2%	2%	10%
40 to <80 ha	11%	6%	10%	6%
80 to <120 ha	19%	0%	12%	4%
120 to <250 ha	36%	0%	32%	4%
250 ha or more	24%	0%	15%	10%

**Table 4.6 Past and anticipated future changes in total farmed area, by location**

	1995 to 2000		2001 to 2005	
	Land within DNP	Land outside DNP	Land within DNP	Land outside DNP
Not applicable		42%		41%
No change	68%	37%	75%	40%
Start(ed)	3%	3%	0%	1%
Increase(d)	24%	15%	12%	12%
Reduce (d)	5%	3%	9%	3%
Cease (d)	0%	0%	3%	3%

### The use of commons grazings

The issue of the use of commons grazings is complex, as the discussion in Chapter 2 made clear, since the nature and degree of use of commons grazings is at the heart of the ‘farming and the environment’ debate. Table 4.7 details the percentage of respondents who make use of common grazings, distinguishing between those with and those without particular types of breeding livestock. For instance, 88 per cent of the farms had cattle enterprises and *of these* 66 per cent made no use of commons grazings. This may have been because either they had rights but chose not to use them, or because they had no commons grazing rights at all. The overall proportion of farms making any use of commons grazings was 48 per cent.

**Table 4.7 The use of commons grazings, by class of livestock**

	<b>Cattle</b>	<b>Sheep</b>	<b>Ponies</b>
Percent of full time holdings with:	88%	72%	18%
<i>Of which</i>			
Percent of breeding stock grazed on commons:			
- None	66%	48%	19%
- Up to 20%	9%	5%	11%
- Up to 40%	6%	5%	3%
- Up to 60%	6%	8%	8%
- Up to 80%	4%	9%	0%
- Up to 100%	9%	26%	58%

Recent and prospective changes in the use of commons grazings are shown in Table 4.8, which suggests that the proportion of farmers planning to reduce their use of common grazings over the next few years is greater than the proportion which increased their use over the last few years. While these findings do not take explicit account of the greater incentives currently available for the adoption of whole commons agreements on stocking levels under the Dartmoor ESA scheme, it is possible that farmers' expectations influenced by this factor.

**Table 4.8 Recent and prospective changes in the use of commons grazings**

	<b>1995 to 2000</b>	<b>By 2005</b>
Not applicable	29%	27%
No change	47%	49%
Start(ed)	4%	2%
Increase(d)	7%	5%
Reduce(d)	12%	13%
Cease(d)	1%	4%

### **Away wintering as a farming practice**

On the basis of the postal survey it is clear that the 'away wintering' of cattle and/or sheep is not carried out by the majority of holdings in the Park. Indeed, 90 per cent of farmers with breeding cattle and 82 per cent with breeding sheep indicate that no away wintering takes place on their systems (Table 4.9). Of those farms which do

off-winter livestock, although most do so for less than 20 per cent of their animals there is a small percentage on which *all* their animals are removed.

**Table 4.9 The practice of away wintering on sample farms**

	Farms with cattle		Farms with sheep	
	Breeding	Store	Breeding	Store
Away wintering				
None	90%	89%	82%	82%
Up to 20%	5%	3%	9%	4%
Up to 40%	1%	2%	4%	1%
Up to 60%	3%	3%	4%	4%
Up to 80%	0%	1%	0%	4%
Up to 100%	1%	2%	2%	4%
	100%	100%	100%	100%

The questionnaire also explored the likelihood of future changes in their use of away wintering. The results suggest (Table 4.10) that the present pattern of away wintering is unlikely to alter much over the next few years, with the majority of respondents anticipating that there will be no change to their present arrangements. Overall, slightly more expect to start or increase than expect to reduce or finish using away wintering.

**Table 4.10 Recent and prospective changes in the use of away wintering as a management practice**

	1995 to 2000	2001 to 2005
Not applicable	57%	56%
No change	33%	33%
Start(ed)	2%	2%
Increase(d)	3%	5%
Reduce(d)	5%	1%
Cease(d)	1%	3%

### A review of farming systems

Further information on the nature of the predominant farming system on Dartmoor, which is based on the production of cattle and sheep, is given in Table 4.11. Of those farms with hill-type livestock, some 60 per cent produce store cattle or sheep, while 37 per cent produce finished livestock. Farms which have at least some lowland-type livestock produce a higher percentage of finished stock, at 48 per cent. Although there are other farming systems found within the Park boundary, including both dairy and arable, these are of minor significance only. Note that details of Dartmoor's farming drawn from the agricultural census are given in Appendix 1.



**Table 4.11 Details of the farming systems on sample farms**

		As % of full-time farms
Hill-type livestock	Stores – cattle	47
	Stores – sheep	23
	Finished – cattle	14
	Finished – sheep	33
Lowland-type livestock	Stores – cattle	26
	Stores – sheep	8
	Finished – cattle	19
	Finished – sheep	27
Any cattle system		88
Any sheep system		72
Any cattle or sheep system		94
Dairying		15
Arable		11
Grass keep		10
Forestry		4
Other agricultural		10
Non-agricultural		10

Turning now to detailed change in farming systems, Table 4.12 focuses on the recent and anticipated changes to the numbers of breeding livestock on the sample farms. From 1995 to 2000, 30 per cent of farmers with breeding cattle and 19 per cent with breeding sheep reported that they had increased their livestock numbers over recent years, while fewer reported a reduction. However, during the period to 2005 there is a clear switch in the balance between the ‘expanders’ and the ‘contracters’: twice as many farmers of breeding cattle expect to *reduce* their cattle numbers compared to those planning to increase them. The switch is even more marked for breeding sheep, strongly suggesting an overall reduction in total sheep numbers (although these statistics do not take account of current flock sizes involved).

**Table 4.12 Recent and prospective changes to the numbers of breeding livestock**

	1995 to 2000		2001 to 2005	
	Breeding cattle	Breeding sheep	Breeding cattle	Breeding sheep
Not applicable	10%	19%	11%	21%
No change	49%	47%	42%	44%
Start(ed)	1%	1%	1%	0%
Increase(d)	30%	19%	14%	8%
Reduce(d)	10%	12%	28%	26%

Cease(d)	0%	2%	4%	2%
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When hill livestock numbers are disaggregated from breeding cattle and sheep, a similar pattern is apparent. Table 4.13 shows that during the period from 1995 to 2000, 12 per cent of hill-type cattle farmers and 11 per cent of hill-type sheep farmers increased their stock, compared with 6 per cent and 7 per cent respectively who reduced their numbers. Again, over the period to 2005 it is expected that this will be reversed, with more hill livestock farmers reducing stock numbers. However, fewer farmers reported an intention to *either* increase or reduce their livestock numbers than expected to make no change.

**Table 4.13 Recent and prospective changes to the numbers of hill livestock**

	1995 to 2000		2001 to 2005	
	Hill type cattle	Hill type sheep	Hill type cattle	Hill type sheep
Not applicable	44%	45%	44%	46%
No change	36%	32%	34%	34%
Start(ed)	1%	3%	0%	0%
Increase(d)	12%	11%	6%	5%
Reduce(d)	6%	7%	14%	13%
Cease(d)	1%	2%	2%	2%

The changes affecting the numbers of livestock sold as finished are examined in Table 4.14 and here the picture is less clear. For farms currently selling finished cattle the rate of increase is expected to remain at 26 per cent in the period to 2005, the same as in the previous five years, although the number of farmers reducing their production is expected to double from 5 to 10 per cent. This differs from farms selling sheep as finished stock, since not only does the expected rate of reduction rise from 8 to 15 per cent, but the farms with intentions to increase numbers (at 15 per cent) than increased during 1995 to 2000.

**Table 4.14 Recent and prospective changes to the numbers of stock sold as finished**

	1995 to 2000		2001 to 2005	
	Cattle sold finished	Sheep sold finished	Cattle sold finished	Sheep sold finished
Not applicable	33%	23%	24%	23%
No change	33%	41%	34%	45%
Start(ed)	3%	2%	3%	1%
Increase(d)	26%	26%	26%	15%
Reduce(d)	5%	8%	10%	15%
Cease(d)	0%	1%	3%	2%

### The significance of environmental payments

The vast majority of farms in the Park, 92 per cent, receive some kind of environmental payments and these are detailed by scheme in Table 4.15. Over three-quarters of farms are in receipt of either the extensification premium or the HFA while two-thirds receive payments for land, on their own ground, that they have entered into the Dartmoor ESA scheme. Far fewer farms, 27%, gain from ESA payments from land that has been entered as common land, although it is possible that this will change over time. The percentage of full-time farms in receipt of payments for conversion to an organic farming system is only 5 per cent of the total.

Clearly HFA and extensification payments require a less active engagement with ‘environmental’ land management than the other explicitly environmental schemes. However, even when these two sources of support are excluded from the analysis the percentage of full-time farms receiving income from environmental payments remains as high as 75 per cent. These findings reinforce the discussion in Chapter 2 about the importance of such schemes for the viability of hill farming in general, and the Dartmoor farming sector in particular.

**Table 4.15 Agri-environment and other payments received by the sample farms**

	As % of full-time farms
Hill farming allowance	76%
Extensification	79%
ESA on commons	27%
ESA on own ground	66%
SSSI	5%
DNP agreement	14%
Organic Aid Scheme	5%
Other schemes	4%
Any scheme	92%
Any scheme other than HFA or extensification	75%

The questionnaire probed farmers’ expectations about the future of agri-environment schemes, and Table 4.16 indicates that nearly half of all farmers expect no change in environmental payments in the future. Although this is somewhat surprising, given the publicity given to the proposals of the Hill Farming Task Force (among others) that environment and ‘second pillar’ payments should be increased it suggests either a degree of caution (‘not counting chickens before they’re hatched’) or that a significant number of Dartmoor farmers are unfamiliar with current policy development. Another possible explanation for this finding might be that, given the high proportion of farmers already in schemes, the expectation is for an increased agri-environmental spend to be spread more broadly encompassing a greater number of farmers rather than allowing more money for existing recipients.

**Table 4.16 Recent and prospective changes in the receipt of agri-environment payments**

	1995 to 2000	2001 to 2005
Not applicable	11%	6%
No change	37%	48%
Start(ed)	15%	5%
Increase(d)	35%	36%
Reduce(d)	1%	2%
Cease(d)	0%	3%

When agri-environment payments are examined in relation to the area farmed, it is seen that variation by farm size is not significant but that the proportion of farms participating in agri-environment schemes rises with increasing farm size (Table 4.17). It is interesting, however, that even the smallest farms have a participation rate as high as 72 per cent.

**Table 4.17 Agri-environment payments by farm size**

	Percent of farms receiving environmental payments other than HFAs or extensification
<40 ha	72%
40 to <80 ha	73%
80 to <120 ha	78%
120 to <250 ha	77%
250 ha or more	81%
All	75%

### **Non-farming business activities**

Overall 68 per cent of the farmers reported some sort of non-farming economic activity, with off-farm income being both the most commonly cited and the most frequently regarded as being ‘crucial’. Table 4.18 gives further detail of the nature and perceived significance non-farming activities on the sample farms. Diversified activities that are regarded as ‘very important’ or ‘crucial’ on at least one in ten of Dartmoor farms include ‘processing and retailing’, ‘tourist accommodation’, ‘rents from properties not connected with tourism’ and ‘contracting’.

**Table 4.18 Farm diversification: non-farming economic activities and their importance in the business**

	Any activity	Importance		
		Not very	Very	Crucial
Processing and retailing	23%	7%	10%	6%
Tourist accommodation	18%	8%	6%	4%
Rents other than tourism	24%	8%	12%	4%
Recreation	7%	4%	3%	0%
Rural crafts	3%	1%	1%	2%
Contracting	21%	11%	6%	4%
Forestry	4%	2%	3%	0%
Off farm income	34%	6%	10%	18%
Other	7%	1%	5%	2%

Recent and prospective changes in the level of non-farming activity as reported by the survey respondents are shown in Table 4.19. Looking to the future, although the majority expect no change a significant proportion (25 per cent) expect to receive an increased their income from non-farming activities. Taking this analysis further, Table 4.20 shows the relationship between farm size and the importance attached to other earnings. Although clearly smaller farms have a higher dependence on external earnings than larger ones, a very significant proportion of the larger farms are also highly reliant on external income.

**Table 4.19 Recent and prospective changes in non-farming economic activity**

	1995 to 2000	2001 to 2005
Not applicable	43%	-----
No change	27%	70%
Start(ed)	4%	3%
Increase(d)	19%	25%
Reduce(d)	4%	1%
Cease(d)	2%	1%

**Table 4.20 Farm diversification: non-farming economic activities and their importance in the business, by farm size**

	Highest level of importance			
	No activity	Not very	Very	Crucial
<40 ha	23%	2%	28%	47%
40 to <80 ha	37%	8%	21%	34%
80 to <120 ha	41%	15%	30%	15%
120 to <250 ha	27%	27%	33%	13%
250 ha or more	29%	33%	24%	14%
All	32%	13%	26%	29%

### **The employment pattern on Dartmoor farms**

The number of individuals working either as full-time or part-time employees in farm businesses on Dartmoor, both farming and non-farming, is shown in Table 4.21. From this it can be seen that the principal farmers and their spouses provide two thirds the workforce on the farms in the Park, while only 15 per cent of the total labour force is provided by regular paid workers and managers. Regular, unpaid family workers provide a further 6 per cent. There are several other important findings from these data:

- Approximately 10 per cent of all farmers, partners and directors, and their spouses, have remunerative work off the farm;
- A further 5 per cent are involved, often on a full-time basis, with diversified business activities on their farms;
- Some 8 per cent of the total workforce (including family members, regular and casual workers) are involved in diversified activities on the farm; One in
- Just over half of the total ‘farm’ labour force is employed on a full-time basis in agriculture, with about 48 per cent working for a greater or lesser proportion of their time in diversified activities or, indeed, off the farm.

These figures serve to highlight the central role of the farm family in the operation of Dartmoor’s farms, and the importance – in terms of providing employment - of supplementary economic activities both on and off-farm.

**Table 4.21 Farming, non-farming and off-farm employment: numbers of people working on Dartmoor farms, by category of employment**

	Farming		Non-farming - on farm		Off farm		All work types	As % of total
	Full- time	Part- time	Full- time	Part- time	Full- time	Part- time		
Principal farmer(s) and spouse(s)	219	96	8	13	15	24	375	58
Other farmers, partners & directors	26	16	0	1	0	3	46	7
Regular paid workers and managers	51	32	10	6	n.a.	n.a.	99	15
Regular unpaid workers (inc. unpaid family)	5	33	1	2	n.a.	n.a.	41	6
Casual workers	n.a.	79	n.a.	10	n.a.	n.a.	89	14
All worker groups	301	256	19	32	15	27	650	100
As % of total	46	39	3	5	2	4	100	

Table 4.22 provides an insight to the frequency with which different categories of workers are found on moor farms. On the basis of the postal sample it appears that about one in six of farms on the moor do not support a full-time farmer. Only 29 per cent of the farms have at least one regular, full-time paid employee involved in farming activity.

**Table 4.22 Farming, non-farming and off-farm employment: proportions of Dartmoor farms, by employment category**

	Farming		Non-farming - on farm		Off-farm	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Principal farmer(s) and spouse(s)	84%	41%	3%	6%	7%	12%
Other farmers, partners & directors	9%	6%	0%	1%	0%	1%
Regular paid workers and managers	18%	11%	3%	2%	n.a.	n.a.
Regular unpaid workers (inc. unpaid family)	2%	13%	1%	1%	n.a.	n.a.
Casual workers	n.a.	27%	n.a.	3%	n.a.	n.a.

When changes in the use of labour and contractors between 1995 and 2000 are compared (Table 4.23) it can be seen that while 10 per cent of farms increased their use of labour during this period, on 30 per cent total employment declined. There appear to be several factors involved in this change. On about a quarter of farms there was an increase in the use of agricultural contractors, compared to only 11 per cent of farms making less use of contractors. Moreover, structural adjustment as a proportion of Dartmoor farms get bigger can be expected to reinforce such changes in the pattern of employment. Looking to the immediate future, fewer farmers expect to reduce their labour but the trend towards an increased use of cointractors looks set to continue, albeit at a lower rate than in the last few years.

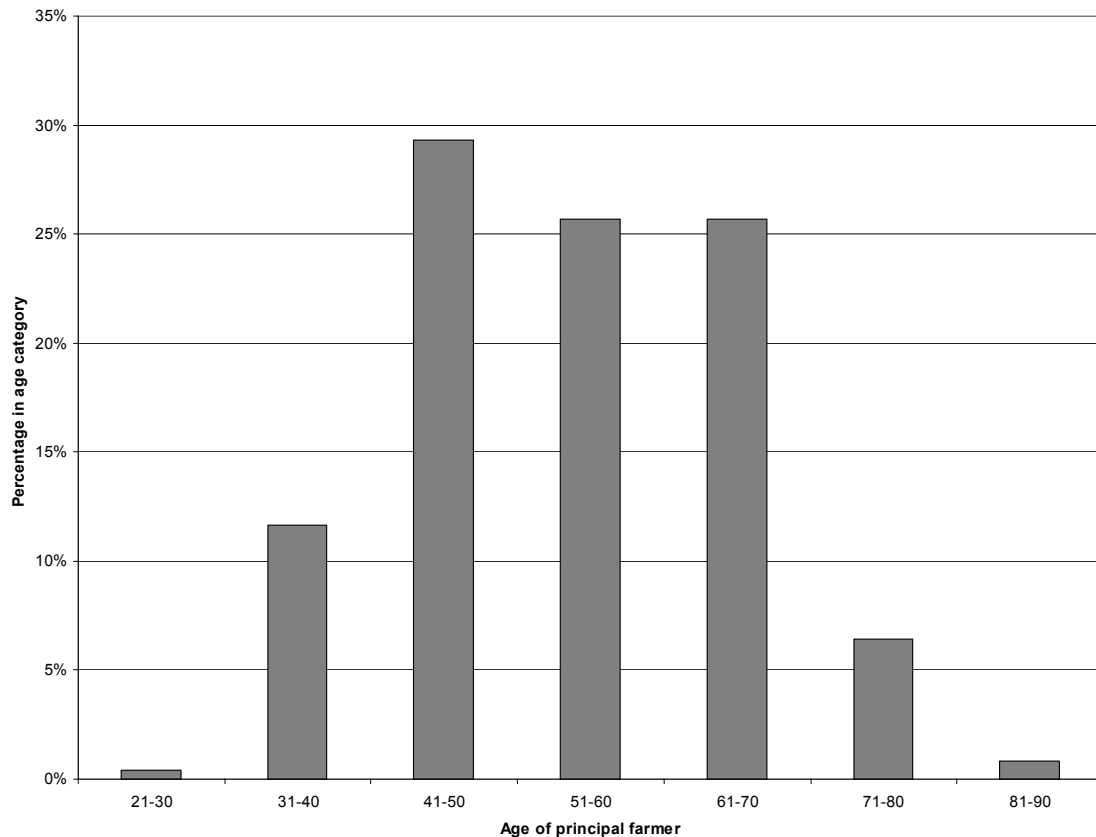
**Table 4.23 Recent and prospective changes in the use of labour and of agricultural contractors**

	1995 to 2000		2001 to 2005	
	Labour	Contractors	Labour	Contractors
Not applicable	4%	10%	12%	13%
No change	54%	52%	62%	58%
Start(ed)	1%	2%	0%	0%
Increase(d)	10%	25%	9%	16%
Reduce(d)	30%	11%	14%	9%
Cease(d)	1%	1%	3%	4%



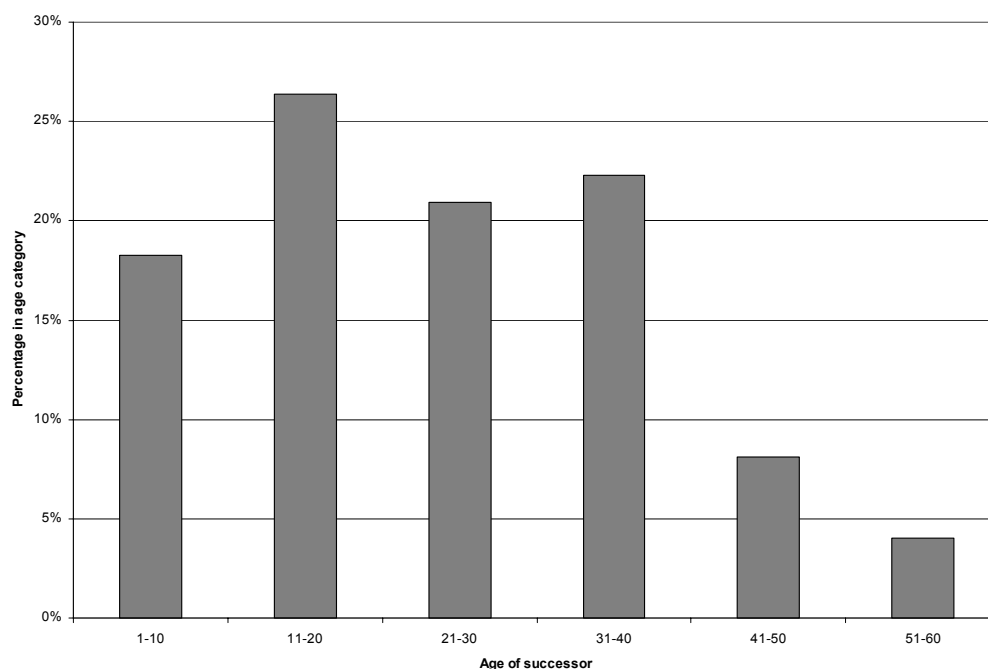
The question of ‘the average age of farmers’ is of perennial interest but, as has been pointed out elsewhere, the bald statistic which relates to the age of the principal farmer may rather overstate the position since at least some will have successor’s who are actively involved in the business. The current position for Dartmoor is that most *principal* farmers are aged between 41 and 70 years, with the average age being 55.

**Figure 4.3 The distribution of the ages of principal farmers, by age band**



The postal questionnaire looked at the issues of succession (Figure 4.4), and establishes that nearly half of the principal farmers have children under the age of twenty who may, at some future time, become involved in the farm and even, ultimately, take it over. Given considerable anecdotal evidence that the sons and daughters of farmers are now much less likely than a generation ago to see the family farm as the most obvious, or best, career opportunity open to them, Of rather more importance from the perspective of succession is that about half of the surveyed farms have a potential successor aged between 20 and 50 years. The average age of potential successors was twenty-four, while 54 per cent of farms reported having at least one successor.

**Figure 4.4 The distribution of the ages of farming successors, by age band**



### **Involvement in group or co-operative activities**

The proportions of farmers participating in either group or co-operative activities which are related either to their farming or non-farming business enterprises are shown in Table 4.24. Overall the survey found that 42 per cent of Dartmoor farmers are involved with at least one group or co-operative activity. The most popular form of such activity is participation in one or more discussion groups, for either or both the farming and non-farming sides of their business, at 23 per cent and 9 per cent respectively. Collaborative activities which require a higher degree of commitment, however, are notably less popular: only 10 per cent are involved with a selling or marketing group, 9 per cent with labour sharing and 8 per cent with the sharing of machinery. Not surprisingly, given both the lower incidence of non-farming activities (by comparison with farming) and its much more diverse nature, far smaller proportions reported any group involvement in this area.

**Table 4.24 Farmers' current involvement in group and co-operative activities**

	Activities relating to	
	Farming	Non-farming
Discussion group	23%	9%
Buying group	14%	2%
Selling or marketing group	10%	2%
Sharing machinery	8%	0%
Sharing labour	9%	1%
Other	1%	0%
Any	40%	12%

Recent and prospective changes in farmers' shared use of machinery, and in other group activities, are examined in more detail in Table 4.25. Two important points emerge from these data. First, during the period 1995 to 2000, there was a very low rate of change in collaborative action of the sort discussed above. Secondly, it would appear that respondents expect only marginal increases in either of these activities by 2005. This issue is returned later in this report.

**Table 4.25 Recent and prospective changes in farmers' involvement in machinery sharing and other group activities**

	1995 to 2000		2001 to 2005	
	Machinery sharing	Group activities	Machinery sharing	Group activities
Not applicable	70%	63%	62%	56%
No change	24%	30%	27%	32%
Start(ed)	2%	1%	2%	3%
Increase(d)	2%	5%	7%	7%
Reduce(d)	1%	1%	1%	1%
Cease(d)	1%	1%	2%	1%

### **The role and potential of livestock markets**

Farmers' views of the current and potential future role of livestock markets in the agricultural economy of Dartmoor and its hinterland, and the results are detailed in Table 4.26. Clearly, livestock markets are seen as providing vital information on the price of store stock with 95% of farmer agreeing with this statement, and to a slightly lesser extent markets are valued with respect to the prices of finished stock. In addition, the majority of farmers also look on livestock markets as serving an important social function as well as, to a lesser degree, providing a forum for discussing new agricultural developments. These findings confirm that livestock markets are of considerable continuing significance to farmers in the Park. However, perhaps because of the novelty of the idea, there was a much less uniform approval for the potential involvement of markets in formal group activities although, it may be argued, those with an opinion voted three to one in favour of this idea.

**Table 4.26 Farmers' views of the role and potential of livestock markets**

	Agree	Disagree	No opinion
Livestock markets provide vital information on the prices of store stock	95%	2%	3%
Livestock markets provide vital information on the prices of finished stock	86%	8%	5%
Livestock markets provide a forum for discussing new agricultural developments	58%	17%	25%
Livestock markets serve an important social function for farmers	91%	1%	8%
Livestock markets should be involved in formal group activities	43%	14%	44%

### Farming and countryside management

Given the importance of countryside management in preserving the character of the farmed landscape of Dartmoor farmers were asked to identify the issues they regarded as barriers to the implementation of more countryside management activities. Perhaps not surprisingly, given the continuing agricultural recession, farmers consider inadequate financial returns from farming to be the greatest single restriction to more and better countryside management (Table 4.27), with 83 per cent of respondents agreeing with this statement. While not quite as significant, other important factors include the (lack of) availability of appropriate grants (52 per cent), the (insufficient) availability of labour (46 per cent), the availability or cost of appropriate advice (28 per cent) and the availability of the necessary skills (23 per cent). More positively, 71 per cent of farmers consider they have, or have access to, the necessary skills for countryside management, while 62 per cent do not regard the availability or cost of appropriate advice as a barrier.

**Table 4.27 Restrictions to countryside management**

	Yes	No	Don't know
Inadequate financial returns from farming	83%	13%	4%
Availability of labour	46%	48%	6%
Availability of skills	23%	71%	6%
Availability or cost of appropriate advice	28%	62%	10%
Availability of appropriate grants	52%	37%	11%

### Dartmoor ponies and farming

A total of nearly one in five of the postal respondents on full-time farms keep ponies and Table 4.28 shows recent past and planned future changes to pony numbers *for these farms*. No other farms were planning to start keeping ponies and one farm reported that they had stopped their pony enterprise between 1995 and 2000. While it is clear that *most* farms keeping ponies anticipate no change, 23 per cent expect to reduce their pony numbers and a further 9 per cent suggest that they will no longer keep ponies by 2005.

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**Table 4.28 Changes to numbers of ponies kept**

	1995 to 2000	2001 to 2005
No change	48%	60%
Start(ed)	3%	0%
Increase(d)	6%	9%
Reduce(d)	42%	23%
Cease(d)	n/a	9%

Since ponies are considered an integral characteristic of the Park, the opinions of all farmers, whether or not they currently keep ponies, is of important and Table 4.29 reports the surveys findings on this. Encouragingly, it shows that more than three quarters of Dartmoor's farmers regard ponies as providing a positive image of the moor. However, 68 per cent of farmers consider that the breeding of ponies should be improved. As might be expected, farmers' opinions on whether or not subsidies should be paid for the keeping of ponies differ between farms that keep them and those that do not! Over half of the farmers who keep ponies support the idea that subsidies should be paid, compared to less than a quarter of farmers that have no ponies. It might also be said, of course, that 30 per cent of farmers with poniesv disagree with the suggestion of subsidies, while 22 per cent of those without ponies support the idea. Overall, a fair consensus on the importance of ponies in the Dartmoor environment and on the need for improved breeding, but much less clarity about the issue of subsidies.

**Table 4.29 Attitudes to keeping ponies**

	Agree	Disagree	No opinion
<b>Farms keeping ponies</b>			
The ponies on Dartmoor portray a positive image	91%	3%	6%
Keeping of ponies on Dartmoor needs encouragement	71%	21%	9%
Subsidies should be paid on keeping ponies	52%	30%	18%
The breeding of ponies on Dartmoor needs improvement	58%	33%	8%
<b>Farms not keeping ponies</b>			
The ponies on Dartmoor portray a positive image	72%	11%	17%
Keeping of ponies on Dartmoor needs encouragement	35%	39%	26%
Subsidies should be paid on keeping ponies	22%	54%	24%
The breeding of ponies on Dartmoor needs improvement	70%	9%	20%
<b>All farms</b>			
The ponies on Dartmoor portray a positive image	76%	9%	15%
Keeping of ponies on Dartmoor needs encouragement	42%	36%	23%
Subsidies should be paid on keeping ponies	28%	49%	23%
The breeding of ponies on Dartmoor needs improvement	68%	14%	18%

### **The impact of foot and mouth disease**

Finally, the postal questionnaire looked at the impact of the FMD epidemic on Dartmoor farmers, and he results are summarised in Tables 4.30 and 4.31, which show the proportion of the responding farms affected in terms of suffering form an Centre for Rural Research, University of Exeter.

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actual cull and through the operation of the Welfare Scheme. In terms of enforced culls, some 6 per cent of breeding cattle and 5 per cent of breeding sheep were slaughtered on respondents farms, while for store animals approximately half these proportions were lost. Rather more animals were killed under the welfare schemes, however and, again, the impact was greater for breeding cattle and sheep than store animals.

**Table 4.30 The FMD epidemic: farmers' involvement in a cull**

Percentage of animals culled	Breeding		Store	
	cattle	Sheep	Cattle	Sheep
1-20	2%	2%	1%	1%
21-40	1%	1%	1%	0%
41-60	1%	0%	0%	0%
61-80	1%	2%	1%	0%
81-100	2%	1%	2%	1%
Any	6%	5%	3%	2%

**Table 4.31 The FMD epidemic: farmers' involvement in welfare schemes**

Percentage of animals slaughtered	Breeding		Store	
	Cattle	Sheep	Cattle	Sheep
1-20	13%	5%	3%	3%
21-40	3%	3%	0%	2%
41-60	1%	2%	1%	2%
61-80	1%	1%	0%	1%
81-100	3%	2%	1%	3%
Any	21%	12%	5%	11%