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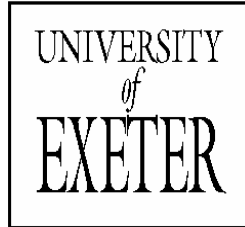


The Impact of CAP Reform on Devon's Agriculture

Final Report to Devon County Council

Matt Lobley and Allan Butler

CRR RESEARCH REPORT 6
ISBN 1870558 77 4



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Final Report

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This report can be downloaded from the CRR website: www.ex.ac.uk/crr/

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Price: £10
June 2004

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Acknowledgements and Disclaimers

We are grateful for the advice given by Martin Turner in the early stages of this project and the assistance of Dawn Wakefield. We would also like to express our appreciation to the farmers who gave their time to take part in the discussion group. All errors and omissions are the responsibility of the authors.

The views expressed in this report are those of the authors and are not necessarily shared by other members of the University or by the University as a whole.

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The Impact of CAP Reform on Devon's Agriculture

Executive summary

Background

The 2003 CAP reform agreement and its means of implementation represent a radical change to the system of farm support in England. In choosing to deliver the new single payment on an area basis DEFRA have adopted a deliberately redistributive approach which will have a significant impact on farming in Devon due to the switch from the historic subsidy system to a flat rate area based payment. As a follow-up to *The State of Agriculture in Devon* (Lobley et al 2003), Devon County Council commissioned the Centre for Rural Research to undertake a detailed analysis of the possible impact of the 2003 CAP reform agreement on farm incomes in Devon. The specific objectives of the research were to:

- examine the implications of the Single Farm Payment for farm incomes in Devon
- identify the impact on different farming sectors
- identify the impact on farms of different sizes
- identify the impact on the districts of Devon
- consider the implications of the new CAP for farm employment, agricultural restructuring and the environment.

From 2005, a 'dynamic hybrid' system for the Single Payment will be implemented as the historic claims element is progressively replaced by a flat rate payment. The actual payment rates will not be known for some time but DEFRA estimates that they will be in the following ranges:

- £210-230 per ha outside Severely Disadvantaged Areas (SDAs)
- £110-£130 per ha within SDAs but excluding land above the moorland line
- £20-£40 per ha for SDA land above the moorland line

The levels of flat rate payments given above are **gross** payments as *modulation* is excluded, as well as the deductions necessary to create the *National Reserve*. In addition, further deductions can be triggered by the *Financial Discipline* mechanism designed to control the CAP budget at the EU level.

In order to explore the impacts of the CAP reform agreement on farming in Devon an economic modelling exercise was undertaken and a farmer discussion group convened in order to explore the implications. The data used in the economic model were drawn from the SW Farm Business Survey undertaken annually by the CRR on contract to DEFRA. Within the SW sample the Devon sub-sample was considered too small to provide a viable basis for the modelling therefore SW data has been used and applied to the farming situation in Devon using agricultural census data (see Appendix 1 for a detailed discussion of modelling methodology and assumptions).

It is important that the results presented in this report are not used out of context as they are sensitive to the assumptions made by the research team.

The complex impact of CAP reform

CAP reform will have a complex impact on farming in Devon. In aggregate terms, the impact on farm incomes is likely to be largely neutral or marginally positive. Excluding potential income from the Entry Level Stewardship (ELS) scheme to be launched in 2005, Net Farm Income (NFI) in Devon could fall by 4% from £60.91 million to £58.47 million by 2013. Widespread uptake (80%) of ELS could reverse this fall and lead to an overall increase in NFI of 2.9% by 2013. Without additional income from ELS several districts of Devon will suffer a marginal loss of NFI. In West Devon however, with a farm structure dominated by LFA and dairy farms, the loss could be up to 11% by 2013. Such aggregate figures however, mask the complexity of the impact on farms of different types and sizes.

In terms of farm type, cereal and lowland livestock farms will benefit from the reforms. However, in absolute terms, the NFI of both large and particularly small lowland livestock farms remains bleak, even in the longer term, despite the positive increases resulting from the introduction of the single payment. Moreover, for both farm types, farming remains unprofitable without support payments. For all farm types, the more willing and able farm operators are to embrace the market and base their production decisions entirely on market returns, the more positive the impact on farm incomes.

The uplands

Devon's upland areas will suffer significant reductions in NFI. In particular, the outlook for small farms located in Severely Disadvantaged Areas (SDAs) is bleak, with NFI per farm projected to fall to approximately £7,500 by 2013. Cattle enterprises in the SDA will be more adversely affected than sheep enterprises and the future is likely to see a decline in cattle numbers. The predicted falls in NFI are largely a consequence of high historic levels of support. The final situation will be influenced by income receipts from the Environmental Stewardship scheme and we have calculated that, on average, a single payment of £160 ha⁻¹ is necessary to maintain the present pattern and distribution of farming in Devon's SDAs.

The impact on Disadvantaged Area (DA) farmers will ultimately be marginally positive. However, NFI is currently very low and will remain so in the early years of the new system, only beginning to rise at the end of the decade. Given incomes possibly as low as £5,500, only rising to £7,000 in the future, the longer term viability of DA farms is questionable in the absence of substantial alternative income sources.

Dairy Farming

Dairy farming is particularly important in Devon, contributing an estimated 57% of the county's total NFI. Overall, dairy farms are likely to experience a loss of up to 21% as a result of the reforms. Small dairy farms (average size 47 ha) will experience a decrease in NFI by some 27%. Large dairy farms on the other hand, could see their incomes reduced by a third in 2006 although NFI is still projected to be approximately £35,389 in 2013. However, while the impact of the single payment and modulation is important, it will be the farm gate price of milk that will shape the future of dairy farming in the county.

CAP driven restructuring

The reform of the CAP and its impact on incomes *will* drive further restructuring of the county's agriculture although there will be a time lag before the full effects are felt. In many ways the new support regime will simply reinforce existing trends although cross-compliance

conditions are a complicating and still unknown factor. Across the county the reformed CAP will be faced by farms at different stages in the business cycle, different stages in the life cycle and farms with different endowments of capital, skills, knowledge, etc. Farmers and their households are likely to differ significantly in their ability and willingness to adapt to the new market orientated policy environment. By involving farmers of different ages, operating farms of different types and sizes, the results of the farmer discussion group are indicative of the possible trajectories of change following implementation of the new CAP regime.

There is still considerable confusion and uncertainty amongst the farming community regarding the precise details of the new support system (e.g. value of single payment, cross-compliance conditions, etc.) and rather than rush in to restructuring decisions there is evidence of a 'wait and see' approach. For some, one approach is to simply meet cross-compliance conditions and live off their single payment. Others plan to adopt a more active response, intending to continue farming but simplifying and extensifying their business. Both approaches have implications for the environment and supply and processing sectors.

In cases where small dairy farmers, for instance, cease active farming and simply meet cross-compliance conditions the less intensive management of land is likely to be beneficial. That said, the impact would depend on the agreed set of cross-compliance conditions. Current proposals that vegetation need only be cut every five years would have a significant visual impact. While this could create opportunities for 'semi-rewilding' it may cause concern for some if the countryside takes on a less managed appearance. In cases where simplifying the business involves going out of beef production conservationists would have concerns about sward management if the ratio of sheep to cattle increased (the latter produce a less uniform, tussocky sward which is valuable in conservation terms). In the uplands, future concerns could revolve around issues of under-grazing rather than over-grazing although it will take some time to discern if under-grazing will become widespread.

These strategies also have implications for employment on farms which is likely to continue to decline. There may be an increase in the use of contract labour though, which raises concerns about the 'level of care' applied to land management activities. More positively,

where farmers decide to withdraw from active farming and only meet cross-compliance conditions, there could be opportunities for new entrants willing to meet the challenge of farming without subsidies. The injection of entrepreneurial, 'new blood' that could result would have positive benefits for the rural economies of Devon.

Not all farmers will simplify and extensify in response to CAP reform and some members of the discussion group saw opportunities for expansion in the future, perhaps managing or, in the longer term, purchasing the land of those who either chose to cease, or are unable to continue, active farming. One sector where this is likely to occur is dairying. The environmental implications of a further expansion of dairy farming are complex. Expansion does not necessarily imply intensification, particularly if cross-compliance conditions are met and dairy farms enrol into ELS. However, much depends on what the newly acquired land was previously used for and if, as seems likely, dairy farms expand at the expense of beef farming, this would represent an intensification of land use.

The other option open to farmers in the face of declining incomes is to seek alternative income sources. Off farm employment is one option although many farm spouses already have off farm employment. Simplifying and down-sizing farming systems should free up some labour and may offer farmers an opportunity to seek additional work although there appeared little enthusiasm for this among the participants in the discussion group. On-farm diversification is an alternative but it is far from being an easy option. Those facing declining incomes may find it hard to finance diversification plans and a strong message to emerge from the farmer discussion group was that the Highways Authority can make diversification difficult where it would be associated with increased traffic movements. Planners need to be more aware of and sympathetic to the challenges facing the county's farming communities.

The results of the farmer discussion group suggest that there is unlikely to be a rapid and large scale exodus from farming in the county. Rather, farmers and their families will adopt a range of strategies in order to remain on the farm. In the longer term, however, as farmers face significant reinvestment decisions some will inevitably decide to retire from active farming. This lagged response means that it will be some years before the full impact of CAP reform on farm structures (the number, size and types of farms) will be revealed.

Finally, from both this and last year's report it is clear that receipts of agri-environmental and other rural development funding can have an important and positive impact on farm incomes. DCC should continue to ensure that the county is able to maximise its share of this funding by, where possible, facilitating and supporting applications from farmers.

Recommendations

The research carried out for this report indicates the possible future of Devon's agriculture but the impact of CAP reform will only become apparent over time.

Recommendation: Regular monitoring of the impact of CAP reform on Devon's farms should be undertaken.

Recommendation: The farmer discussion group should be reconvened in two years time to see how they have adjusted.

The reforms seem unlikely to lead to a large scale exodus from farming but may well stimulate withdrawal, where active farming is reduced to a level needed to meet cross compliance requirements.

Recommendation: DCC should consider developing a facilitation service to 'match' potential new entrants with withdrawing farmers

It is likely that the reforms will stimulate further attempts at diversification. However, farmers still perceive that planning authorities do not understand their needs and all too often frustrate their diversification plans.

Recommendation: Improve dialogue between land use and highways planning authorities & farming community

CAP reform has important implications for the future of Devon's upland areas. Under-grazing may become a problem but could also present new opportunities. Change may be difficult but it is not necessarily undesirable.

Recommendation: DCC should initiate a debate about the future management of upland areas, including the desirability or otherwise of some managed retreat from grazing in certain areas.

Access to agri-environmental and rural development funding can represent an important addition to farm income.

Recommendation: DCC should take steps to facilitate the uptake of agri-environmental and rural development schemes by farmers in the County.

The Impact of CAP Reform on Devon's Agriculture

Chapter 1: Introduction

Background

In 2003 the CRR published a report on the *State of Agriculture in Devon*, funded by DCC. This, follow up, report presents a detailed analysis of the possible impact of the 2003 CAP reform agreement on farm incomes in Devon. The specific objectives of the research were to:

- examine the implications of the Single Farm Payment for farm incomes in Devon
- identify the impact on different farming sectors
- identify the impact on farms of different sizes
- identify the impact on the districts of Devon
- consider the implications of the new CAP for farm employment, agricultural restructuring and the environment.

DEFRA's decision to implement the CAP reform agreement through a 'hybrid' system (combining an element of payment based on historic support receipts and an area based payment) will have a significant impact on farming in Devon (as well as the rest of England) due to the switch from the historic subsidy system to a flat rate area based payment (The payment is now referred to by DEFRA as the SPS – Single Payment Scheme). Furthermore, modulation will reduce the value of the SP that Devon farmers receive to varying degrees depending on farm type, farm size and enterprise ratios.

CAP reform decisions

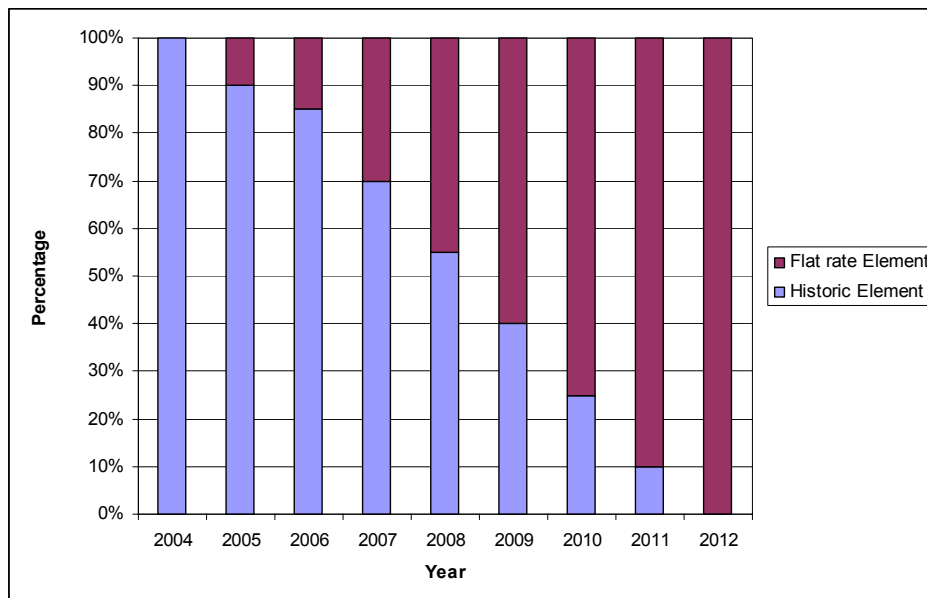
From 2005, a 'dynamic hybrid' system for the SPS will be implemented as the historic claims element is progressively replaced by a flat rate payment. Following the announcement by DEFRA on April 22 2004 payment rates will be now be differentiated by three land categories instead of the original two region proposal. The actual payment rates will not be known for some time but DEFRA estimates that they will be in the following ranges:

- £210-230 outside Severely Disadvantaged Areas (SDAs)

- ⊕ £110-£130 within SDAs but excluding land above the moorland line
- ⊕ £20-£40 for SDA land above the moorland line

The levels of flat rate payments given above are **gross** payments as *modulation* is excluded as well as the deductions necessary to create the *National Reserve*. In addition, further deductions can be triggered by the *Financial Discipline* mechanism designed to control the CAP budget at the EU level. Finally, the timescale of the transition from the historic element of the SP to that of the area based flat rate is illustrated in Figure 1.1.

Figure 1.1: Historic and flat rate elements of the SPS in England.



Modulation will impact on the overall SP three ways: UK modulation, EU modulation and through the Financial Discipline. UK modulation rates are likely to be higher than that envisaged in the Curry Report since UK government co-financing is likely to be less than previously envisaged and because of the need to fund the new Entry Level Stewardship (ELS) Scheme (Jones, 2004). In addition, further cuts are likely via the Financial Discipline in order to control overall CAP spending, fund subsidies in the Accession States and to fund further CAP reform. Taking EU and UK modulation together, Devon's farmers can expect a 15% reduction in their single farm payments. However, this reduction may be even greater if the financial discipline element of modulation is accounted for. The financial discipline is likely to be required from 2008

(if not earlier). Jones (2004) makes a number of assumptions about the need for the Financial Discipline and suggests that it will start to operate from 2008, rising to over 4.5% by 2013. Therefore, the total modulation rate by 2013 could be nearly 20% (see Table 1.1).

Table 1: Modulation rates from 2004 to 2013

Year	UK Modulation	EU Modulation	Financial Discipline	Total Modulation
2004	3.5%			3.5%
2005	4.5%	3.0%		7.5%
2006	6.0%	4.0%		10.0%
2007	8.0%	5.0%		13.0%
2008	10.0%	5.0%	1.7%	16.7%
2009	10.0%	5.0%	2.5%	17.5%
2010	10.0%	5.0%	3.5%	18.5%
2011	10.0%	5.0%	3.9%	18.9%
2012	10.0%	5.0%	4.2%	19.2%
2013	10.0%	5.0%	4.5%	19.5%

Given the structure of the SPS and the incremental nature of modulation, modelling these is likely to indicate differential impacts for Devon's agricultural community.

The data used in the economic modelling exercise undertaken for this project were drawn from the SW Farm Business Survey undertaken annually by the CRR on contract to DEFRA. Within the SW sample the Devon sub-sample was considered too small to provide a viable basis for the modelling therefore SW data has been used and applied to the farming situation in Devon using agricultural census data (see appendix 1 for a detailed discussion of modelling methodology and assumptions).

It is important that the results presented in this report are not used out of context as they are sensitive to the assumptions made by the research team.

The Impact of CAP Reform on Devon's Agriculture

Chapter 2: The Impact of CAP reform on farm incomes in Devon

Introduction

This chapter considers the results of the economic model of farm incomes in some detail, examining the impact on different types and sizes of farm and the differential impact on the districts of Devon. In aggregate terms, at a county level, the impact on farm incomes is likely to be neutral or marginally positive. However, this finding is sensitive to certain assumptions and obscures a complex pattern of winners and losers at the farm level. As Table 2.1 indicates the average annual Net Farm Income (NFI) for all farms in Devon over the period 2000-2002¹ has been calculated as £60.91 million. Following the implementation of the new CAP regime, including modulation (but excluding reductions for the national reserve), by 2013 NFI at the county level may have fallen to £58.47 million. If the impact of ELS is considered (assuming an 80% uptake) by 2013 this figure could rise to over £62 million. In reality, NFI is likely to fall somewhere between the lowest and highest figures, suggesting a largely neutral impact at the county level. This is because an 80% uptake of ELS may not be realistic and because of the 'dynamic changes' farmers make in response to the decoupled single payment (see below for a discussion of the potential impact of dynamic changes). In addition, these figures do not take into account possible receipts from other ERDP (England Rural Development Plan) schemes.

Within the county, as table 2.1 illustrates, some farm types will be clear winners (such as lowland livestock and cereal farms), while others will lose out (most notably SDA livestock farms). For some, such as DA livestock farms, widespread participation in ELS could lead to proportionally significant gains while total NFI for the sector would still remain low. For others, such as dairy farms, participation in ELS could reduce larger losses to marginal losses. As table 2.2 indicates, in the absence of additional income from participation in ELS, several districts will suffer a marginal loss of NFI, although the loss is slightly larger for West Devon. The large increase in NFI in Exeter is slightly misleading given the very small size of the district's agriculture sector.

¹ The base period for calculating entitlement to the single payment

The Impact of CAP Reform on Devon's Agriculture

Table 2.1 The impact of CAP reform on Net Farm Income (NFI) in Devon (£m)

Farm type	Average NFI over base years	NFI in 2013	% change	NFI in 2013 incl. ELS ¹	% change
Cereals	2.47	3.64	47	4.04	63
Lowland livestock	4.12	8.58	108	9.85	139
Mixed	5.00	5.44	9	5.77	15
DA² livestock	1.21	1.49	24	1.61	34
SDA³ livestock	6.08	3.80	-38	2.63	-57
Dairy	34.5	27.97	-21	31.02	-15
Pigs & poultry	7.53	7.60	1	7.72	3
Total	60.91	58.47	-4	62.65	2.9

¹ Entry Level Stewardship. Assumes 80% uptake

² Disadvantaged Area

³ Severely Disadvantaged Area

Table 2.2 The impact of CAP reform on Net Farm Income (NFI) at District level (£m)

	Average NFI over base years	NFI in 2013 (Excl. ELS)	% change	NFI in 2013 (Incl. ELS)	% change
East Devon	10.49	9.92	-5	10.81	3
Exeter	0.04	0.07	66	0.07	86
Mid Devon	10.17	10.31	1	11.27	11
North Devon	9.78	9.07	-7	9.38	-4
South Hams	6.59	6.59	0	7.19	9
Teignbridge	4.28	4.41	3	4.57	7
Torrige	12.16	11.50	-5	12.60	4
West Devon	7.40	6.60	-11	6.75	-9
Devon	60.91	58.47	-4	62.65	2.9

While understanding the aggregate impact is clearly important it ignores sometimes significant differences in NFI over time, between farms of different sizes but of the

same type and between different types of farm in the districts of Devon. That more detailed analysis is the subject of the remainder of this chapter.

Cereal and general cropping farms

The single payment and modulation

In the base year period, 2000 to 2002, the Net Farm Income (NFI) of a typical cereal farm in Devon is calculated at £69 ha⁻¹. Without subsidies, the NFI of cereal farms in Devon would have been negative at -£86ha⁻¹. Therefore, the annual subsidy payment in the base year of £155ha⁻¹ (of which 76% is directly attributable to cereals and other crops) is critical to the survival of cereal farms in their present form. Decoupling subsidy payments from production is likely to benefit cereal farmers in the county. Moreover, switching the decoupled historic payment to an area based payment will further increase income levels, assuming no other changes occur. Indeed, as illustrated in Table 2.3, the single payment is likely to increase from £155ha⁻¹ to £220ha⁻¹ by 2012.

Table 2.3: The average single payment per hectare for cereal farms in Devon

Single Payment	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Element	-	£144	£136	£112	£88	£64	£40	£16	£0	£0
Area Element	-	£22	£33	£66	£99	£132	£165	£198	£220	£220
Single Payment (Gross)	£155	£167	£170	£179	£187	£196	£205	£214	£220	£220
Modulation	-£1	-£7	-£11	-£16	-£24	-£26	-£30	-£32	-£33	-£34
Single Payment (Net)	£154	£160	£159	£162	£164	£170	£176	£182	£187	£186
NFI/ha	£64	£72	£73	£78	£80	£86	£92	£99	£103	£102

Overall, cereal farms tend to be some of the largest farm types in Devon and they are likely to benefit the most per farm with gross payments increasing from £26,949 to £38,240 by 2012 (see Appendix 2 for a discussion of subsidy payments). Consequently, they are likely to have more deducted as a result of modulation as the buffer of €5,000 per farm diminishes as farm size increases. Therefore, as the rate of modulation increases, the amount subtracted per hectare also rises. Nevertheless, the aggregate effect is positive for cereal farms in Devon that are likely to see an appreciation in the single payment from £154 ha⁻¹ to £186 ha⁻¹. Thus regardless of the negative impacts of

modulation, NFI increases to £102 ha⁻¹ in 2013 as compared to £69 ha⁻¹ in the base years.

Entry Level Stewardship

The introduction of the Entry Level Stewardship scheme will also have a positive impact on the NFI of Devon's cereal farmers. On average, cereal farms in the county currently receive £13.03 ha⁻¹ for participating in ESA and CS schemes. Therefore, farmers that meet the requirements for ELS could receive an additional £16.97 ha⁻¹, taking NFI to £119 ha⁻¹ in 2013, which equates to a 70% increase over the base period. However, this appreciation will only occur assuming that production costs and crop prices remains constant. **Furthermore, boosting income through additional subsidy payments, regardless of whether they are decoupled or environmental, does not negate the fact that cereal farming without them is unprofitable² in Devon.**

Farm size

The average size of a small cereal farm is approximately 100 ha while that of a large farm is 206 ha. Interestingly, the NFI of small cereal farms, despite being less per farm was twice that of larger units when interpreted on a per hectare scale; £111 ha⁻¹ compared to £51 ha⁻¹. By far the greatest reason for this difference is that small farms tend to produce much higher value cash crops. However, in terms of the single payment, smaller cereal farms were in receipt of less subsidy payments than larger comparatives in the base period (£142 ha⁻¹ and £161 ha⁻¹). This is likely to be significant as the switch from the historic to an area based system progresses since small farms will have more to gain per hectare. Furthermore, the exclusion of the first €5,000 of single payment from modulation means that smaller farms will have less deducted per hectare. Table 2.4 illustrates how small farms are likely to benefit more per hectare than larger farms in Devon as a result of the introduction of the single income payment and the associated process of modulation. Moreover, because of the differential between their respective NFI ha⁻¹, the absolute income of small cereal farms is almost on a par with much larger farms (see Table 2.5).

² Unprofitable in this report is being used in the context of negative NFI. It does not account for incomes sourced either from non-agricultural on farm enterprises or off-farm activities.

Table 2.4: NFI ha⁻¹ of small and large cereal farms in Devon (excl. ELS)

NFI	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Small Cereal Farms (1)	£111	117	119	126	131	139	146	155	160	159
Large Cereal Farms (2)	£51	53	54	58	59	64	69	75	78	78
Differential between (1) & (2)	£60	£64	£65	£68	£72	£75	£77	£80	£82	£81

Table 2.5: Absolute NFI of small and large cereal farms in Devon (excl. ELS)

NFI	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Small Cereal	£11,098	£10,699	£11,673	£11,851	£12,596	£13,024	£13,821	£14,575	£15,426	£15,969
Large Cereal	£10,554	£9,434	£10,886	£11,018	£11,929	£12,059	£13,133	£14,125	£15,351	£16,117
All cereal farms	£12,012	£11,141	£12,487	£12,656	£13,588	£13,891	£14,953	£15,942	£17,123	£17,866

Countywide cereal farming

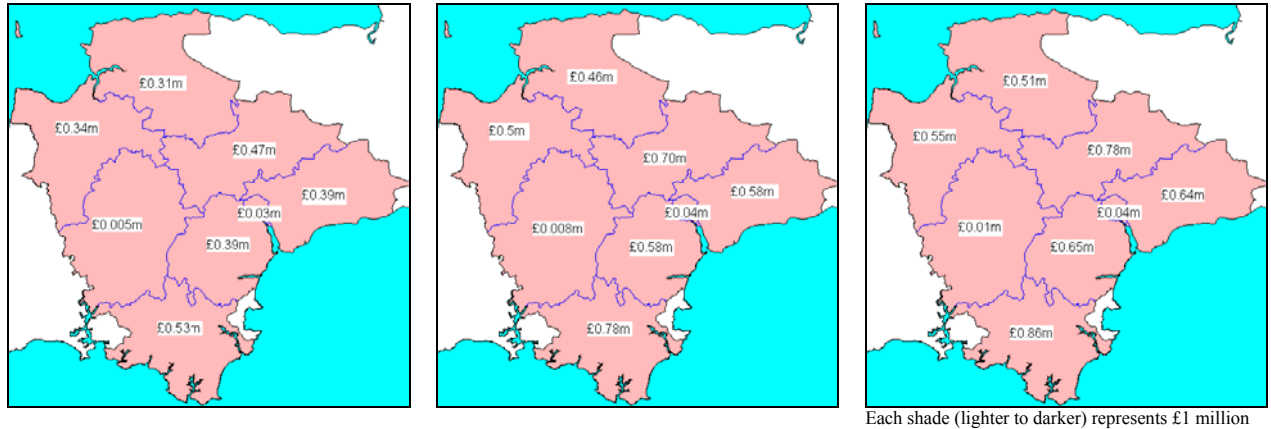
The relatively low income derived from cereal farming, allied to its comparative importance *vis-à-vis* other farming types in Devon, means that income derived from this sector at a county basis is reasonably insignificant. The average NFI from cereal farms over the base year period at a county level equates to £2.47 million (or 4% of the County's total NFI). However, the spatial distribution of this is not uniform as 40% of production is concentrated in Mid-Devon and the South Hams (respectively £0.47 million and £0.53 million). Therefore, it is these districts that will benefit most from the positive impact of the single payment on cereal farming as their income may increase by £0.48 million by 2012 as a result of the introduction of the single payment and its subsequent switch from a historical basis to an area based payment (see Figure 2.1). As a county, the increase in NFI is likely to amount to £1.17 million by 2012. Other districts of Devon have a lower area of cereals and will on aggregate benefit less. In addition to these increases, the entry level agri-environmental scheme could potentially boost Devon's cereal farmers' income by an extra £0.39 million (assuming an 80% take up rate). Again, Mid-Devon and the South Hams will be the major beneficiaries.

Figure 2.1: Net Farm Income from cereal and general cropping farms in Devon

1. Average over base years

2. After modulated single payment applied in 2013

3. Including ELS and modulated single payment in 2013



Outlook for cereal farmers in Devon

Generally, the outlook for cereal farmers in Devon is positive. The introduction of a single farm payment and its transition from an historic amount to an area based system is likely to see a steady increase in NFI over the period 2004 to 2013 (as illustrated in Figure 2.1). The introduction of the ELS scheme in 2005 is likely to provide further benefits to Devon's cereal farms as their present level of receipts from ESAs and CS participation is low. Clearly, income from the ELS will depend on the farmers' willingness to join. A strengthening of Sterling against the Euro could be the only negative effect on the income of the county's cereal farms. Since cereal prices are sensitive to exchange rate fluctuations, any positive gains from the single income payment could be reduced through a depreciation of the Euro (see Appendix 3).

Lowland cattle and sheep farms

The single payment and modulation

In the base year period, 2000 to 2002, the Net Farm Income (NFI) of a typical lowland cattle and sheep farm in Devon is calculated at £33 ha⁻¹. This represents the lowest NFI of all farm types in Devon. Indeed, without subsidies, the NFI of lowland cattle and sheep farms in Devon would have been negative at -£120 ha⁻¹. Therefore, the annual subsidy payment in the base year of £153 ha⁻¹ (of which 72% is directly attributable to lowland cattle while 17% is attached to lowland sheep enterprises) is essential for the

survival of the typical lowland livestock farm. From this, it is clear that decoupling of agricultural support payments from livestock will impact on the gross margins of cattle enterprises.

Similar to cereal farms, decoupling subsidy payments from production is likely to benefit lowland cattle and sheep farmers in the county. Moreover, switching the decoupled historic payment to an area based payment will further increase income levels, assuming no other changes occur. Indeed, as illustrated in Table 2.6, the single payment is likely to increase steadily from £153 ha⁻¹ to £220ha⁻¹ by 2012.

Table 2.6: The average single payment and NFI ha⁻¹ for lowland cattle and sheep farms in Devon

Single Payment	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Element	-	£139	£131	£108	£85	£62	£39	£15	£0	£0
Area Element	-	£22	£33	£66	£99	£132	£165	£198	£220	£220
Single Payment (Gross)	£153	£161	£164	£174	£184	£194	£204	£213	£220	£220
Modulation	-£1	-£6	-£10	-£15	-£22	-£25	-£28	-£30	-£32	-£32
Single Payment (Net)	£152	£154	£154	£159	£162	£169	£176	£183	£188	£188
NFI per ha	32	36	36	41	43	50	57	64	69	68

Lowland cattle and sheep farms are much smaller than cereal farms and as such the gross payment per farm is less. Nevertheless, this farm type is likely to still benefit substantially with gross payments increasing from £17,286 to £21,779 by 2012. The modulation buffer of €5,000 per farm to protect smaller holdings means that the net appreciation in the single payment rises from £152 ha⁻¹ to £188 ha⁻¹. Thus regardless of the negative impacts of modulation, NFI increases from £33 ha⁻¹ to £68 ha⁻¹ in 2013. While this escalates the NFI of lowland cattle and sheep farms by over 200%, it nevertheless remains in a relatively poor position *vis-à-vis* other farm types in Devon.

Farm size

The average size of a small lowland cattle and sheep farm is approximately 66 ha while that of a large farm is 155 ha. Unlike cereal farms, larger cattle and sheep farms generate greater NFI than their smaller counterparts, who make a marginal loss;

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respectively £70 ha⁻¹ and -£9 ha⁻¹. There is more than one reason for this large differential in NFI. The most important is that income generated from cattle and their concomitant subsidies is much higher on larger farms. In addition, larger farms derive more per hectare from cereals, cereal subsidies and environmental payments. Small lowland cattle and sheep farms only exceed larger farms in deriving income from miscellaneous production.

In terms of the single payment, smaller lowland cattle and sheep farms were in receipt of less subsidy payments than larger comparatives in the base period (£134 ha⁻¹ and £169ha⁻¹). This is likely to be significant as the switch from the historic to an area based system progresses since small farms will have more to gain per hectare. Furthermore, the exclusion of the first €5,000 of single payment from modulation means that smaller farms will initially have less deducted per hectare. Table 2.7 illustrates how small farms are likely to benefit more per hectare than larger farms in Devon as a result of the introduction of the single income payment and the concomitant process of modulation. However, in absolute terms, the NFI of both large and particularly small lowland cattle and sheep farms remains bleak even in the longer term, despite the positive increases resulting from the introduction of the single payment (see table 2.8).

Table 2.7: NFI ha⁻¹ of small and large lowland cattle and sheep farms in Devon (excl. ELS)

NFI	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Small Lowland Cattle And Sheep (1)	-£11	-£3	-£1	£7	£13	323	£32	342	348	£48
Large Lowland Cattle And Sheep (2)	£69	£70	£70	£72	£72	£76	£80	£86	£89	£89
Differential between (1) & (2)	£80	£73	£71	£65	£59	£53	£48	£44	£41	£41

Table 2.8: Absolute NFI of small and large lowland cattle and sheep farms in Devon (excl. ELS)

NFI	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Small Lowland Cattle and Sheep	-£92	-£195	-£82	£459	£884	£1,507	£2,103	£2,753	£3,170	£3,135
Large Lowland Cattle and Sheep	£10,693	£10,933	£10,787	£11,101	£11,110	£11,826	£12,482	£13,312	£13,828	£13,732
All lowland cattle and sheep	£3,572	£4,023	£4,047	£4,588	£4,915	£5,691	£6,421	£7,266	£7,802	£7,734

Entry Level Stewardship

The introduction of ELS will also have a positive impact on the NFI of Devon's lowland cattle and sheep farmers. On average, lowland cattle and sheep farms in the county currently receive £13.87 ha⁻¹ for participating in ESA and CS schemes.

Therefore, farmers that meet the requirements for ELS could receive an additional £16.13 ha⁻¹, taking NFI from £36 ha⁻¹ in 2004 to £52 ha⁻¹ in 2005 if they sign up for the scheme. By 2013, NFI with participation in ELS could increase to £85 ha⁻¹, which is 2.5 times greater than that received over the base years. However, this increase will only occur assuming that production costs and crop prices remain constant.

Furthermore, boosting income through additional subsidy payments regardless of whether they are decoupled or environmental does not negate the fact that lowland cattle and sheep farming without them is unprofitable in Devon.

Countywide lowland cattle and sheep farming

The significance of lowland cattle and sheep farming to Devon and changes emanating from CAP reform will have crucial repercussions for districts of the county. Since the income derived from lowland cattle and sheep farming is initially low, the positive increases, although small in absolute terms, will impact the county's livestock farming.

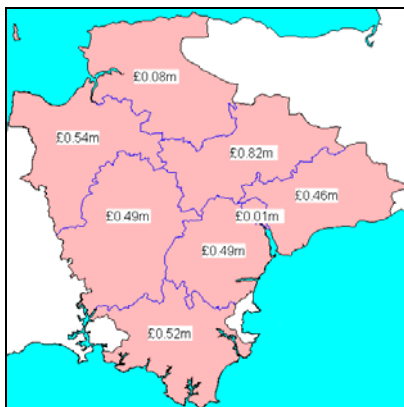
Figure 2.2 illustrates how changes to each district are likely to occur. The average NFI from lowland cattle and sheep farms over the base years' period at a county level equated to £4.12 million. Unlike the spatial pattern of cereal farming, that of lowland cattle and sheep farming is more uniform as each district (with the exception of Exeter)

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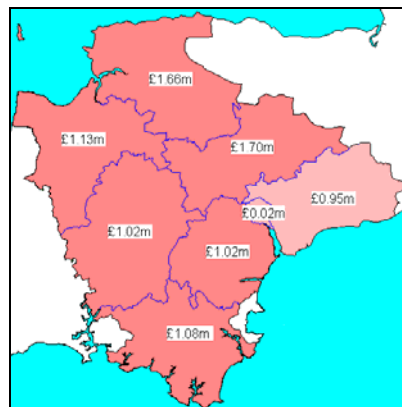
accounts for between 11% and 20% of this farm type. At the top end of this range, Mid-Devon and North Devon are likely to benefit most from the introduction of a single payment. These districts will see the NFI from lowland cattle and sheep farms increase from £0.82 million and £0.80 million to £1.70 million and £1.66 million respectively. With the exception of Exeter, the NFI of all districts will increase by over 200% by 2013 as a result of the introduction of the single payment and its subsequent switch from a historical basis to an area based payment. As a county, it is estimated that these changes to subsidy payments will augment NFI by £4.46 million by 2013. Cumulatively, over this period, an additional NFI of £20.95m could be expected.

Figure 2.2: Net Farm Income from lowland livestock farms in Devon

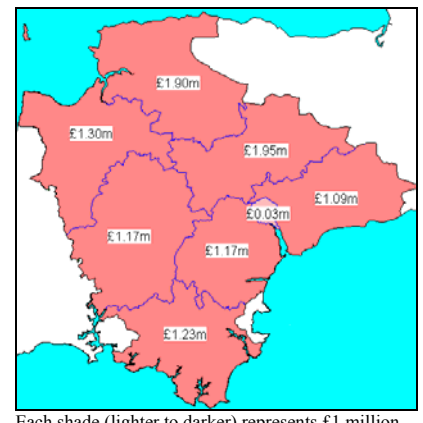
1. Average over base years



2. After modulated single payment applied in 2013



3. Including ELS and modulated single payment in 2013



Each shade (lighter to darker) represents £1 million

In addition to these increases from the single payment, the ELS scheme could potentially boost Devon's lowland cattle and sheep farmers' income by an extra £1.27 million (assuming an 80% take up rate). Again, Mid-Devon and North Devon will be the major beneficiaries.

Outlook for lowland cattle and sheep farmers in Devon

Generally, the outlook for lowland cattle and sheep farmers in Devon is positive in the sense that NFI will increase although, as noted earlier, NFI per farm remains very low. The introduction of a single income payment and its switch from an historic amount to

an area based system is likely to lead to a steady increase in their NFI over the period 2004 to 2013 (as is illustrated in Figure 2.2). In particular, smaller lowland cattle and sheep farms in the county are likely to benefit. The introduction of ELS could further boost NFI by £1.27 million assuming an 80% uptake rate. A strengthening of Sterling against the Euro could be the only negative effect on the income of the county's lowland cattle and sheep farms. Since lowland cattle and sheep prices are sensitive to exchange rate fluctuations, any positive gains from the single income payment could be reduced through a depreciation of the Euro.

Mixed cropping, cattle and sheep farms

The single payment and modulation

In the base year period, 2000 to 2002, NFI of a typical mixed cropping, cattle and sheep farm in Devon is calculated at £95 ha⁻¹. Of this, subsidies contribute £180 ha⁻¹ and, as such, without them NFI would have been negative at -£85 ha⁻¹. Of the subsidy payments, 54% are related to cattle enterprises, 32% are attributable to cereal enterprises, 10% to sheep enterprises, with the remaining 4% to other crops. Similar to the situation of lowland cattle and sheep farms, it is clear that decoupling of agricultural support payments from livestock will impact on the gross margins of cattle enterprises.

Decoupling subsidy payments from production using the single payment mechanism is likely to marginally benefit mixed farmers in the county since initially the historic payment is relative high. Indeed, it is only in the longer term when the historic payment is switched to the area based method that the NFI of mixed farms is likely to increase. In the shorter term, NFI will marginally decrease and not fully recover until 2009. Table 2.9 illustrates this transition from an initial gross single payment of £180 ha⁻¹ rising to £220ha⁻¹ by 2012.

Table 2.9: The average single payment and NFI ha⁻¹ for mixed farms in Devon

Single Payment	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Element	-	£165	£155	£128	£101	£73	£46	£18	£0	£0
Area Element	-	£22	£33	£66	£99	£132	£165	£198	£220	£220
Single Payment (Gross)	£180	£188	£190	£195	£200	£206	£211	£216	£220	£220
Modulation	-£1	-£8	-£12	-£17	-£24	-£26	-£29	-£31	-£32	-£32
Single Payment (Net)	£179	£180	£178	£178	£176	£179	£182	£186	£188	£188
NFI/ha	£95	£95	£93	£94	£92	£95	£98	£102	£104	£104
NFI per farm	£11,148	£11,067	£10,890	£10,980	£10,794	£11,151	£11,468	£11,916	£12,189	£12,118

The average size of mixed farms in Devon is 117 ha and as such the gross payment per farm will increase from £21,064 to £25,725 by 2012. However, as these farms are reasonably large, with a high historic subsidy payment, the modulation buffer of €5,000 per farm holds little protection. Indeed, it is the effect of modulation that is likely to reduce NFI in the short to medium term. This is because much of the single payment in the initial years of its implementation is based on the historic element. Therefore, the higher this is, the greater cuts will be made through modulation in these early years. For mixed farms, this has the effect of reducing the net single payment from £180 ha⁻¹ in 2005 to £176 ha⁻¹ in 2008, which *ceretis paribus* has a negative impact on NFI until 2009.

Entry Level Stewardship

The introduction of ELS could mitigate the negative impacts of modulation as its introduction is likely to increase the NFI of mixed farms in Devon. On average, mixed farms in the county currently receive £17.59 ha⁻¹ for participating in ESA and CS schemes. Therefore, farms that meet the entry requirements for ELS could receive an additional £12.41 ha⁻¹, taking NFI from £95 ha⁻¹ in 2004 to £107 ha⁻¹ in 2005 if they sign up for the scheme. By 2013, NFI with participation in the entry level scheme could rise to £116 ha⁻¹, which is a 22% increase compared to the base period. However, this increase will only occur assuming that production costs and crop prices remain constant. Furthermore, boosting income through additional subsidy payments

regardless of whether they are decoupled or environmental does not negate the fact that mixed farming without them is unprofitable in Devon.

Countywide mixed farming

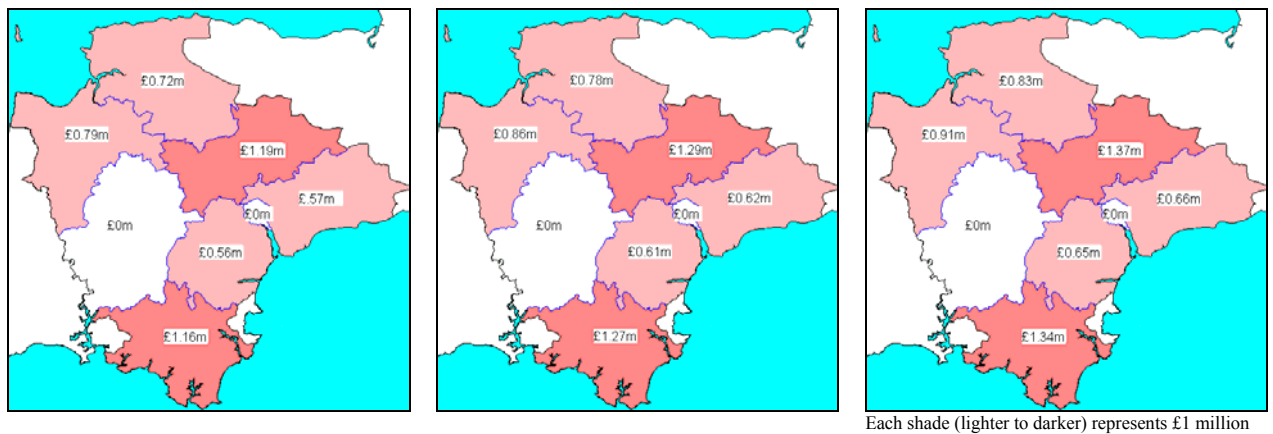
The significance of mixed farming to Devon and changes emanating from CAP reform will have marginal repercussions at the district level. Figure 2.3 illustrates how changes to each district are likely to occur. The average NFI from mixed farms over the base years' period at a county level equated to £5 million. The spatial pattern of mixed cropping, cattle and sheep farms tends to be dominant in Mid Devon (24%) and the South Hams (23%) with few or no farms in West Devon and Exeter. In 2013, the NFI of mixed farms in Mid-Devon is likely to have marginally increased from £1.19 to £1.29 million. In addition to these increments, ELS could be of more importance to mixed farms than either lowland cattle and sheep or cereal farms since it could provide an extra £330,000 to mixed farms in Mid Devon.

Figure 2.3: NFI from mixed farms in Devon

1. Average over base years

2. After modulated single payment applied in 2013

3. Including ELS and modulated single payment in 2013



The cumulative effects of changing to a single payment and the introduction of ELS are mixed. During the initial years of the single payment, the loss sustained by mixed farming reflects the low cumulative income derived between 2004 and 2013, at £850,000. Conversely, the impact of the ELS scheme seems comparatively large at £3.02 million over the period 2005-2013 (assuming 80% uptake). Potentially, the total

cumulative increases from gains from the single payment of mixed cropping, cattle and sheep farms, and from the introduction of ELS could reach £3.87 million by 2013.

Outlook for mixed farmers in Devon

Generally, the outlook for mixed farmers in Devon is positive. The introduction of the single payment and the transition from an historic to an area based system is likely to lead to an increase in NFI over the period 2004 to 2013 after an initial fall (as illustrated in Figure 2.3). The introduction of ELS in 2005 is likely to provide further benefits to Devon's mixed farms as their present level of receipts from ESAs and CS participation is low. Clearly, income from ELS will depend on the farmers' willingness to join. An 80% up take rate would increase income of mixed farmers by £330,000 annually in Devon as a whole. A strengthening of Sterling against the Euro could be the only negative effect on the income of the county's mixed farms. Since mixed farming prices are sensitive to exchange rate fluctuations, any positive gains from the single income payment could be reduced through a depreciation of the Euro.

Disadvantaged area (DA) cattle and sheep farms

The single payment and modulation

In the base year period, 2000 to 2002, the NFI of a typical DA cattle and sheep farm in Devon is calculated at £52 ha⁻¹. Of this, subsidies contribute £176 ha⁻¹ and as such without them NFI would have been negative at -£123 ha⁻¹. Of the subsidy payments, 70% are related to cattle enterprises, 22% are attributable to sheep enterprises, with the remaining 8% receipts from crop enterprises.

Decoupling subsidy payments from production using the single payment mechanism is likely to have a marginally negative impact on DA cattle and sheep farms in the county. A similar argument to that in the case of mixed farming is applicable here: the initial historic payment is relatively high and therefore it is not until the area based method reaches 60% of the payment that the NFI of DA livestock farms is likely to increase. In the short term, NFI marginally decreases, not recovering until 2009. Table 2.10

illustrates this transition from an initial gross single payment of £176 ha⁻¹ rising to £220ha⁻¹ by 2012.

Table 2.10: The average single payment and NFI ha⁻¹ for DA cattle and sheep farms in Devon

Single Payment	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Element	-	£159	£151	£124	£97	£71	£44	£18	£0	£0
Area Element	-	£22	£33	£66	£99	£132	£165	£198	£220	£220
Single Payment (Gross)	£176	£183	£185	£191	£197	£204	£210	£216	£220	£220
Modulation	-£1	-£7	-£11	-£17	-£24	-£26	-£29	-£30	-£32	-£32
Single Payment (Net)	£175	£175	£174	£175	£174	£178	£181	£186	£188	£188
NFI ha⁻¹	£51	£52	£51	£52	£51	£55	£58	£63	£65	£65
Total NFI	£5,519	£5,622	£5,464	£5,575	£5,504	£5,915	£6,288	£6,779	£7,081	£7,017

The average DA cattle and sheep farm is 108 ha and as such the gross payment per farm will increase from £19,015 in 2004 to £23,784 by 2012. However, as these farms have a relatively high historic subsidy payment, the modulation buffer of €5,000 per farm holds little protection. Indeed, the effect of modulation reduces NFI in the short to medium term because much of the single payment in the initial years of its implementation is based on the historic element. However, as the single payment is slightly less than that of mixed cropping, for cattle and sheep farms, the loss of income through modulation is more or less neutral until after 2008. This suggests that the critical historic basis of single income payment is approximately £176 ha⁻¹. If it is greater than this, modulation is likely to impinge harder in the early period; while if it is less, modulation cuts will not be as onerous. Overall, for DA livestock farms, modulation marginally reduces the net single payment from £175 ha⁻¹ in 2005 to £174 ha⁻¹ in 2008, which *ceretis paribus* has a negative impact on NFI until 2009. After this, NFI increases to a maximum of £65 ha⁻¹ in 2012

Entry Level Stewardship

The introduction of ELS mitigates the negative impacts of modulation as its introduction is likely to increase the NFI of DA livestock farms in Devon. On average, DA farms in the county currently receive £18.92 ha⁻¹ for participating in ESA and CS

schemes. Therefore, farms that meet the requirements for ELS would receive an additional £11.08 ha⁻¹, only marginally impacting on NFI in 2005 but increasing it to £82 ha⁻¹ by 2013 (a 58% increase compared to the base period). However, this increase will only occur assuming that production costs and crop prices remain constant. Furthermore, boosting income through additional subsidy payments regardless of whether they are decoupled or environmental does not negate the fact that DA farming without them is unprofitable in Devon.

Countywide DA cattle and sheep farming

The significance of changes in DA cattle and sheep farming resulting from CAP reform will have implications for a number of districts of the county. The average NFI from DA farms over the base years at a county level equated to £1.21 million. Figure 2.4 illustrates how this might change in specific districts. The spatial distribution of DA cattle and sheep farms tends to be dominated by West Devon which contains half of the disadvantage area cattle and sheep farms, this is followed by Torrington, which has 39% while North Devon has 10% and Teignbridge the remainder.

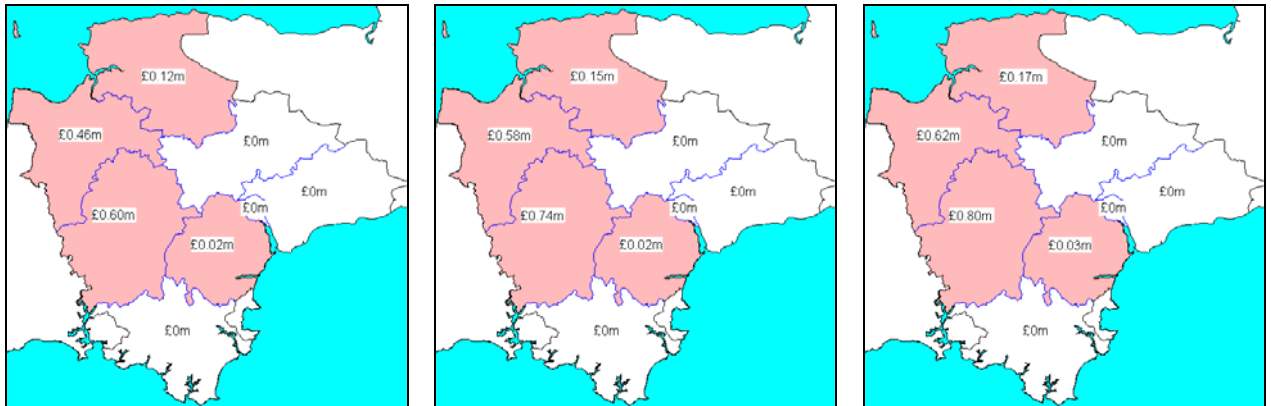
By 2013, the NFI of DA livestock farms in all districts (with DA farming) will have marginally increased. Assuming an 80% rate of uptake, ELS may further boost NFI by £0.12million annually, and in 2013 NFI in Devon is likely to have appreciated to £1.61million, compared to an average of £1.21million in the base period and a projected £1.49 million in the absence of ELS.

Figure 2.4: NFI from DA cattle and sheep farms in Devon

1. Average over base years

2. After modulated single payment applied in 2013

3. Including entry level scheme and modulated single payment in 2013



Each shade (lighter to darker) represents £1 million

Severely disadvantaged area (SDA) cattle and sheep farms

The single payment and modulation

In the base year period, the NFI of a typical SDA cattle and sheep farm in Devon is calculated at £113 ha⁻¹. Of this, subsidies contribute £145 ha⁻¹ and as such without them NFI would have been negative at -£32 ha⁻¹. Of the subsidy payments, 62% are related to cattle enterprises while only 38% are attributable to sheep enterprises. Clearly, if, as also examined in this section, a hill farm has no cattle enterprises, then total subsidy payments are less at £116 ha⁻¹, which is all attributed to sheep. From this the differential between subsidies on cattle and sheep is fully apparent. Moreover, since the single payment to SDA farms is less than other farm types (except SDA within the moorland line) and is assumed to be £120ha⁻¹ in this report, then cattle enterprises would appear to be a liability.

Decoupling subsidy payments from production using the single payment mechanism is likely to have a negative impact on SDA cattle and sheep farms in the county, regardless of whether these are cattle and sheep, sheep only, or exist within the moorland line. **Unlike the farming types already discussed, SDA farming income can be expected to decline from the introduction of the single farm payment, as their historic subsidy payment is greater than the proposed single payment limit of**

£120 ha⁻¹, as illustrated in Table 2.11. Therefore, the introduction of the single payment with concomitant modulation is likely to reduce the NFI of SDA farms, reducing average SDA NFI from £113 ha⁻¹ in the base years to £71 ha⁻¹ in 2013 (see table 2.12). However, in the absence of cattle, an SDA farm's NFI reduction can be expected to be much less dramatic, falling from £111 ha⁻¹ in the base years to £97 ha⁻¹ in 2013. The implications for farms within the moorland line are more difficult to assess because of the numerous additional assumptions that are necessary. However, the critical factor will be the level of subsidy payments in the base period. The higher these are the greater will be the decline in a moorland line SDA farm's NFI following the implementation of the single payment.

Table 2.11: The average single payment and NFI for SDA cattle and sheep farms in Devon

Single Payment	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Element	-	£130	£123	£101	£80	£58	£36	£14	£0	£0
Area Element	-	£12	£18	£36	£54	£72	£90	£108	£120	£120
Single Payment (Gross)	£145	£143	£142	£138	£134	£130	£126	£123	£120	£120
Modulation	-£1	-£6	-£9	-£12	-£16	-£17	-£17	-£17	-£17	-£17
Single Payment (Net)	£144	£137	£133	£126	£118	£114	£109	£106	£103	£103
NFI ha⁻¹	£112	£105	£101	£94	£86	£82	£77	£74	£71	£71
NFI per farm	£20,190	£18,993	£18,211	£16,915	£15,518	£14,747	£13,960	£13,310	£12,860	£12,802

Table 2.12: The average single payment and NFI for SDA sheep only farms in Devon

Single Payment	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Element		£104	£99	£81	£64	£46	£29	£12	£0	£0
Area Element		£12	£18	£36	£54	£72	£90	£108	£120	£120
Single Payment (Gross)	£116	£117	£117	£118	£118	£119	£119	£120	£120	£120
Modulation	-£1	-£5	-£7	-£10	-£14	-£15	-£16	-£17	-£17	-£17
Single Payment (Net)	£115	£112	£110	£107	£104	£104	£103	£103	£103	£103
NFI ha⁻¹	109	106	104	101	98	98	97	97	97	97
NFI per farm	£19,715	£19,193	£18,769	£18,307	£17,717	£17,635	£17,526	£17,536	£17,523	£17,465

The average SDA cattle and sheep farm is 181 ha and as such the gross SP per farm will decrease from £26,139 to £21,670 by 2012, unlike sheep only SDA farms that see an increase in gross payments from £20,961 to £21,670 by 2012. High historic subsidy

payments compared to that for SDA sheep only and in particular moorland line SDA farms means that the buffer of €5,000 per farm holds little protection from modulation. For both SDA cattle and sheep and sheep only farms, modulation steadily decreases the value of the single payment. Although sheep farms still experience a negative impact from the introduction of the single payment, they are better positioned to endure changes resulting from a switch from the historic element based on livestock payments to the area based method. **Clearly, this could have serious consequences for cattle farmers in the SDA whose historic element is likely to be much higher than sheep only farmers. Therefore, some restructuring between cattle and sheep enterprises, or at least a reduction in the size of cattle enterprises, is a reasonable expectation over the period of implementation.**

Entry Level Stewardship

Modelling the implications of the introduction of ELS in the case of SDA farms is complicated as both Exmoor and Dartmoor have ESA designations. The assumption that ELS replaces ESA and CS schemes may not be valid for these upland areas. Instead, it is likely that many farms on both Dartmoor and Exmoor that presently have ESA agreements would easily meet and exceed the entry conditions of ELS and are likely to qualify for Higher Level Stewardship (HLS). Modelling this scenario is problematic since information about the payment levels and target uptake rates for HLS is not available. Instead, we confine our comments to the level of payment that would be needed to maintain present average levels of agri-environmental payments in Devon's SDA.

In the base period, the average ESA payment to SDA farms in Devon was £43.68 ha⁻¹, while that for CS (as would be expected, because farms eligible for ESA payments are not usually also eligible for CSS payments) is very low at £2.08 ha⁻¹. Therefore, SDA farms, on average received nearly £46 ha⁻¹. Clearly, if only ELS is available, SDA farms would be at a further disadvantage as an additional £16 ha⁻¹ would be lost from NFI (i.e. they currently, on average, receive £46/ha, but under ELS would receive only £30/ha). Therefore, in order to maintain current average agri-environmental scheme

receipts, SDA farms would need to enter in to an HLS agreement with an average payment of £46 ha⁻¹.

Farm size

The average size of a small SDA cattle and sheep farm is approximately 85 ha while that of a large SDA farm is 261 ha, representing the largest farms in Devon. Farms in both size groups are currently making a positive NFI. In the base years, the NFI of small SDA farms was £148 ha⁻¹ compared to that of £85 ha⁻¹ for large SDA farms. Smaller farms tend to derive more income from both cattle and sheep per hectare. This reflects the fact that smaller farms have a much higher grazing level at 1.34 adjusted grazing livestock units (GLUs) ha⁻¹, compared to 0.91 GLUs ha⁻¹ for more extensively grazed large farms. Therefore, in terms of subsidy payments per hectare, larger farms derive less income from both cattle and sheep subsidy payments than smaller farms; £127ha⁻¹ and £166 ha⁻¹ respectively.

As the single payment is introduced, NFI is likely to decline for both large and small farms, since current subsidy payments for both exceed the final area payment of £120. However, smaller farms are more likely to be adversely affected since their historic element is £46 ha⁻¹ above the final area payment in 2012. It is expected that after modulation is accounted for the NFI of small SDA farms will decline by £59 ha⁻¹ in 2013 (see Table 2.13). Larger farms, on the other hand, are better positioned as, although their NFI will decline, it is less dramatic on a per hectare basis, with a probable loss of £25 ha⁻¹ by 2013.

Table 2.13: NFI of small and large SDA cattle and sheep farms in Devon

NFI per ha	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Small SDA Cattle and sheep (1)	£147	£139	£134	£124	£113	£106	£99	£93	£88	£88
Large SDA Cattle and sheep (2)	£83	£78	£75	£70	£65	£63	£61	£60	£59	£58
Differential between (1) & (2)	£64	£61	£59	£54	£48	£43	£38	£33	£29	£30
NFI per farm: small farms	£12,474	£11,827	£11,369	£10,503	£9,611	£9,010	£8,408	£7,867	£7,501	£7,479
NFI per farm: large farms	£21,592	£20,350	£19,508	£18,341	£16,997	£16,490	£15,947	£15,595	£15,331	£15,244

If considered on a whole farm basis, larger farms are expected to experience greater losses in total NFI in absolute terms, but a smaller proportional loss. At the whole farm level, the NFI of small farms is expected to decline from £12,474 to £7,479 in 2013, a reduction of £4,977 or 40%. Large farms on the other hand, are likely to see their NFI contract from £21,592 to £15,244 in 2013. This represents a loss of £6,348, or 29%. Clearly, such declines, whether on large or small farms, could impact severely on the structure of upland farming of Devon, although these figures do not take into account other income sources, which in some cases may help buffer the impact of CAP reform. It is probable that extensive grazing farms will be less severely affected by the implementation of a single payment.

Countywide SDA cattle and sheep farming

The implementation of the single payment will impact on Dartmoor and Exmoor as well as the districts that constitute these uplands. For Dartmoor these are West Devon (which makes up the majority), Teignbridge and the South Hams, while for Exmoor it is North Devon. The average NFI from SDA farms over the base period at a county level equated to £6.08 million (10% of the County's NFI). Of this, £3.58 is generated by Dartmoor farming while the remaining £2.49 comes from Exmoor.

By 2013, the NFI of SDA farms is likely to have decreased dramatically to £3.8 million. West Devon and North Devon are expected to be markedly affected as their NFIs decline respectively to £1.3 million from £2.08 million, and to £1.56 million from £2.49 million (see figure 2.5). Therefore, the loss to the part of Exmoor that lies within Devon could be £930,000, while the loss for Dartmoor is likely to be £0.78 million. Taking the hypothetical assumption of sheep only SDA farms, it is observed from the third map in Figure 2.5 that the decline in NFI would be reduced. Cumulatively, the loss to the upland economies of Devon from the implementation of the single farm payment could be £14.08 million over the whole period. Clearly, much of the reduction in NFI is attributable to cattle farming enterprises in these regions. If a higher single payment of £130 ha⁻¹ was introduced, an additional £0.54 million (cumulatively £5.4 million over the whole period) would mitigate losses in NFI of SDA farms. This

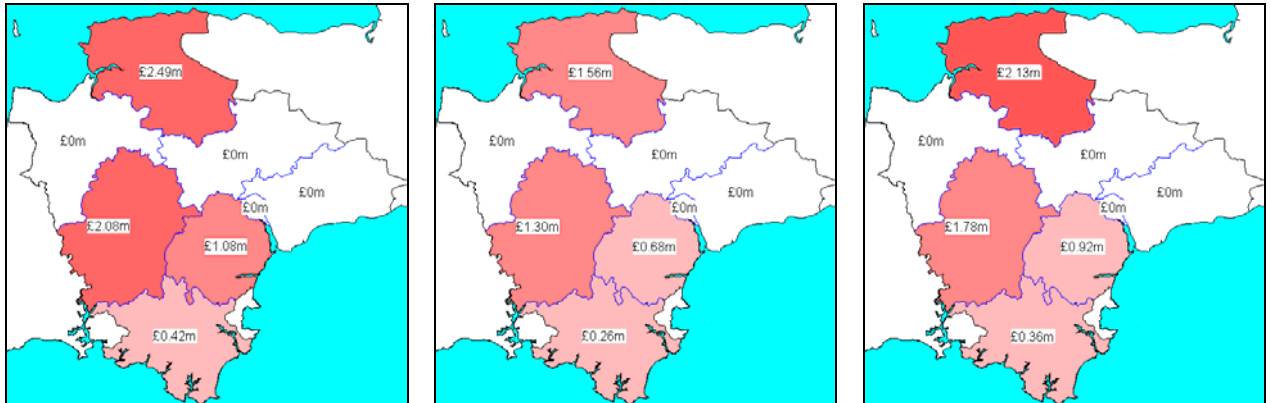
suggests that **on average a single payment of £160 ha⁻¹ is necessary to maintain the present pattern and distribution of farming in Devon's uplands.**

Figure 2.5: NFI from SDA cattle and sheep farms in Devon

1. Average over base years

2. After modulated single payment applied in 2013

3. After modulated single payment applied in 2013 (sheep only farms)



Each shade (lighter to darker) represents £1 million

Dairy farms

The single payment and modulation

In the base year period, the NFI of a typical dairy farm in Devon is calculated at £255 ha⁻¹. Of this, subsidies contribute £38 ha⁻¹, mainly through non-dairy cattle subsidies. However, the introduction of the dairy premium to compensate for the expected downward adjustment of milk prices resulting from cuts in the intervention prices of butter and skimmed milk will increase the level of subsidies paid to dairy farms. In the 2004 financial year this is expected to be £44, increasing to £131 by 2006. These payments will be incorporated in the single payment. Without considering the effects of the single payment, the NFI of dairy farmers over the period when the dairy premium is introduced is likely to decline since its introduction is assumed to only compensate dairy farmers for approximately 60% of their losses. In terms of raw milk price, this is equivalent to 15.4ppl.

The Impact of CAP Reform on Devon's Agriculture

The inclusion of the dairy premium raises the single payment to £170 ha⁻¹ by 2007. After this period, the single payment stabilizes and the effects from modulation become more apparent. Since the single payment is less than the final area based assessment, NFI after 2007 is likely to increase for the average dairy farm in Devon. Table 2.14 illustrates that from 2007, despite increased modulation, the net single payment steadily increases from £173 ha⁻¹ to £207 ha⁻¹ in 2012, having a direct positive effect on NFI.

Table 2.14: The average single payment and NFI ha⁻¹ for dairy farms in Devon

Single Payment	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Historic Element		£113	£144	£119	£93	£68	£42	£17	£0	£0
Area Element		£22	£33	£66	£99	£132	£165	£198	£220	£220
Single Payment (Gross)	£82	£137	£179	£186	£193	£201	£208	£215	£220	£220
Modulation	£1	£5	£11	£16	£22	£25	£28	£29	£31	£31
Single Payment (Net)	£81	£132	£168	£170	£171	£176	£180	£186	£189	£189
NFI per ha	£225	£203	£173	£182	£189	£194	£198	£203	£207	£206
NFI per farm	£21,494	£19,376	£16,530	£17,369	£18,046	£18,506	£18,929	£19,453	£19,780	£19,724

The introduction of the dairy premium as compensation for price cuts contributes towards the rise in the gross single payment from £7,815 per farm in 2004 to £21,032 in 2012. However, the loss of revenue from milk price changes is likely to reduce the NFI per farm from £21,494 in 2004 to £19,724 in 2013. Over this period, 2006 would appear to be a particularly poor year as NFI could dip to £16,530 per farm. Clearly, the actual mechanics of such changes will depend on how market prices react to reductions in the intervention prices and the figures reported here are merely one possible outcome. Another possible outcome predicted by Colman and Harvey (2004) suggests that the impact of CAP reform on the dairy sector is likely to drive the price of raw milk down, with 15.7ppl being a reasonable forecast post 2007. While this is only a few points of a penny different to the price modelled in this report, it could reduce NFI by a further £27 ha⁻¹. Therefore, in 2007 the NFI of an average dairy farm in Devon could be reduced to at least £13,957. **Critically, this illustrates that while the single payment incorporating the dairy premium is important, it will be the farm gate price of milk that will shape the future of dairy farming in the county.**

Entry Level Stewardship

The introduction of ELS is likely to be of benefit to dairy farms assuming they are willing and able to participate. Historically, dairy farms have been unlikely to participate in agri-environmental schemes and this is reflected in the present level of environmental payments which is the lowest of all farm types (with the exception of pig and poultry) at an average of only £7.62 ha⁻¹ from ESA or CS schemes. Therefore, the introduction of ELS could increase the NFI of dairy farms by an additional £22.38 ha⁻¹. However, this is unlikely to compensate for losses incurred by changes to the dairy support regime or the potential costs of meeting cross compliance conditions.

Farm size

As the sample of dairy farms in the South West is more comprehensive than for other farm types, it is possible to examine the impact of CAP reform on small (47 ha), medium (81 ha) and large (150 ha) dairy farms. The impact of CAP reform on dairy farms differs slightly by farm size (see Table 2.15). For each farm size the expected reduction in the price of milk as a result of changes to intervention prices is likely to have the greatest impact on the NFI of larger dairy farms. On large farms in Devon, the average milk yield per farm is nearly 1 million litres, which is nearly three times more than that achieved by small farms and a 59% greater yield than that obtained on medium sized farms. Consequently, although they will receive a considerable amount in dairy premium, the reduction in milk prices is likely to have an adverse affect on their NFI.

Table 2.15: The impact of CAP reform on small, medium and large dairy farms

NFI	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
NFI per ha: small dairy farms	£206	£183	£150	£159	£166	£171	£175	£180	£183	£183
NFI per farm: small dairy farms	£9,575	£8,508	£6,962	£7,376	£7,730	£7,945	£8,145	£8,385	£8,535	£8,513
NFI per ha: medium dairy farms	£213	£189	£158	£166	£173	£177	£181	£186	£189	£189
NFI per farm: medium dairy farms	£17,032	£15,151	£12,622	£13,293	£13,837	£14,181	£14,497	£14,895	£15,142	£15,097
NFI per ha: large dairy farms	£252	£230	£202	£210	£216	£220	£223	£228	£231	£230
NFI per farm: large dairy farms	£38,763	£35,407	£31,091	£32,274	£33,160	£33,766	£34,314	£35,038	£35,484	£35,389

The introduction of ELS could be of benefit to all farm sizes, but has the greatest potential advantage to medium sized dairy farms. In the base period, revenue derived from ESA or CS amounted to an average of £3.08 ha⁻¹. Therefore, if medium sized dairy farms meet the entry requirements of ELS, their NFI could be enhanced by £26.92 ha⁻¹, which, in turn, would lead to a potential NFI of £216 ha⁻¹ by 2012.

Countywide dairy farming

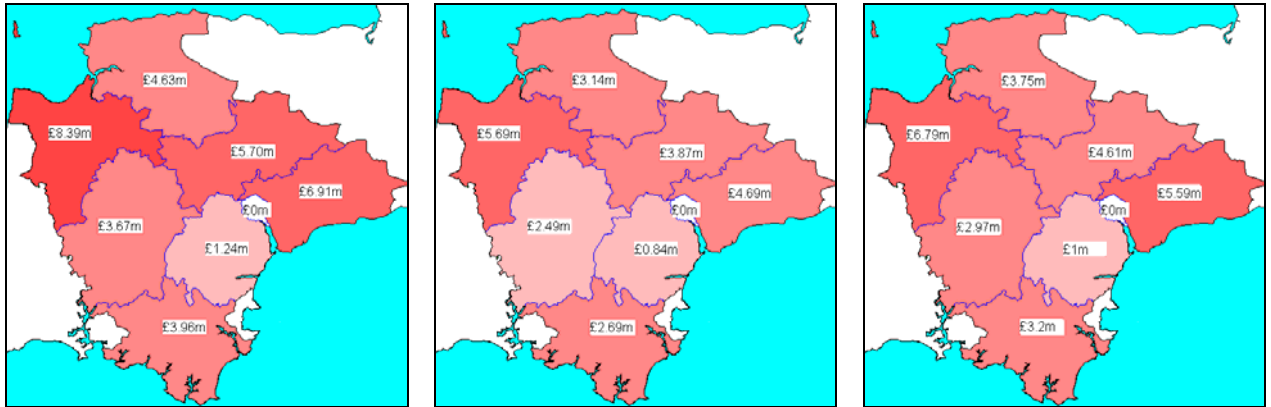
Presently, dairying contributes significantly to Devon's farming economy (an estimated £34.5 million based on average data, or 57% of Devon's NFI). Spatially, the districts of Torridge and East Devon have particular concentrations, each respectively contributing £8.39 million and 6.91 million (see figure 2.6). However, the reduction in milk prices and the limited compensation through the dairy premium is likely to result in a cumulative loss of £22.26 million from the farming economy in 2006. This represents a greater loss in NFI than any other farm type in Devon. While this will have a negative impact on all districts, the farming economy of West Devon may potentially confront particular difficulties as a result of losses in SDA farming income as well.

Figure 2.6: NFI from dairy farms in Devon

1. Average over base years

2. After modulated single payment applied in 2006

3. After modulated single payment applied in 2013 with entry level



Each shade (lighter to darker) represents £2.5 million

Cumulatively (as incomes partially recover), the loss sustained by the dairy sector in Devon from 2004 to 2013 is likely to be approximately £77.21 million if compared to the base years' NFI. However, the recovery of farming incomes post 2006 is likely to depend on the distribution of small, medium and large dairy farms in the districts of Devon. Generally, incomes are likely to improve from 2006, although, even including the ELS payment, it is unlikely that by 2013 incomes from dairy farming will have attained the average in the base period.

Pig and poultry farms

The single payment and modulation

In the base period, the NFI of a typical pig and poultry farm is calculated at £1480 ha⁻¹. A proportion of this NFI is attributable to cereal enterprises and if these are removed from the data a purely pig and poultry farm could attain a NFI of £1110 ha⁻¹. However, because of the small size of the SW FBS pig and poultry sample, these figures are based on national data rather than that which is specific to the South West or Devon. Furthermore, pigs and poultry is a statistical grouping that does not necessarily reflect the nature of pig or poultry farms in reality. Therefore, the results from this section should be interpreted with **extreme caution**.

The introduction of a single payment is likely to only have a very marginal affect on NFI since those pig and poultry farms with cereals command reasonable levels of subsidies to counteract the switch to an area basis. If cereals are removed from the data, a large benefit could be expected as the NFI of this type of pig and poultry farm could increase from £1110 ha⁻¹ to £1255 ha⁻¹. Clearly, the amount of subsidies from other minor enterprises such as cereals, cattle and sheep will have a significant impact on the amount the pig and poultry farms benefit. In Devon, the average size of a pig and poultry holding is smaller than the national sample average, at 11.4 ha rather than 20 ha. Therefore, a pig and poultry farmer can expect to benefit more from the single payment than national farmers, since less of it will be subject to modulation. By 2013, this could increase NFI by an additional £37 ha⁻¹.

Entry Level Stewardship

The ability of pig and poultry farms to enrol in ELS is likely to be dependent on the area of land that is not utilized for intensive pig or poultry production. Furthermore, a free range pig farm may find it difficult to comply with grazing or soil erosion guidelines because of the nature of the animals they produce. Therefore, compliance with ELS requirements is likely to be dependent on the range of other land management activities excluding pig and poultry farming that are on the farm. For example, in the data set used for this report an average of 9ha of land are cropped, which, if eligible for ELS, would receive a ELS payment of £270.

Countywide pig and poultry farming

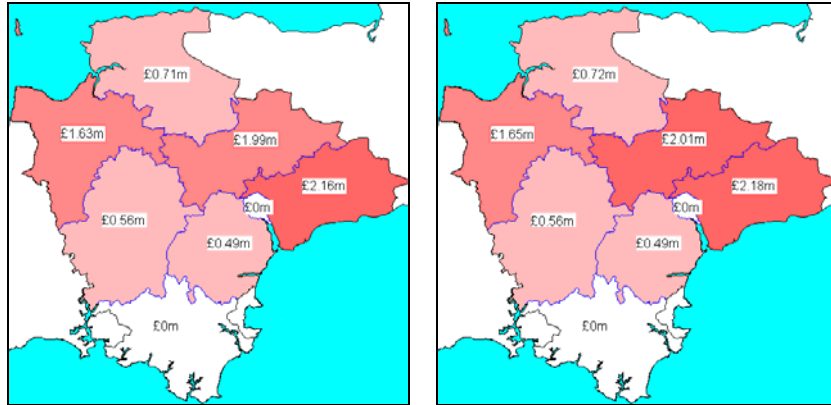
Districts in Devon where Pig and Poultry farming is significant include East Devon (29%), Mid Devon (26%) and Torridge (22%). Furthermore, Mid Devon has most holdings, thus making their average holding size smaller than East Devon. In the base period, it is estimated that pigs and poultry contributed £7.53 million. Of this East Devon was in receipt of £2.16 million, closely followed by Mid Devon with £1.99 million. With the introduction of the single payment, it is likely that Devon will marginally benefit by over £70,000. However, the impact of the entry level agri-

environmental scheme is more difficult to predict without disaggregating the enterprises of pig and poultry farms more fully at the spatial level of Devon.

Figure 2.7: NFI from pig and poultry farms in Devon

1. Average over base years

2. After modulated single payment applied in 2013



Each shade (lighter to darker) represents £1 million

Production responses to the decoupled single payment on Devon's farming

So far, the analysis has examined the impact of the new single payment and modulation, but has not considered how the decoupled payment may affect farmers' production decisions. Decoupling is concerned with breaking the link between support payments and production decisions. The most optimistic assumption is that, following the introduction of the SP, farmers' production decisions will be based entirely on market signals. However, as Moss *et al.* (2002) argue, the administrative act of disassociating payments from units of production may not be sufficient to break the link between payment and production levels because some farmers will use the decoupled payments to smooth income streams; use it to reduce their level of financial risk; to obtain bank loans more easily; and to enable them to continue the lifestyle of farming. Moreover, they suggest that only when a major re-investment decision is reached will farm businesses adjust fully to the single farm payment. An additional assumption underlying the concept of some remaining link between production decisions and the SP is that the base period may be revised in future and that this may continue to influence production decisions (as has happened in the USA for example). While the exact decisions that farmers make regarding their farming practices are unknown, Moss *et al.* (2002)

develop three scenarios to analyse the impact of decoupling payments on different farm sectors in the UK. These are referred to as dynamic changes:

Scenario A - there are no production responses to decoupling direct payments and producers base their decisions only on the basis of market returns;

Scenario B - 30% of production responses are accounted for by decoupled direct payments;

Scenario C - 60% of production responses are accounted for by decoupled direct payments.

In addition to these three scenarios, a further production response of 100% is added that mirrors the results already discussed for each farm type. Given the range of reasons for assuming some residual coupling of support and production decisions, it is unlikely that all farmers will adjust their production activities accordingly to achieve Scenario A, which therefore acts as an 'ideal' world scenario. More likely, particularly for farming in Devon that is dependent on livestock enterprises, scenario B or C is more likely.

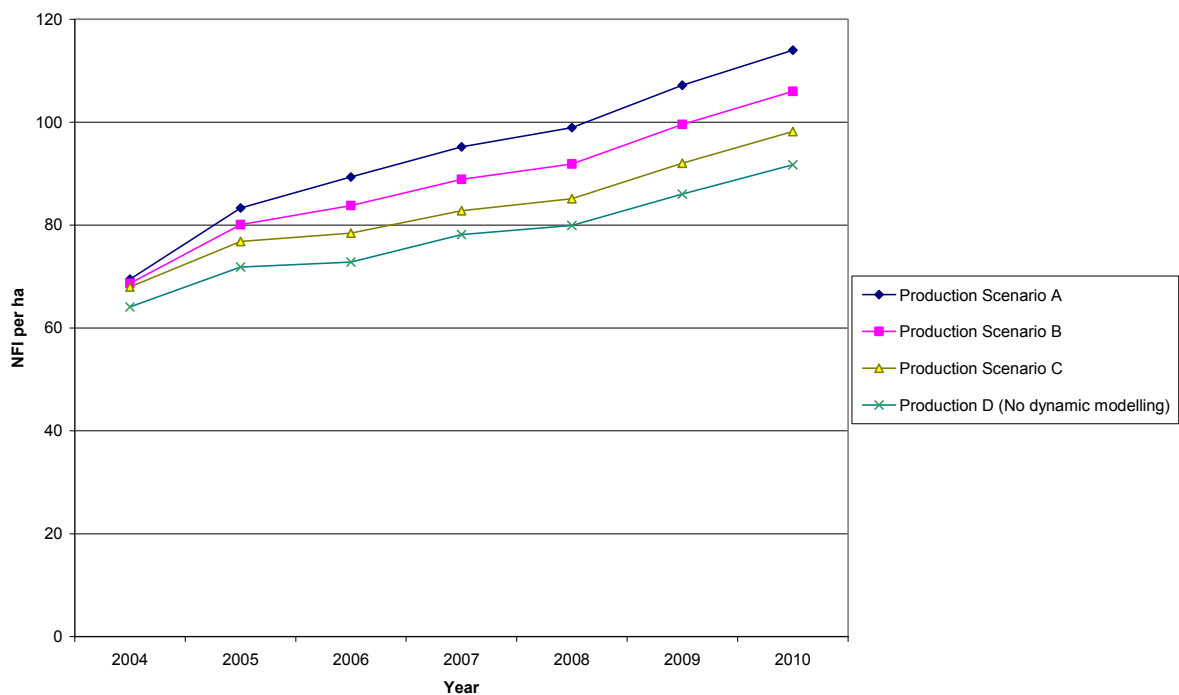
In terms of capturing the production responses to the proposed single farm payment on Devon farms, use is made of Moss *et al's* (2002) estimates for sectoral market receipts for the period 2004 to 2010, when the full influence of the decoupled scenarios were expected to have occurred. Clearly, since decoupling will not occur until 2005, careful interpretation of results from this section is necessary. Indeed, they only provide tentative evidence of how farms, particularly cattle and sheep farms might change after decoupling has taken place rather than acting as a direct comparison to the base years period. Therefore, the analysis in this section indicates a number of possible futures for farm income. In comparison to the previous section, including dynamic changes in the model has the effect of increasing farm incomes. In reality, the impact on incomes will depend on the ability and willingness of the farmer to disassociate the single payment from production, making each enterprise profitable in its own right. However, this may be difficult because, as noted previously, many farm types in Devon are not profitable without subsidies.

Of particular relevance to Devon are the predictions of farmers' production responses to cattle and sheep enterprises, since changes to milk and cereals are predicted to be minimal. As such, most of this section reports on the affects on cattle and sheep sectors and enterprises in Devon. In particular, for all farm types reported, it could be expected that reduced sheep numbers, but particularly a decline in beef cattle, alongside increases in commodity prices and a concomitant reduction in variable costs, could lead to farming becoming more profitable than by assuming 100% production response; that is, no changes to production.

Cereal farms

The dynamic changes associated with cereal production are minimal. At best (a 0% production response) dynamic changes to cereal farming only accounts for an appreciation in NFI of £3.21 ha⁻¹ in 2009, while cumulatively up to 2010 this would sum to £6.12 ha⁻¹. The differences in Figure 2.8 are accounted for by dynamic changes to cattle and sheep enterprises on cereal farms.

Figure 2.8: NFI of cereal farms based on production responses to decoupled single payment

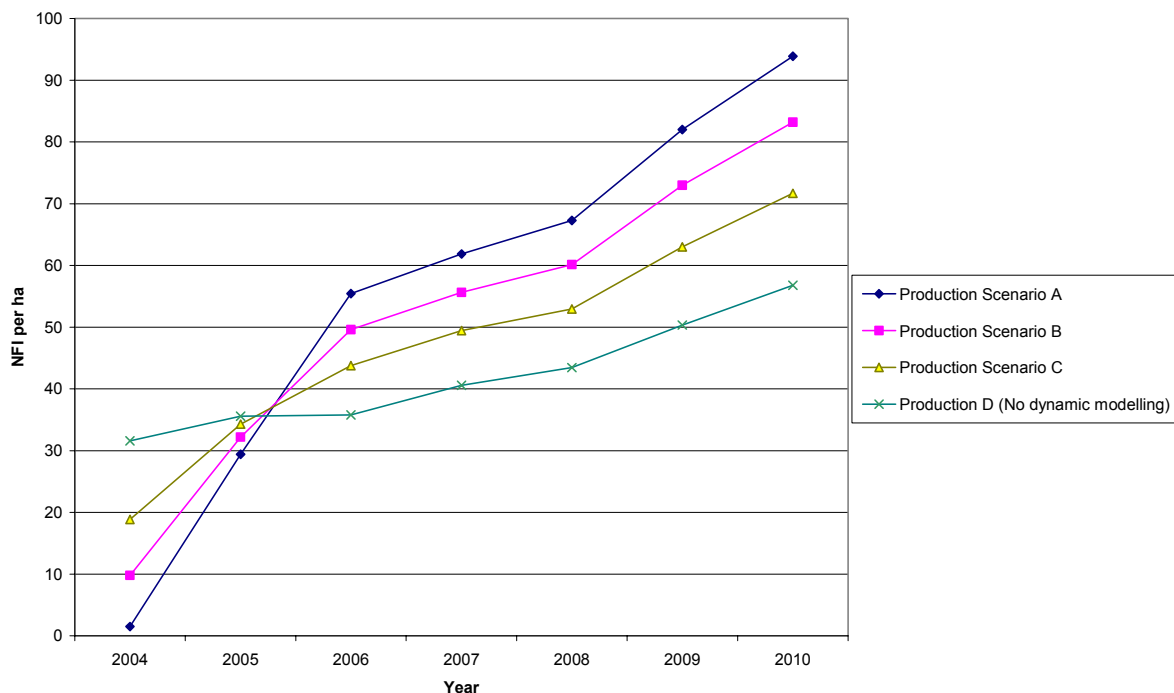


As discussed above, the most dramatic changes are likely to occur with cattle enterprises in the early years of decoupling. Such an adjustment to cattle and sheep numbers, if it were to occur, could result in the NFI of cereal farms increasing by £21 ha⁻¹. Therefore, in 2010 assuming farmers make decisions purely based on market prices (0% production responses) NFI could increase to £114ha⁻¹. However, if farmers still associate the single payment with production, dynamic changes to farm production will be less, resulting in lower NFI. Therefore, more realistically this could be less - up to £16 ha⁻¹.

Lowland cattle and sheep farms

Lowland cattle and sheep farms are likely to be the main beneficiary of any dynamic changes resulting from the decoupled single payment as their NFI ha⁻¹ is relatively low. Even if 60% of production responses are still associated with the single payment, a lowland Devon farmer will perhaps earn an additional £15 ha⁻¹ in the longer term. If 100% managed their enterprises purely on market returns, this could increase to an extra £38 ha⁻¹ in 2010 (see figure 2.9).

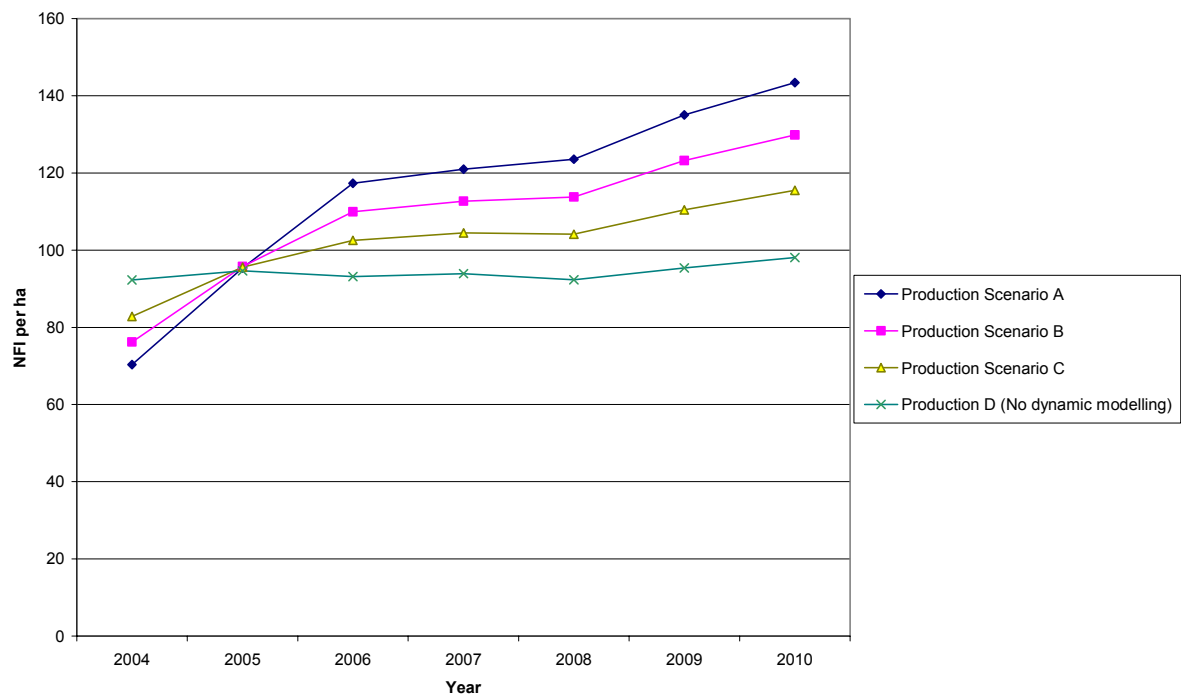
Figure 2.9: NFI of lowland cattle and sheep farms based on production responses to decoupled single payment



Mixed cropping, cattle and sheep farms

Similar to cereal farms, for mixed farms dynamic changes to cereal production are likely to be minimal, while the most dramatic changes are likely to be seen in livestock enterprises in the early years of decoupling. Indeed, two years after the introduction of the decoupled single payment could see a reduction in the gross margins from cattle enterprises of up to £33 ha⁻¹. However, the concomitant reduction in variable costs and other dynamic changes to production still result in an increase of NFI from £95 ha⁻¹ to £117 ha⁻¹ in 2006. By 2010, this could amount to an additional £48 ha⁻¹ as cattle prices recover. More realistically, dynamic changes are likely to be less pronounced with NFI increasing by up to an extra £35 ha⁻¹ in 2010.

Figure 2.10: NFI of mixed farms based on production responses to decoupled single payment



Disadvantaged area cattle and sheep farms

DA cattle and sheep farms are also likely to benefit from any dynamic changes resulting from the decoupled single payment. With the most optimistic scenario, NFI could

increase by an additional £35 ha⁻¹. Even if 60% of production responses are still associated with the single payment, a disadvantaged area cattle and sheep farm will perhaps earn an additional £14 ha⁻¹ in 2010 (see figure 2.11).

Severely disadvantaged area cattle and sheep farms

The benefits from disassociating the single payment from livestock enterprises could arrest the declining incomes of SDA cattle and sheep farms. However, the physical constraints on changing production systems to accommodate enterprises only based on market returns may be more difficult to attain. If a 0% production response (Scenario A) was possible, this could perhaps increase NFI to that achieved in 2004, £112 ha⁻¹ (see table 2.12). More plausible is that farmers would use the single income payment to cover the variable costs of certain cattle or sheep enterprises, thus achieving a lower increase in NFI as a result of decoupling, although this may be greater than no changes to production systems.

Figure 2.11: NFI of DA cattle and sheep farms based on production responses to decoupled single payment

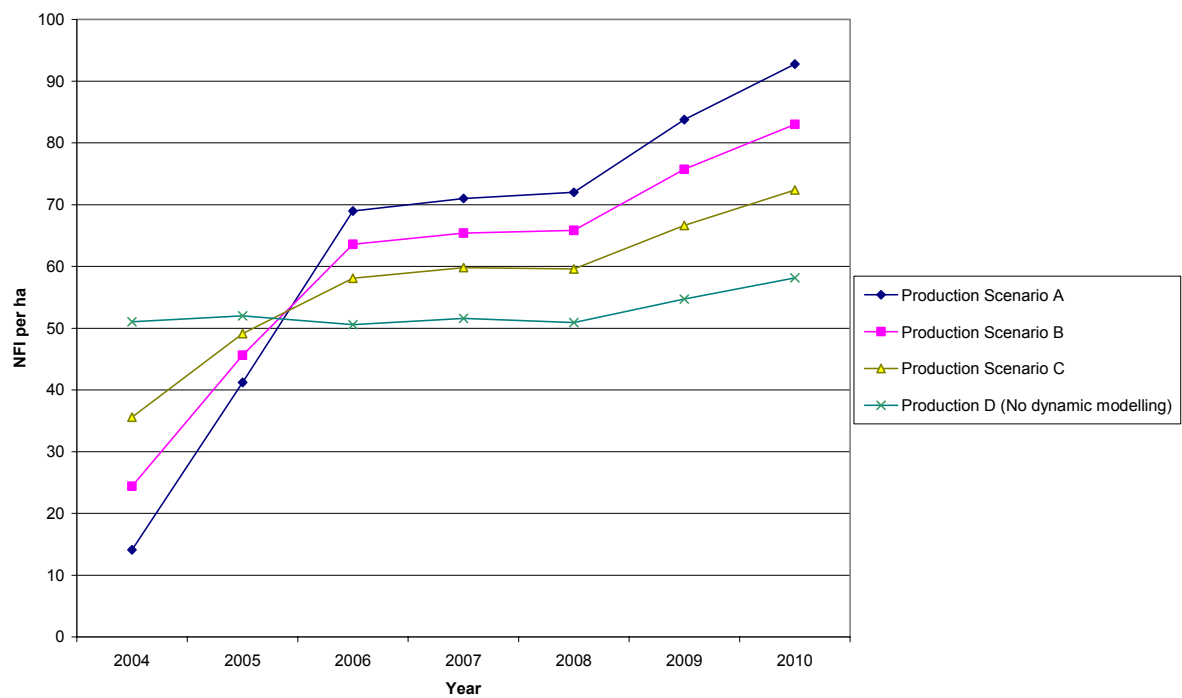
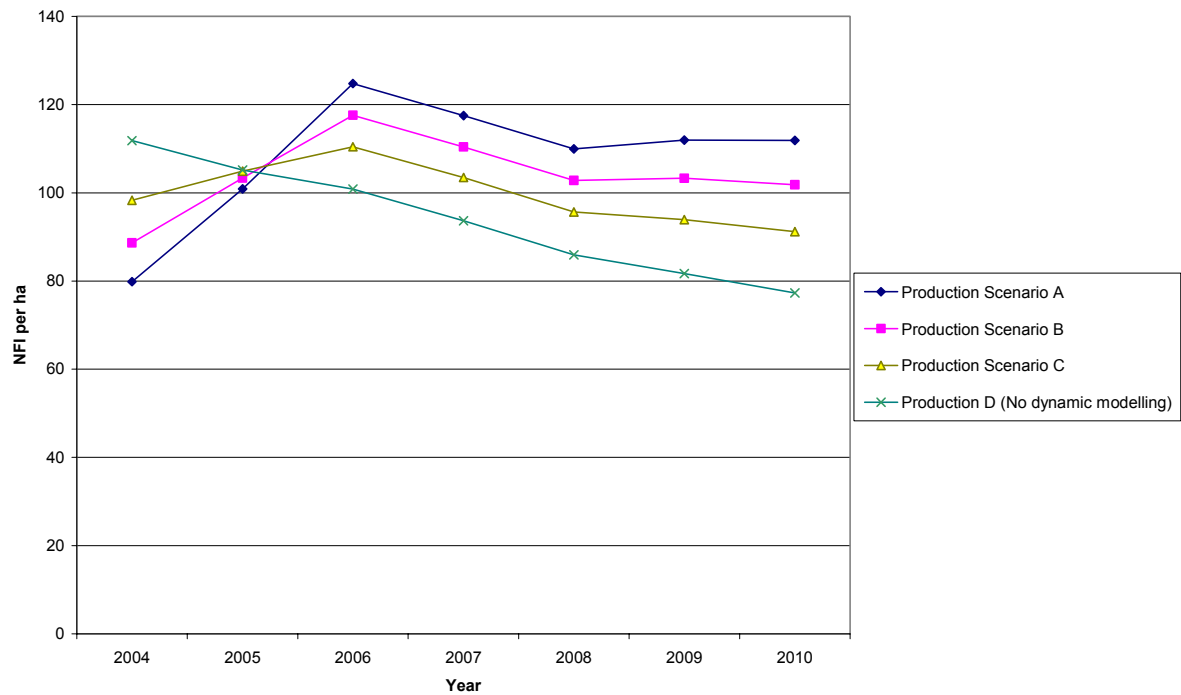


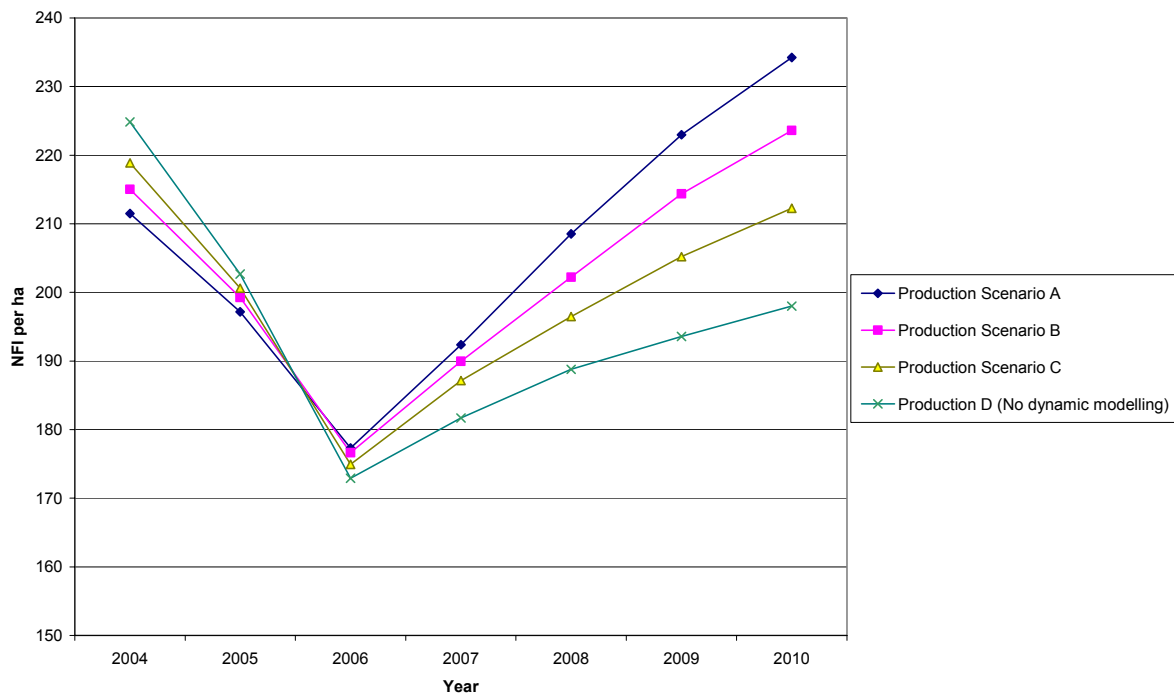
Figure 2.12: NFI of SDA cattle and sheep farms based on production responses to decoupled single payment



Dairy farms

Dynamic changes to dairy farms, like cereal farms, will be dependent on the scale and nature of their beef cattle and sheep enterprises. In Devon, a 0% production response (scenario A) could lead to the average dairy farm benefiting by an additional £36 ha⁻¹ by 2010 (see figure 2.13). However, in the early years of the decoupled single payment, the effects of a reduction in livestock before increasing cattle and sheep prices could coincide with the negative impact of changes to the dairy regime and is therefore unlikely to alleviate this problem.

Figure 2.13: NFI of dairy farms based on production responses to decoupled single payment



Summary

At an aggregate level the impact of CAP reform on Devon's agriculture will be marginally negative, or if there is a widespread uptake of ELS, marginally positive. However, dairy farms and SDA livestock farms face significant losses. In the case of dairy farms, widespread participation in ELS would offset some of the losses, but for SDA farms participation in ELS alone could lead to further reductions in NFI as many SDA farms currently receive higher levels of agri-environmental payments. In order to maintain their current position, SDA farms would require a payment of £160 ha⁻¹.

At the district level, in the absence of ELS payments, East Devon, North Devon and Torridge will face marginal losses (ranging from -5% to -7%). The dominance of dairying and SDA livestock farms in West Devon will lead to larger losses (-11%). Again, participation in ELS has the potential to reduce these projected losses, or even contribute to small gains in NFI.

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Although decoupling is intended to break the link between production decisions and the support payment a farmer receives, there are good reasons to assume that to some extent there will still be some link between production decisions and the SP. However, if farmers react to the SP by completely disassociating it from production decisions, incomes will rise.

Chapter 3: Implications of CAP reform at the farm level

Introduction

The wider implications of CAP reform on enterprise structure, land use, labour use, etc. are not directly revealed by the analysis in the previous chapter, although downward pressure on incomes in some sectors suggests a powerful trigger for enterprise change. The economic modelling carried out for this project is based on average values for the typical farm. However, in many ways the typical farm is a statistical creation and across the county the reformed CAP will be faced by farms at different stages in the business cycle, different stages in the life cycle and farms with different endowments of capital, skills, knowledge, etc. In order to explore some of the implications of the CAP reform agreement on farming practices and attitudes to farming, a discussion group was convened with 13 Devon farmers representing a range of farm types, sizes, tenures and of differing ages (see Appendix 4 for details). Discussion group participants were presented with the predicted impacts on NFI for each farm type as a stimulus to discussion.

Attitude to farming

One of the fundamental objectives of decoupling is to 'force' farmers to adopt a more market orientated attitude to their business. Unfortunately, the long reform process and the length of time subsequent to last year's agreement needed to develop the implementation model for England has created much confusion. There was some consensus that it is difficult to plan for the future (in terms of enterprise size, mix, etc.) as the 'small print' of the new regime is still missing. As one farmer commented:

“we're all working in the dark and until we get some more information we don't know whether to jump, or which way to jump, or what to do. There's no planning”.

Rather than make important business changes in the face of less than full information, there was evidence of a 'wait and see' approach. Some of the younger participants, in particular, felt that they could/would change when “it happens”, but for now were hanging on to “wait and see”. Others were more clearly disheartened by the signals

they perceive the new system gives about the value placed on farming and intended to 'play the system':

"I'm going to bumble along and do what the government wants me to do and pick up what I can [in government payments]. I'm going to farm the subsidies"

Ironically, the reforms were intended to halt subsidy seeking behaviour, but there was agreement that in cases where farms are already on the margins of profitability the operator may just "sit back", cross-comply and take the single payment. The reforms have also had an impact on longer term attitudes to farming and some of the discussion group farmers are now less likely to encourage a successor to take the farm over but would still support a successor if that was their choice. Indeed, at least one farmer said he felt he was in a very difficult situation as his son had indicated that he did not want the farm and yet the farmer did not feel he could dispose of the farm in case his son changed his mind in the future. This and the comments above about 'farming the subsidies' suggests that **even where there is no currently identifiable successor, CAP reform will not stimulate rapid exit of current older generation farmers.**

Impact on farm business (enterprise size, structure, land use & labour)

In terms of impact on farm incomes, discussion group members felt that the results of the modelling exercise were a reasonable reflection of their situations although a considerable amount of variability around the 'typical' farm was also recognised. Discussants clearly saw CAP reform as a stimulus for change, although this could follow a number of trajectories. One younger farmer, who was clearly bullish about the future, reported that:

"whatever comes along from the single payment, if my business has to rely on that in order to survive I don't think I'd bother farming. So I'm aiming to restructure my business so that it survives whatever the payment – the payment will be a bonus"

For this farmer the future would see a move to lower cost production, some freeing up of his own labour and a policy of restructuring the business so that it was in a position

to embrace new opportunities created by others choosing to leave the industry. Others also thought that if they could “hang on” for long enough the post-reform farm economy would offer new choices. For example, an older dairy farmer stated that he was “going to carry on as usual and keep my fingers crossed” in the expectation that a sufficient number of dairy farmers would leave, leading to a fall in supply and associated price rises which could fuel a new round of expansion.

Indeed, there was agreement that the future is likely to see an increase in enterprise/farm size in an attempt to spread fixed costs. This does not necessarily imply an intensification of land use (although that depends in part on what newly acquired land was previously used for), but it will nevertheless have an impact on the appearance of the countryside and lead to greater pollution loading associated with larger dairy units for instance.

The other main response mentioned several times is a simplification of the farm business, including reducing stock and associated inputs. This is exactly the type of decoupling-induced extensification effect that formed part of the rationale for the reforms. However, there may be a fine line between where simplification and downsizing ends and minimum cross-compliance begins and the latter has wider implications. For example, the dairy sector was the subject of considerable discussion ranging from the impact of exchange rates, different projections of milk prices to decisions to leave dairying. It was thought (by discussion group farmers) that a number of dairy farmers are just waiting to see how much they will get for their single payment and will then leave dairying, run a few sheep and cross comply. Some, argued that this could bring the payment into disrepute as farmers would be accused of being paid for nothing (particularly if this is associated with a deteriorating landscape/environment - see below).

Decisions about enterprise choice and levels of output can clearly have knock-on effects both up- and down-stream. If farming just to cross-comply was widespread or sectorally concentrated it could have serious implications for the processing sector. The domestic pig processing sector, for example, has already declined dramatically with falling British pig production and there was some concern that the same could happen for beef

and possibly sheep (although the latter is less likely) particularly if there is a significant downturn in production in the uplands. Our results certainly suggest a serious decline in the profitability of beef production and a decline in farm incomes in the uplands (which will be more pronounced for beef producers). There are already problems with under capacity for specialist and niche producers (e.g. insufficient slaughter facilities for ruby red beef) and declines in production could see the further erosion of important parts of the county's agricultural infrastructure.

The final trajectory of change to be discussed was diversification. While members of the discussion group agreed that the new CAP regime could act as a stimulus to further diversification, they also identified the usual barriers such as lack of capital, lack of appropriate skills and knowledge. Planning consent was identified as a barrier to both new and expanding diversification initiatives, particularly relating to highways and the increased traffic flows associated with diversification. The perception was that the attitude of the highways authority was a significant barrier to diversification. The reforms may also stimulate some expansion of 'novel' livestock enterprises that are currently unsupported but nevertheless compete favourably with CAP-supported enterprises.

Although a range of potential responses were identified by discussion group members, there was agreement that the CAP reforms will reinforce the existing trend towards a dualistic structure with those doing the minimum to cross-comply being in sharp contrast to others expanding.

The different types of response identified clearly have implications for employment levels on the county's farms. The number of employees on Devon farms fell by 4% between 2000-02, while the number of full-time farmers fell by 2% and the number of part-time farmers grew by 5% (Defra census data). Again, these trends seem likely to be reinforced by the CAP reforms. Discussion group members reported that they would survive with the minimum possible labour for their agricultural enterprises. Some argued that if they were operating on a minimum cost basis, then they would also not use contractors or would minimise their use. Others however, argued that a minimum cost approach could also include saving on machinery costs which could lead to an

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increase in the use of contractors. An increase in diversification may lead to increased employment, but whether it would offer opportunities for those who have lost agricultural jobs is open to debate.

The environmental implications of the reactions to the new CAP are difficult to assess as they will be influenced by location specific and farm specific factors. Discussion group members claimed that if their profits are squeezed they would do the absolute minimum in terms of environmental land management. It was also argued that if there is an increase in the use of contractors (see above) that this could have an impact on the environment. For example, the very large machinery frequently used by contractors can cause damage to hedges and *may* provide stimulus for field enlargement. There is also concern over the general 'level of care' exhibited by some contractors (see Lobley et al 2002).

Finally, the group discussed what would be done with the single payment. Would it, as suggested by some, be put to one side and not be used to underwrite the farm business or would it continue to subsidise the farm? It was felt that it is inevitable that the single payment will subsidise farm businesses in some cases, slowing down restructuring. However, it was also recognised that the value of the single payment will decline in real terms over the next 5-10 years. This, coupled with 'fear' of further reform, is feeding a climate of uncertainty.

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Chapter 4: Summary and implications

The 2003 CAP reform agreement and its means of implementation represent a radical change to the system of farm support in England. In choosing to deliver the new single payment on an area basis, DEFRA have adopted a deliberately redistributive approach. In Devon this could have significant implications, as our analysis has shown that other than Dairying and Pig and Poultry farming, other farm types are unprofitable without subsidies. The resulting complex pattern of winners and losers has implications for the future structure of Devon's agriculture, agricultural employment, environmental management and for agricultural processors and suppliers.

The impact of CAP reform

In aggregate terms, at a county level, the impact on farm incomes is likely to be largely neutral or marginally positive if potential income from Entry Level Stewardship is taken into account. Without additional income from ELS, most districts of Devon will suffer a marginal loss of NFI. In West Devon, however, with a farm structure dominated by LFA and dairy farms, the loss could be up to 12% by 2013. Such aggregate figures, however, mask the complexity of the impact on farms of different types and sizes. In terms of farm type, cereal and lowland livestock farms will benefit from the reforms. However, in absolute terms, the NFI of both large and particularly small lowland cattle and sheep farms remains bleak, even in the longer term, despite the positive increases resulting from the introduction of the single payment. Moreover, for both farm types farming remains unprofitable without support payments. For all farm types, the more willing and able farm operators are to embrace the market and base their production decisions entirely on market returns, the more positive the impact on farm incomes.

The uplands

Farms located in Severely Disadvantaged Areas emerge as clear losers from the reforms and the outlook for small SDA farms is bleak with NFI projected to fall to approximately £7,500 by 2013. Cattle enterprises in the SDA will be more adversely

affected than sheep enterprises and the future is likely to see a decline in cattle numbers, which has implications for environmental management. The predicted falls in NFI are largely a consequence of high historic levels of support. The final situation will be influenced by income receipts from the Environmental Stewardship scheme and we have calculated that, on average, a single payment of £160 ha⁻¹ is necessary to maintain the present pattern and distribution of farming in Devon's SDAs. In contrast to SDA farms, the impact on Disadvantaged Area farmers will ultimately be marginally positive. However, NFI is currently very low and will remain so in the early years of the new system, only beginning to rise at the end of the decade. Given incomes possibly as low as £5,500, only rising to £7,000 in the future, the longer term viability of DA farms is questionable in the absence of substantial alternative income sources.

Dairying

Dairy farming is particularly important in Devon, contributing an estimated 57% of the county's total NFI. Modelling the impact of the new CAP on dairy farms is complex given the sensitivity of incomes to small movements in the price of milk. Overall, dairy farms are likely to experience a significant loss as a result of the reforms, although incomes will dip even further in the early years of the implementation of the single payment. Small dairy farms (average size 47ha) are conventionally thought to be particularly vulnerable and the trend has been for small dairy enterprises to close and surviving businesses to expand. It seems unlikely that that trend will be reversed as the results of the modelling exercise suggest that small dairy farms will experience a decrease in NFI by some 27%. Large dairy farms, on the other hand, could see their incomes reduced by a third in 2006 although NFI is still projected to be approximately £35,389 in 2013. However, while the impact of the single payment and modulation is important, it will be the farm gate price of milk that will shape the future of dairy farming in the county.

CAP driven restructuring

The reform of the CAP and the impact on incomes summarised above *will* drive further restructuring of the county's agriculture. In many ways the new support regime will

simply reinforce existing trends, although cross-compliance conditions are a complicating and still unknown factor. It is not possible to simply 'read off' a series of restructuring decisions from the results of the economic modelling carried out for this project. The modelling exercise is based on average values for the 'typical farm', which is a statistical creation. Across the county, the reformed CAP will be faced by farms at different stages in the business cycle, different stages in the life cycle and farms with different endowments of capital, skills, knowledge, etc. Farmers and their households are likely to differ significantly in their ability and willingness to adapt to the new market orientated policy environment. In the absence of large scale survey data, a farmer discussion group was convened in order to explore some of the implications of the CAP reform agreement. Clearly, a single meeting with 13 farmers cannot claim to give a fully representative picture of likely responses. However, by involving farmers of different ages operating farms of different types and sizes, the results are indicative of the likely trajectories of change following implementation of the new CAP regime. The different trajectories of change reflect the complexity of the post reform situation and the likely time lags in adjustment at the farm level.

There is still considerable confusion and uncertainty amongst the farming community regarding the precise details of the new support system (e.g. value of single payment, cross-compliance conditions, etc.) and rather than rush in to restructuring decisions there is evidence of a 'wait and see' approach. Nevertheless, based on the results of the farmer meeting, a number of trajectories of future change can be identified. For some farmers, perhaps those approaching the end of their career, one approach is to simply meet cross-compliance conditions and live off their single payment. Others plan to adopt a more active approach, intending to continue farming but simplifying and extensifying their business. Both approaches have implications for the environment and supply and processing sectors.

In cases where small dairy farmers, for instance, cease active farming and simply meet cross-compliance conditions the less intensive management of land is likely to be beneficial. That said, the impact would depend on the agreed set of cross-compliance conditions. Current proposals that vegetation need only be cut every five years would

have a significant visual impact. While this could create opportunities for 'semi-rewilding', it may cause concern for some if the countryside takes on a less managed appearance. In cases where simplifying the business involves going out of beef production, conservationists would have concerns about sward management if the ratio of sheep to cattle increased (the latter produce a less uniform, tussocky sward, which is valuable in conservation terms).

In the uplands, future concerns could revolve around issues of under-grazing rather than over-grazing. In the east of England, where remaining grassland is frequently threatened by under-grazing or abandonment, 'flying' flocks and herds are used for conservation management. Although this could be an option if under-grazing becomes a widespread issue, it is not without its difficulties. It will take some time to discern if under-grazing will become widespread, if it does DCC should initiate a debate about the future management of upland areas, including the desirability or otherwise of some managed retreat from grazing in certain areas.

These strategies also have implications for employment on farms, which is likely to continue to decline. There may be an increase in the use of contract labour though, which raises concerns about the 'level of care' applied to land management activities. More positively, where farmers decide to withdraw from active farming and only meet cross-compliance conditions, there could be opportunities for new entrants willing to meet the challenge of farming without subsidies. The injection of entrepreneurial 'new blood' that could result would have positive benefits for the rural economies of Devon and DCC should consider developing a facilitation service to 'match' potential new entrants with withdrawing farmers.

Not all farmers will simplify and extensify in response to CAP reform and some members of the discussion group saw opportunities for expansion in the future, perhaps managing, or in the longer term, purchasing the land of those who either choose to cease, or are unable to continue, active farming. One sector where this is likely to occur is dairying. The environmental implications of a further expansion of dairy farming are

complex. Expansion does not necessarily imply intensification, particularly if cross-compliance conditions are met and dairy farms enrol into ELS. However, much depends on what the newly acquired land was previously used for and if, as seems likely, dairy farms expand at the expense of beef farming, this would represent an intensification of land use.

The other option open to farmers in the face of declining incomes is to seek alternative income sources. Off farm employment is one option although many farm spouses already have off farm employment. Simplifying and down-sizing farming systems should free up some labour and may offer farmers an opportunity to seek additional work, although there appeared little enthusiasm for this among the participants in the discussion group. On-farm diversification is an alternative, but it is far from being an easy option. Those facing declining incomes may find it hard to finance diversification plans and a strong message to emerge from the farmer discussion group was that the Highways Authority can make diversification difficult where it would be associated with increased traffic movements. Clearly some farms are not located in a position where significantly increased traffic movements are possible, while others are more favourably located. A first step to improve the current situation would be to improve dialogue between the farming community and both land use and highways planning authorities. Planners need to be more aware of and sympathetic to the challenges facing the county's farming communities.

The results of the farmer discussion group suggest that there is unlikely to be a rapid and large scale exodus from farming in the county. Rather, farmers and their families will adopt a range of strategies in order to remain on the farm. In the longer term, however, as farmers face significant reinvestment decisions, some will inevitably decide to retire from active farming. This lagged response means that it will be some years before the full impact of CAP reform on farm structures (the number, size and types of farms) will be revealed.

Finally, from both this and last year's report it is clear that receipts of agri-environmental and other rural development funding can have an important and positive impact on farm incomes. DCC should continue to ensure that the county is able to maximise its share of this funding by, where possible, facilitating and supporting applications from farmers.

Recommendations

The research carried out for this report indicates the possible future of Devon's agriculture, but the impact of CAP reform will only become apparent over time.

Recommendation: Regular monitoring of the impact of CAP reform on Devon's farms should be undertaken.

Recommendation: The farmer discussion group should be reconvened in two years time to see how they have adjusted.

The reforms seem unlikely to lead to a large scale exodus from farming but may well stimulate withdrawal, where active farming is reduced to a level needed to meet cross compliance requirements.

Recommendation: DCC should consider developing a facilitation service to 'match' potential new entrants with withdrawing farmers

It is likely that the reforms will stimulate further attempts at diversification. However, farmers still perceive that planning authorities do not understand their needs and all too often frustrate their diversification plans.

Recommendation: Improve dialogue between land use and highways planning authorities and the farming community.

CAP reform has important implications for the future of Devon's upland areas. Undergrazing may become a problem, but could also present new opportunities. Change may be difficult, but it is not necessarily undesirable.

Recommendation: DCC should initiate a debate about the future management of upland areas, including the desirability or otherwise of some managed retreat from grazing in certain areas.

Access to agri-environmental and rural development funding can represent an important addition to farm income.

Recommendation: DCC should take steps to facilitate the uptake of agri-environmental and rural development schemes by farmers in the County.

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Appendix 1: Assumptions used in modelling

General Assumptions

- ✚ The historic SP is derived from subsidies on cattle, sheep, cereals and other cash crops. The dairy premium is also included from 2004 (see milk production assumptions).
- ✚ Changes to Arable Area Payment Scheme (AAPS) are modelled from 2005. A reduction in the support price for cereals is likely to trigger a short-run fall in the market price of feed cereals in the EU ranging between 1% and 3%. From 2006/07 it is expected that cereal prices will increase by around 1% (European Commission 2002). This change is reflected in the cereal prices for Devon's farms.
- ✚ Modelling large, medium and small farms is only possible for dairy farming in Devon. For this farm type the sample number is sufficient to enable each size to be representative. For cereal, lowland and SDA livestock farms, the sample size is only sufficient to enable two size categories – small and large. For the remaining farm types their sample sizes are only sufficient for an average representative farm.

Dynamic Production Assumptions

- ✚ Dynamic production and price coefficients are assumed or derived from Moss *et al.* (2002). This captures the possible dynamic effects that the implementation of a single farm payment may have.
- ✚ To assess how animal numbers on farms may change, the following Grazing Livestock Units (GLUs) were used:

Livestock	GLUs
Dairy Cows	1
Cattle	0.8
Lowland Ewes	0.12
Upland Ewes	0.1

For all farms except SDA cattle and sheep farms, the change in total number of cows is used to model the dynamic effects on cattle enterprises. In the case of the SDA farm model, co-efficient for the change in numbers of suckler cows is used instead. This differentiates that SDA farms tend to be predominantly

dependent on suckler herds, whereas lowland and other farm types have more opportunities for other beef enterprises.

The cereal sector is an aggregate of the soft wheat, barley and rapeseed markets for the UK that are weighted for the number of holdings that are found in the South West.

The changes in milk production, animal numbers or cereal area are assumed to have a concomitant affect on variable costs, which are accounted for by applying the coefficients that alter the level of production. In terms of cattle and sheep farms, this requires attributing variable costs on a proportional basis to each separate enterprise.

- ⊕ Fixed costs are assumed to remain constant and are only likely to change when a major re-investment decision. At this point, the farm businesses will fully adjust to the SP.

Exchange Rate Assumptions

- ⊕ The exchange rate for the base year is calculated as €1 = £0.620. This is based on an average of exchange rates, as reported by the Office for National Statistics, for the base period of January 2000 to December 2002.
- ⊕ Exchange rates also affect milk prices – see milk production assumptions.
- ⊕ Examining the relationship between output prices and the exchange rate using South West data indicates a strong correlation. Indeed, if Table A1.1 is considered, the coefficient of determination, R^2 , for total output price is dependent on exchange rate fluctuations over the period 1995-2003. However, if each commodity price is considered individually, only some show degrees of dependence. For example, cereals, barley, wool and milk have reasonably strong relationships with exchange rate changes, whilst sheep and poultry show only a weak determination. Where the relationship is poor, other factors are likely to be more important than the £/Euro exchange rate.
- ⊕ The relationship between input prices and exchange rate shifts is more complicated (Table A1.2). Other factors such as the change in oil prices, changing grain prices or general inflationary pressures are likely to be more significant.
- ⊕ Other assumptions are given in the text of Appendix A1.

Table A1.1: R^2 values for output prices and exchange rate change

	R^2	t-stat
All products	0.9041	$t_{0.025,7} = -8.12$
Cereals	0.8755	$t_{0.025,7} = -7.016$
Barley	0.8831	$t_{0.025,7} = -7.274$
Potatoes	0.3249	$t_{0.1,7} = -1.835$
Cattle	0.7069	$t_{0.025,7} = -4.109$
Sheep	0.3598	$t_{0.05,7} = -1.983$
Pigs	0.6005	$t_{0.025,7} = -3.244$
Poultry	0.6326	$t_{0.025,7} = -3.472$
Wool	0.8355	$t_{0.025,7} = -5.962$
Eggs	0.7322	$t_{0.025,7} = -4.375$
Milk	0.8246	$t_{0.025,7} = -5.736$

Table A1.2: R^2 values for input prices and exchange rate change

	R^2	t-stat
All Inputs	0.6151	$t_{0.025,7} = -3.45$
Seeds	0.8371	$t_{0.025,7} = -5.997$
Fertilizers	0.2122	$t_{0.25,7} = -1.373$
Sprays	0.3166	$t_{0.1,7} = -1.801$
Animal Feed	0.7401	$t_{0.025,7} = -4.464$
Straight Feed	0.7834	$t_{0.05,7} = -5.031$
Compound Feed	0.6898	$t_{0.025,7} = -3.946$
Veterinary	0.2368	$t_{0.1,7} = 1.479$
Machinery repairs	0.4450	$t_{0.025,7} = 2.369$
Machinery new	0.3267	$t_{0.05,7} = 1.843$
General	0.6465	$t_{0.025,7} = 3.578$

Milk Production Assumptions

- ⊕ Impacts arising from milk production on lowland and DA livestock farms are not modelled, as dairying only represents minor enterprises in the FBS data. Therefore, income for dairying has been subsumed into the miscellaneous income category for these farm types.
- ⊕ An overall increase in milk quotas of 1.5% is modelled over the period 2006-2008 using annual increments of 0.5%.
- ⊕ To compensate for a 15% price support cut for skimmed milk and a 25% price support cut for butter, the introduction of direct payments for milk producers is included at the following rates: 2004 at 0.85ppl, 2005 at 1.70ppl and 2006 at 2.56ppl, based on an exchange rate of £0.70 (See MDC 2003).

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- From these, average per hectare values are calculated using yield per cow and the total number of dairy cows on the average Dairy farm (also for large, medium and small dairy farms). These per hectare payments for the dairy premium are estimated as:

Dairy Premium	€/ha	£/ha
2006/07	82	53
2007/08	163	106
2008/09	246	160

Appendix 2: EU agricultural subsidy payments to Devon

The level of EU payments to farming in Devon, based upon the areas for each farm type is estimated at nearly £54 million for the average over the base years. Districts that received the greatest level of EU support were North, West and Mid Devon. East Devon on the other hand, excluding Exeter, received the least (see Table A2.1). The introduction of the SP is likely to increase the gross payment of EU subsidies to the county by 62% by 2013. However, East Devon and Torridge are likely to be the districts that benefit the greatest, mainly as a result of the introduction of the dairy premium. In the hill farming regions of North and West Devon, subsidy losses are mitigated by gains in other farming sectors, particularly Dairy. Since the overall increases in NFI are likely to be more or less neutral with the introduction of the SP, **it suggests that more of farming income in Devon will be derived from EU subsidies.**

Table A2.1 Average EU payments to Devon farms in each district.

	Average over base years	2013 EU payments (excl. ELS)	% Change
East Devon	5.39	10.92	102
Exeter	0.12	0.16	35
Mid Devon	8.22	13.90	69
North Devon	10.81	15.85	47
South Hams	7.02	11.37	62
Teignbridge	6.21	8.49	37
Torridge	7.81	14.60	87
West Devon	8.14	11.60	42
Devon	53.73	86.88	1.62

Appendix 3: Modelling changes in exchange rates on the SP and NFI

The single payments for the three regions used in this report are set at an exchange rate of £0.7 = €1 (DEFRA 2004) giving the following payment rates: Non-SDA land, £210 to £230; SDA land outside moorland line, £110 to £130; and SDA within moorland line, £20 to £40. If a ten year average of the £/€ exchange rate is considered, £0.7 is a reasonable assumption since from Mar 1995 to Feb 2004 €1 equated to £0.69. However, more recently (in the past five years), Sterling has been stronger against the euro with €1 equating to £0.64. Therefore, it is necessary to measure the changes that currency fluctuations have on the level of the SP that farmers in Devon could reasonably be expected to receive. Table A3.1 illustrates possible changes in payment levels if the pound strengthens so that €1=0.65 and €1=0.625, and if Sterling weakens against the euro at €1=0.75.

Table A3.1: Single payment rates at exchange rates £0.625, £0.65 & £0.75 = €1

SP in (€)	SP in £ (£0.7=€1)	SP in £ £0.625=€1	SP in £ £0.65=€1	SP in £ £0.75=€1
29	20	18	19	21
43	30	27	28	32
57	40	36	37	43
157	110	98	102	118
171	120	107	111	129
186	130	116	121	139
300	210	188	195	225
314	220	196	204	236
329	230	205	214	246

Examining Table A3.1 shows that a weaker pound *vis-à-vis* the euro will benefit Devon farmers in that the SP will appreciate by approximately 7% for every five pence exchange rate shift.

In terms of farm types, Table A3.2 shows how different SP values influence NFI depending on the exchange rate value whilst other variables remain constant.

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Table A3.2: NFIs with SP at exchange rates £0.625, £0.65 & £0.75 = €1

	Average NFI over base years	% change		% change		% change	
		NFI in 2013	NFI in 2013	NFI in 2013	NFI in 2013	NFI in 2013	NFI in 2013
		€1=£0.625	€1=£0.65	€1=£0.65	€1=£0.65	€1=£0.75	€1=£0.75
Cereal	64	82	-20	89	-13	115	13
Mixed	92	84	-19	90	-13	117	13
Lowland Livestock	32	48	-29	55	-19	82	19
DA Livestock	51	45	-31	52	-21	78	21
SDA Livestock	112	60	-15	63	-11	78	11
Dairy	224	182	-10	188	-3	215	07
Pigs and Poultry	1479	1488	-1	1495	-1	1521	01

Shifts in the £/€ exchange rate are likely to be particularly important to lowland and disadvantaged livestock farms. DA livestock farms could find NFI reduced by 21% if the value that SP is exchanged at €1=£0.65 increasing to 31% for €1=£0.625. Least affected, with the exception of pig and poultry, are dairy farms. The changes in percentage reflect the initial levels of NFI that are compared against the averages over the base years. Indeed, **farms in Devon that have low NFI per hectare are more likely to be vulnerable to exchange rate changes fluctuations reflected in the level of SP.**

If exchange rates are assumed to influence input and output prices as well, the percentage changes in NFI per hectare are greater. According to a DEFRA report, a five percent shift in the £/Euro exchange rate would have an impact of approximately 25% on the level of Total Income From Farming (TIFF) with changes in market prices and subsidies being only partly offset by price changes of inputs (DEFRA 2001). Furthermore, the correlation of total output and exchange rate is shown to have a strong relationship.

Using the coefficient of determination (see Appendix 1) as a guide to output and input price changes as a result of £/Euro shifts, the following implications for farming in Devon may be drawn. Since the average £/€ exchange rate over the base year period was relatively low (£0.62=€1), for most farm types NFI increases or the losses incurred are likely to be reduced as the euro appreciates.

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Table A3.3: NFIs assuming exchange rates alter SP, output and input prices (for average base years - £0.62, £0.65 & £0.75 = €1)

	Average		%		%		%
	NFI over base years	NFI in 2013	change	NFI in 2013	change	NFI in 2013	change
	£0.62=€1	£0.62=€1		£0.65=€1		£0.75=€1	
Cereal	69	81	17	108	56	198	186
Mixed	95	83	-13	104	9	176	184
Lowland Livestock	33	47	44	66	100	128	291
DA Livestock	52	44	-16	59	12	109	109
SDA Livestock	113	59	-48	67	-41	93	-18
Dairy	255	180	-29	200	-22	259	2
Pigs and Poultry	1494	1487	0	1542	3	1666	12

In Devon, SDA farms are unlikely to recover their NFI of the base year regardless of positive exchange rate shifts. Clearly, as discussed in the main report, the HLS is likely to be necessary for any gains in NFI. However, most farm types would see positive gains in NFI compared to the average base years. For lowland livestock farms, poor initial NFI could significantly improve as the euro strengthens against the pound. **It is evident that changes in exchange rates have considerable impacts on the NFI of Devon farms.**

Appendix 4: Farmer Discussion Group

For a farmer discussion group to be representative of farming in Devon, it is necessary that it reflects the types of farms analyzed in this report. Furthermore, it should also characterize farming in the various districts of Devon. To this end, farmers throughout the county were contacted through a networking procedure. A representative from Agri-Bip was also invited to attend the discussion group.

The discussion meeting, held in Tiverton, included farmers from most districts of Devon, with the exception of Torridge. Examining Table A4.1 illustrates that most major farming types in Devon were present. Of the farmers, their average farm size was 131 ha and their average age was 46. Furthermore, the discussants represented various tenures, with 46% coming from rented farms and 31% being owner-occupiers. The number of enterprises on each farm varies considerably, as does the number of diversified enterprises (including agriculturally based enterprises such as ultra sonic sheep scanning and hedge trimming and non-agricultural enterprises such as holiday caravans and motor bike scrambling). The majority of discussants have not identified a successor.

Table A3.1: Details of farmer participants involved in discussion group on CAP reform

	Size (Ha)	Tenure	Farmer's Age	Main Enterprises	Other Enterprises	Number of Diversified Enterprises	Identified Successor
Farm 1	344	Tenant	45	Hill Sheep and Suckler Cows	-	1	No
Farm 2	71	Owner-Occupier	42	Eggs	Cereals, Beef and Sheep	0	No
Farm 3	50	Owner-Occupier	34	Lowland Beef and Sucklers	Sheep	3	No
Farm 4	61	Tenant	40	Dairy	Dairy Youngstock	0	No
Farm 5	122	Owner-Occupier	55	Arable	Sheep	0	No
Farm 6	223	Mixed Tenure	38	Dairy	Beef and Cereals	0	No
Farm 7	130	Tenant	46	Dairy	-	0	Yes
Farm 8	203	Tenant	56	Dairy	Dairy Youngstock	0	Yes
Farm 9*	101	Tenant	40	Equine	Beef and Let Ground	1	Possibly
Farm 10	122	Mixed Tenure	54	Arable	Store Cattle and Lambs	1	Yes
Farm 11*	101	Tenant	42	Equine	Suckler Beef and Sub Letting	0	No
Farm 12	93	Owner-Occupier	41	Sheep	Sheep and Arable	2	No
Farm 13	81	Mixed Tenure	59	Beef	Sheep and Deer	2	No

* Farms 9 and 11 are different perspectives of the same farm as it is managed by a husband and wife team.



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