

A YORKSHIRE AGRICULTURAL SOCIETY AWARD



A FUTURE FOR HILL FARMING

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January 2010

EXECUTIVE SUMMARY

‘A Future for Hill Farming’ is a report that sets down my journey to find out whether or not there is a future for farming in the uplands. This Nuffield Farming Scholarship was sponsored by the Yorkshire Agricultural Society and involved travel in the UK (specifically Scotland and Wales), the Republic of Ireland, France and Canada. The overall aim of the study was to assess whether there is a future for hill farming and what will have to change in order that this future is secured.

The report reviews the policy framework in the UK and Europe (focusing on those countries visited) and how this is likely to change in the short term. It considers how subtle differences between the implementation of the Single Farm Payment and the various schemes covering Less Favoured Areas influence the financial situation of farms across Europe.

It also considers the typical agricultural systems found across upland farms in Europe and Canada and how these contribute to the success or otherwise of the farming business. It contains observations about full versus part-time farming businesses and the contribution that agri-environment scheme income makes to the farm profit and loss account. It also attempts to highlight identify common features amongst successful enterprises.

The final theme that is examined in this report is the role that marketing can play in securing markets for produce from upland farms and obtaining a premium as a result of effective branding. It is observed that food produced from hill farms can never be cheap and therefore the best strategy is to try and justify a higher price as a result of ‘telling the story’.

The conclusions emphasise that a fundamental issue that needs to be addressed is that whilst Government, the public and academics all recognise and stress the importance of the upland environment, currently, no one is paying a realistic sum of money for it. Farmers are expected to manage the landscape, ecosystems and our natural heritage on the back of their Single Payment and agri-environment income that only goes some way towards paying them for the value of what they ‘produce’.

The report also concludes that there will inevitably be some casualties over the next decade as a result of support payments reducing and a significant proportion of the ageing farming population having to retire. In order to meet the needs of the next farming generation, investment in research and extension must consider the information requirements of extensive hill farmers, as well as intensive lowland farmers.

Finally, as climate change continues to move up the policy agenda, the report describes how hill farming certainly should be part of the solution. Meat produced from the hills has a relatively low carbon footprint, if sequestration values are taken into account, and hill areas are less likely to be severely affected by drought.

The recommendations focus on actions for the industry but also explain how policy and funding decisions by Government have an important role to play. The farming industry and those individuals that make up the farming population must recognise that their role in the future of upland farming is just as pivotal as that of Government and that they have everything to play for in the next ten years.

FOREWORD

Why Hills are Important to Me...

I do not have a background in farming. That is unless you count the fact that my Grandmother introduced the first herd of registered Dexter cattle into the Transvaal in South Africa where she farmed for 40 years until 1989. I guess she was one of the first 'life style farmers' that are now common place here in the uplands of the UK.

My background is rooted in the coal industry. My father worked for the National Coal Board, later to become British Coal, for nearly 30 years. I grew up in the pit village of Kiveton Park, near Sheffield and then worked for British Coal Opencast and then later a private mining company for the first 9 years of my working career. I was responsible for land restoration and for undertaking the ecological and landscape assessments of future sites.



I always wanted to work in a land related career from the age of 13. I spent most of my childhood outside, either riding ponies or walking my dog. As soon as I was allowed to go places on my own, I used to catch a bus with my dog from Kiveton to Sheffield and then another one out to the Peak District, a journey taking nearly 1 ½ hours each way. There began my love affair with the hills of the Peak District.

As I got older and more adventurous, I also used to take off to the Yorkshire Dales, the Lakes and the Yorkshire Moors, by train and then eventually by car, once I had learnt to drive. By the time I was choosing my first job, in my final year at University at the Queen's College in Oxford, I was determined that I wanted a job that was to do with land management and I wanted to work somewhere near the hills. Three years with only Shotover Hill and a pimple they called Boars Hill in close proximity had made me determined that I would no longer live in flat boring places.

I have been lucky enough to have succeeded in respect of both these aims. My career has taken me to South Wales, Sheffield, Manchester and north Derbyshire and now I have the best territory in the world, the north of England. I have worked in roles that combine land restoration, ecology and agriculture and have enjoyed all of them. But my obsession with the uplands has to some extent driven many of my career choices. Now that I am fortunate enough to live in the Hope Valley, I will be very reluctant to leave this little piece of heaven lying just 10 miles west of the city of Sheffield, home to over a million people.



View Across to Abney, Hope Valley from Bretton

FWAG and Hill Farming

I joined FWAG ten years ago and during this time have been on a very steep learning curve regarding the agricultural industry. Although I am a keen nature conservationist, I believe I am a pragmatic one. Having worked for one of the most environmentally damaging industries there is, I could hardly knock farmers for causing some environmental impact. So I am very comfortable defending the environmental actions of most farmers, albeit I acknowledge that there are a very small minority of farmers whose environmental practice should never be condoned.

The Farming and Wildlife Advisory Group has a vital role as the broker between the farmer and the conservation organisations. The organisation takes the view that there is a middle ground between commercial food production and environmentally sensitive farming. FWAG advisers steer farmers through the plethora of regulatory paperwork, grant applications and acronyms. FWAG membership provides the farmers the opportunity to meet with like minded producers at farm walks, technical briefing meetings, farm demonstration days and workshops to share ideas, best practice and experiences.



During my role as Regional Director for the Northern Region, I have learnt more about challenges and opportunities that now face the upland farming sector. As FWAG's representative on the Upland Technical Working Group that steered the development and implementation of the Upland Entry Level Scheme, I have gained a valuable insight into the conflicting objectives of wildlife groups such as the RSPB compared to those of the farming industry, represented by the NFU and CLA. I believe that a balance can be found between conservation and commercial farming but that at present many of those setting and implementing policy do not have a practical understanding of agriculture. As a result, we are left with schemes such as UELS, which whilst commendable in its objectives, runs the risk of causing confusion and disillusionment with minimal environmental gain on the ground.

ACKNOWLEDGEMENTS

- The Yorkshire Agricultural Society for sponsoring this scholarship
- The Nuffield Farming Scholarships Trust for giving me the chance to complete a scholarship and the much needed support and guidance given by the Director, John Stones, N.Sch
- My parents who have encouraged me throughout and have also proved to be expert report editors!
- My friends (especially Paula and Hester, horse helpers) who helped me while I was gone
- Michael Woodhouse, former Director of FWAG England, for persuading me to apply, for supporting my scholarship and for looking after my horses when I went to Australia at very short notice
- David Hugill, N.Sch, for his advice, encouragement and much appreciated words of wisdom throughout my scholarship
- All those people in Scotland, Ireland, France, Canada and Wales who gave up their time and passed on their invaluable knowledge and expertise to me, especially:

Sandy Tulloch, Joe Cronin, Joe Mc Crohan, Neilie O'Leary, Dr Brendan Dunford, David Calinan, Keith and Josette Richardson, Sarah Dejean and Neil and Lynda Perkins.

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INTRODUCTION

The Challenge Facing the Hills

Upland farmers are the guardians of Britain's most valued and important landscapes and ecological resources. These are the areas that tens of millions of visitors enjoy each year and that also provide water, carbon storage, recreational opportunities, energy in the form of wind and hydro power and not least, quality food.

Yet despite their importance, these areas are under threat as never before. The removal of price support through the Common Agricultural Policy has given rise to very volatile prices. The old headage payments received as the sheep and beef premium have now gone. The Single Payment Scheme is being eroded as England opts for 14% voluntary modulation in addition to the compulsory 5% rate agreed across the EU. The average age of the UK's hill farmer is now 59 and the number of people from the younger generation who wish to enter farming in the hill areas is at an all time low.

Why We Need Hill Farmers

There are those amongst the conservation organisations who are advocating re-wilding as an answer to the potential problems of the increasing marginality of many hill farms. Whilst targeted re-wooding of ghylls and cloughs and other suitable locations is to be encouraged, allowing in-by and even moorland to revert to scrub will do nothing for wildlife and will detract from the traditional landscapes that most people want to see.

It will take over 200 years for these 're-wilded' areas to form woodland. In the meantime, they will be unattractive tracts of gorse, bracken and hawthorn scrub that provides only minimal value for the rarer species that have suffered declines in the uplands. Ground nesting birds such as curlew, lapwing and twite, attractive flowering herbs such as greater burnet, mountain pansy, meadow saxifrage, bee orchid and butterwort and butterflies such as the brimstone and many of the rarer fritillaries all require managed habitats, particularly species rich grassland. Scrub will also be impenetrable for walkers and could harbour injurious pests, particularly ticks.

Only if managed grazing continues will these areas maintain their value as an important wildlife habitat and a special landscape. The more enlightened conservationists recognise this and are some of the most committed supporters of hill farming.

Hill farming is also crucial to so many other aspects of life in the Uplands. A report by the Commission for Rural Communities to be published in early 2010 states that although as a proportion of income to rural communities farming is no longer the most significant industry, many other businesses depend directly or indirectly on it. People visit the villages or beauty spots because their immediate surroundings are farmed. Without livestock and actively managed natural and heritage features, the places would be much less attractive and would not be the draw for the tourists. Walkers, cyclists, horse riders and picnickers seek out varied landscapes that have evolved and

are maintained as a result of grazing animals, stone-wallers, foresters, haymaking and even contractors spraying weeds and controlling scrub.

Some would argue that it is possible to preserve all the desirable features of the uplands by paying farmers to be park-keepers. Food production could be a secondary 'by-product' of the process. Before I commenced my Nuffield study on the future of hill farming, I considered briefly whether this might be true. However, in the light of my travels and my findings, I am convinced that the survival of these exceptional areas in the British Isles depends entirely on the existence of financially viable agricultural production in the uplands.



Moors above the Derwent in the Hope Valley

My Nuffield Farming Scholarship

I travelled to Ireland, Scotland, France, Canada and also visited several fellow Nuffield Scholars in Wales. I chose these countries because I wanted to:

- Understand the differences between the policy framework in each of the UK countries following devolution
- Visit two other countries in the EU that have less favoured areas that are not dissimilar to those in the UK based on altitude, climate, farm enterprise and size
- Include a non-EU country that has an extensive livestock sector that receives only limited government subsidy

I had already visited farms in Australia during the Contemporary Scholars conference in 2008. I was also familiar with the situation in New Zealand following a 5 week visit to NZ in 2001 as part of a Winston Churchill Memorial Trust Travelling Fellowship.

Whilst I appreciate that there was still probably a good deal to learn about these countries, I felt that it might be more valuable to include a different country in my studies.

This report will set out why I believe this and will focus on three key themes:

- The Policy Framework
- Agricultural Systems
- Marketing

In order to illustrate the messages that emerge from these themes, case studies and best practice examples will be used to establish:

- A suitable policy framework that will encourage hill farmers to improve production efficiency without compromising the environment and is fit for purpose in relation to climate change, food security and rising energy costs
- The appropriate industry response in order that it can continue to justify the essential transitional financial support for hill farmers in the short and medium term
- Strategies that could be adopted by individual farmers to enable them to meet the challenges of the next decade
- Multi-objective initiatives that could help to support hill farming in high value and environmentally sensitive areas
- How the produce from hill farming can secure the necessary premium from consumers
- How consumers can be convinced of the true value of food from the hills

SETTING THE SCENE: POLICY

The Market Situation in the UK

As I prepare this report (November 2009), livestock prices in the UK seemed to have stabilised at a level significantly above that seen pre-2008. Breed sales have seen new records set. News of Suffolk and Texel tups reaching prices of £7k is commonplace in the Sales sections of the Farmers Guardian. Cattle prices have also been strong, with steers making an average of... Prices for store cattle and heifers have also been good. Calf prices have risen to levels not seen for over a decade, such that even Holstein bull calves are providing a reasonable return to dairy farmers.

These improved prices have at last provided some optimism for hill farmers who for nearly 15 years, have had to battle with prices that are well below the costs of production. A small minority (<5%) of hill farmers have indicated that during 2009, their farm businesses may break even net of their single payment (personal communications). This would represent major progress for this small proportion of the most progressive farmers in this sector.

However, the recent good fortunes of livestock farmers cannot be taken as any comfort that such prices will be guaranteed into the future. In the absence of price support and intervention via the Common Agricultural Policy, agricultural commodity prices are likely to remain volatile. Livestock farmers will continue to have to make very difficult decisions about their business strategies and priorities. They must attempt to predict prices many months and sometimes years into the future, when even the market experts struggle to do so with any degree of accuracy.

The UK Policy Framework

In the UK, each of the member countries has now implemented the decoupled **Single Farm Payment** in a slightly different way because agriculture is one of the issues that has been devolved to the individual parliaments.

All four member states have fully de-coupled their single payment but Wales, Scotland and Northern Ireland have opted for a partly historic basis in order to calculate an individual farmer's entitlement, albeit the Northern Ireland system does include an element of a flat rate payment.

In contrast, England has opted for a very complex method for the calculation of the single payment. The payment was initially based almost entirely on the historic payment rate. Over the eight years until 2013, however, the farmers will gradually move over to a regional average payment. This Single Payment Scheme (SPS) regional average payment is set as three bands as follows:

English Lowland (includes the old disadvantaged area) £168.49 (€190.47)

English Severely Disadvantaged Area (non-moorland) £141.93 (€156.09)

English severely Disadvantaged Area (above the moorland line) £24.89 (€27.37)

The payment rates shown above are those that have been calculated for the 2009 year based on the exchange rate with the Euro.

By using this approach, England has ensured that the additional payments that accrue to farmers that were intensively stocked during the reference years are diluted over the period until 2013. By this date, all farmers will receive an identical per ha rate, including dairy farmers and other non-farmers who received no support payment prior to the introduction of the SPS.

In Scotland, Wales and NI, all farmers continue to receive a single payment based on their historic payment rate based on a reference year. By opting for this system, these farmers have, to some extent, been buffered from some of the effects of de-coupling as the only change that they will experience over the 2005 – 2013 period will be due to the increasing effects of modulation and financial regulation. In fact any reductions seen due to increased modulation, have more than been compensated for in the last two years by the favourable exchange rate which determines the actual amount that farmers are paid.

English farmers are further penalised because they are subject to higher voluntary modulation rates than their counterparts in the other countries; Figures for 2010 are 14% in England as opposed to 9% in Scotland, 6.5 % in Wales and 9% in NI. This is in addition to the compulsory modulation rate of 5% that applies across the EU. It is interesting to note that with the exception of Portugal, no other EU countries applied for the facility to impose voluntary modulation on their farmers.

The other payment received by farmers in the Severely Disadvantaged Area is the **Less Favoured Area** payment, which is part of the Pillar 2 of the Common Agricultural Policy (CAP). This again is treated differently in each of the member countries in the UK.

In **England**, until 2009, farmers received the Hill Farm Allowance. This was paid as a flat per hectare payment for land holdings up to 350 ha with a reduced rate thereafter. A higher rate applies to land below the moorland line compared to that above. The rates payable in 2009 were:

Land below the moorland line (up to 350 ha)	£37.34/ha
Land above the moorland line (up to 350 ha)	£14.14/ha
Land below the moorland line (above 350 ha)	£18.67/ha
Land above the moorland line (above 350 ha)	£7.00/ha

In order to qualify for the HFA, farmers simply had to tick a box on their SPS form and would have to comply with cross compliance plus a few very simple environmental conditions.

In 2010, everything changes. Farmers in England that are not in a Countryside Stewardship Scheme or don't have an Environmentally Sensitive Area Scheme (UESA) agreement will now have to apply to the Upland Entry Level Scheme in order to secure this funding that formerly arrived with their SPS cheque as the HFA. This represents a major change as they will be expected to comply with a range of environmental requirements both on moorland and in-bye but to then make up the remainder of their 'points' they will have to choose from a range of options.

The Government's argument in support of the introduction of the UESA is that taxpayers need to see some 'public goods' in return for the funding that is paid to farmers in the LFA. However, the scheme is very complex and FWAG, the NFU and the CLA are extremely concerned that many farmers will

disengage at the first hurdle because of the difficulties that they may encounter when trying to prepare an application.

In **Wales**, Less Favoured Area (Tir Mynydd) payments are available in 80% of the country. The LFA is divided into a Disadvantaged and a Severely Disadvantaged zone. Tir Mynydd payments for 2009 are £30/ha (SDA) and £20/ha (DA), with a reduction of 35% over 140 ha and 70% over 640 ha. The minimum claimed area is 6 ha and land used for milk production is not eligible. Minimum activity is not defined but applicants must 'farm' for a minimum of 5 years and under cross-compliance they must graze or mow at least once within any 5 years

In the future, all the agri-environment, organic and Less Favoured Area payments will be combined under the 'Glastir' scheme. This scheme will, according to the Welsh farming Minister, pay farmers for environmental goods and services. The proposals for Glastir have not been well received by the farming unions in Wales as most fear that many farmers, particularly those in the LFA, will be significantly worse off. Under the current proposals, LFA farmers will receive an additional 20% over and above the base payment to compensate for the loss of their Tir Mynydd payment.

In **Scotland**, the Less Favoured Area Support Scheme (LFASS) applies to eligible land holdings exceeding 3 ha. Land entered into the scheme must be actively farmed for at least 183 days per annum and the definition of farming entails minimum stocking rates for livestock which does not include horses. Land used for dairy is also not eligible and payment rates are calculated on the basis of historic values.

Table 1: Payment Rates for the Less Favoured Area Scheme in Scotland

Land Category	"Standard" areas with lower transport costs	"Fragile" mainland areas of disadvantage and higher transport costs	"Very fragile" island areas
	Cost per Adjusted Hectare (£)	Cost per Adjusted Hectare (£)	Cost per Adjusted Hectare (£)
More Disadvantaged Land (categories A and B)	£37.80	£45.00	£51.70
Less Disadvantaged Land (categories C and D)	£32.50	£39.50	£45

In recognition of the costs associated with running even the smallest of farms, especially in outlying areas, a minimum payment of £385 will be available to everyone eligible for LFASS. Businesses will receive either £385 or their calculated LFASS payment, whichever is the greater.

Seventy percent of the farmed land in **Northern Ireland** is currently designated as less favoured. As in England, it is categorised as either disadvantaged or severely disadvantaged. Farmers who wish to claim the Less Favoured Area Compensatory Scheme Allowance must:

- Have at least 3 hectares of eligible forage land in the Severely Disadvantaged Area and/or Disadvantaged Area
- Keep enough eligible stock to meet the minimum 0.2 Livestock Units per hectare stocking density requirement
- Have the land available and accessible to them and meet the stocking density requirement throughout the period of 1 April 2009 to 31 October 2009
- Adhere to the Cross-Compliance requirements
- Undertake to farm in the Less Favoured Area for five years from the first payment of a compensatory

Assuming these criteria are met, they receive

- £23.81 per hectare for Disadvantaged Areas; and
- £47.62 per hectare for Severely Disadvantaged Area

The Policy Framework in non UK Countries Visited

In the **Republic of Ireland**, the single farm payment has been decoupled but is based on an entirely historic basis of calculation, in order to minimise any adverse impacts on farmers. In the Less Favoured Areas, the Disadvantaged Areas Scheme provides for payment for three different categories of land up to an overall payment ceiling of 45 forage hectares

- Less Severely Handicapped Lowland and Coastal Areas with Specific Handicaps: €82.27 per forage hectare.
- More Severely Handicapped Lowland: €95.99 per forage hectare.
- Mountain Type Grazings: €109.71 on first 10 forage hectares or part thereof; €95.99 per hectare on the remaining forage hectares.

In **France**, the farmers receive a de-coupled single payment but once again, it is based on entirely historic calculation. The Government have also managed to retain an element of headage payment for cattle which boosts the overall payment for these farmers. In the Less Favoured Areas, a similar system operates as there is in Ireland but it has been difficult to extract exact payment figures for 2010. LFA payments are made on holdings up to a threshold area of 50 ha with a higher payment rate on the first 25 ha.

In **Canada** there is no specific payment to farmers with hill land and farmers do not receive any direct support payments.

Looking to the Future....

A report several times larger than this one could easily be devoted to predictions regarding the future of the Common Agricultural Policy (CAP). I do not profess to have a crystal ball nor do I have a comprehensive knowledge of CAP. However, it is likely that the level of support received by farmers in 2014 in all EU states from the Single Farm Payment will be reduced.

Some observers suggest that payments from 2014 onwards will be linked to public goods and environmental outcomes. They also anticipate that the payments received by individual farm businesses will be reduced dramatically compared to current levels. However, recent moves by France and Germany to form an alliance to campaign against any significant reductions to the CAP could mean that changes are less drastic than many English politicians would like to see.

If payments move towards a system of payments on the basis of public goods, this could be better news for hill farmers than those in the lowlands as a result of the high environmental and aesthetic value of the uplands and the role that farmers play in maintaining such landscapes.

Nevertheless, even if more of the money is directed at upland areas, it will still be a far smaller pot and therefore all farmers will be worse off. In one sense, England and Wales will be one step ahead of the game as their LFA payment has been transformed into an agri-environment scheme and will therefore be easier to defend under a system of payment for public goods. Most sense that hard times are ahead and income from the public purse will reduce dramatically after the next round of CAP negotiation.



Swaledale Ewe and lamb above Wharfedale, North Yorkshire

AGRICULTURAL SYSTEMS

Farmers in the different countries that I visited faced many different challenges. In the Lozere region of France and the foothills of the Rocky Mountains to the west of Alberta in Canada, a shortage of rainfall during the summer months dictated the approach to stock management. Across the uplands of the UK and the Republic of Ireland, too much rain during most of the year is the main problem, especially during the autumn and spring when it can mean that stock have to be brought into winter housing prematurely, resulting in significant extra cost to the business.

Despite these inherent differences, I observed many common threads between the farm businesses that I visited in each of the countries. Many of the issues encountered by the farm businesses in Europe and Canada were very similar. The main ones are outlined below.

Costs and efficiency

In all of the countries visited, there appeared to be a vast difference between those farm businesses that were in the top quartile in terms of performance and those who were in the bottom quartile. Researchers and advisers are encouraging farmers to have a better understanding of their costs and how these inputs are converted into live-weight gain. Benchmarking is slow to catch on in upland farming systems.

As a result of a shorter growing season and higher rainfall, cattle in the hills are housed for a longer period over the winter. Therefore, the overall costs of bedding, conserved forage and concentrate are necessarily higher. Hill farmers will also often pay more per tonne for concentrate feed and straw because of the distance over which it needs to be transported. Similarly, many hill areas are more remote from the market and therefore transport to market costs are also increased. Yet few farmers appear to know how these costs affect their profitability. Many do not keep meaningful records and few seem therefore to have any accurate ideas regarding how much profit or loss they are making.

Decisions regarding feeding strategies, over-wintering plans for stock and different housing options are rarely made using accurate farm-specific data. Therefore, assessing year-on-year business performance accurately and drawing meaningful conclusions from improvements or deterioration in profitability is almost impossible.

Environmental performance

Due to the extensive nature of the upland farming systems encountered in Europe, the environmental impacts are relatively limited. In most cases, they are vastly outweighed by the benefits accrued from stock grazing to maintain fragile grassland habitats and to prevent scrub encroachment. Historical problems such as overgrazing, the impacts of which were most obvious in the Lakeland Fells and the western hills of Ireland, have been tackled quite

successfully. Reductions in stock numbers have been achieved by a combination of regulation and financial incentive.

New concerns are now being raised about other environmental issues. A recurring topic for discussion in 2009 has been greenhouse gas emissions from livestock, particularly cattle. Some scientists have suggested that the only responsible way to reduce the population's carbon footprint is for everyone to become a vegetarian. This is because of the greater efficiency when converting the sun's energy into nutrients from plants when compared to feeding those plants to livestock to produce meat.

It is unlikely that an entirely vegetarian diet for humans could be efficiently produced by the uplands. Experiences in the Peak District during the Second World War where the 'War Ag' regulations forced the compulsory ploughing of many areas for cereals showed that the uplands will only ever successfully grow grass. Oats and rye sown in the Peak District during the war was harvested every year, unripe, and was subsequently fed to livestock. Certain vegetables can be grown on a very small scale in the uplands in better years, but this requires considerable amounts of labour, pesticide and well rotted manure!

Across the hills of the UK, a significant environmental threat now looms as a result of under-grazing because there has been a significant reduction in stock numbers in the hills. Suckler cow numbers have remained relatively stable for the last 20 years but last year saw a reduction in numbers. Breeding sheep numbers have also fallen by more than 5% each year over the last three years.

These declines are more pronounced in Scotland, particularly in the highlands and islands. A report produced for the Agricultural Change and Environment Observatory Programme suggests that the rates of decline in cattle numbers will accelerate over the next four years. Rates of reduction of up to 25% reduction in the numbers of suckler cows between 2007 and 2013 could be observed whilst sheep numbers are predicted to reduce by less than 4% over this same period .

Looking further afield, the practice of finishing cattle in 'feed lots' in Canada is now causing considerable environmental concern amongst environmentalists and some politicians. In Lethbridge, southern Alberta, at any one time 110,000 cattle will be fattened prior to slaughter in mile upon mile of corral. The quantities of manure produced from these units and the relatively small area across which it is being spread means that issues with nitrate and phosphate levels in ground water are emerging.

Breeds and Breeding

It is evident that there has not been the same focus on the improvement of genetics within the sheep and beef industry as there has been in the dairy sector. This is true in Ireland, France and Canada as well as the UK. The best performing herds and flocks in Europe are now starting to focus their attention on the selection of the best traits for carcase production, fertility, easy calving/lambing and conversion of feed into live-weight gain. However,

the vast majority of producers are still basing their choice of breeding stock on a wide range of other, less relevant criteria.

In the UK, the stratified nature of the sheep flock means that there is still a clear need for mules and therefore the traditional hill breeds such as the Swaledale, Scottish Blackface and North Cheviot still have a vital role in maintaining the supply of store mule lambs for sheep producers in the lowlands. Many farms in the uplands still maintain two separate flocks on the moorland or common ground and the in-bye respectively.

This system works well, both commercially but also, critically, in maintaining the ecological well-being of the moorland and rough grazing areas. In the absence of agri-environment payments and the requirement to maintain eligible land under the Single Payment Scheme 'in good agricultural condition' which includes a requirement not to under-graze, there is a risk that hill sheep could be lost from tracts of moorland.

The 2009 Farming Practices Survey has indicated that 6% of farms have stopped grazing the moorland and a further 30% of them have reduced grazing. It is likely that as the farming population in these areas continues to age and the impact of the de-coupling of the SPS continues to take effect, that these trends will continue, if not accelerate.

Although it is hoped that traditional hill breeds, both of sheep and cattle continue to flourish in hill areas, there is still an important role for genetic selection to improve the vigour of the animals and the consequent profitability of the sector. Eblex has invested considerably in promoting the use of improved genetics to farmers but there is still enormous scope for greater uptake. Time spent observing tup sales at Bakewell or Thirsk auction mart demonstrates that the appearance of Swaledale tups, and more specifically their heads and horns are still a primary deciding factor for many would-be purchasers, rather than proven genetic performance!

The importance of native and more specifically, regional breeds should not be overlooked, however. In France, farmers show great loyalty to the local breeds. There is an incentive for keeping these animals as many local retailers will pay a premium for their meat.

When in the upland areas, the Montbeliard is the dominant dairy breed and black and whites are a rare sight. Cheese production is the main outlet for their milk, but a significant proportion of it also goes to the liquid milk market. I talked about the relative merits of the Montbeliard with their owners who stressed the longevity and fertility of the cows and the absence of problems with mastitis, lameness and difficult calvings. Yields are on average 15% lower than those of Holsteins but perhaps if calving intervals are significantly better, vets bills are drastically reduced and a cow can be expected to achieve 6, 7 or even 8 lactations, then the economics may start to stack up.

There is clearly a strong argument in favour of introducing Montbeliard breeding into many of the upland dairy herds. A global review of recent research into cross breeding was part funded by Morrisons and the Arla Foods Milk Partnership and undertaken by Wes Bluhm. Conclusions from this review suggest that cross breeding helps to address animal welfare problems and concerns from both a financial and ethical perspective.



Montebeliard Cattle Grazing near Canorgue, Lozere region

The review also indicated that cross breeding can improve profitability due to increased survivability of calves and longevity of cows leading to reduced replacement rates and greater potential for heifer sales.

Rationalisation and specialisation

I don't need a crystal ball or to have completed a Nuffield Scholarship to suggest that it is inevitable that farms in the uplands are likely to become larger and more specialist over the next decade or more. However, what is more relevant is how these farm businesses will grow, what benefits this will bring to the industry and the wider rural community and what adverse effects may arise.

It is unlikely that there will be a uniform expansion of hill farms across the uplands. There will definitely be differing rates of growth between different EU countries and within UK regions due to factors such as land tenure, availability, price and farm type. In upland areas that are near to large centres of population, purchase of land by non-farming interests will continue to be important.

In Ireland, farm sizes are still astonishingly small in the upland areas, hence the popularity of part-time farming. Exortionate land prices, even now the country is in deep recession, and a strong ethos of retaining the family farm, mean that it is extremely difficult for farmers to buy or even rent in additional land. This will continue to be a limiting factor that impairs the ability of the Irish farming industry to progress and modernise.

In France, land is still comparably cheap compared to the UK and Ireland and this means that it is possible for new entrants and existing farmers to acquire land. However, even with the current generous support payments in this country, the economics of livestock farming mean that many farmers are not keen to take on an additional mortgage or loan.

At the time of my visit, the strong value of the Euro was a significant factor affecting the profitability of the agricultural sector and this contrasted to the major boost that the exchange rate was providing to UK farmers. It has made French land and property less attractive to UK investors, though and this was welcomed by French farmers who were seeking to purchase additional acres!

In the UK, land prices have only been marginally affected by the recent property price slump. In sought after areas in National Parks, prices have barely dipped. There has been a reduction in land rents since the introduction of the Single Payment as previously, high rents were further inflated by the influence of incentives such as extensification and the Hill Farm Allowance. However, in many areas, including the Peak District, seasonal 'grass eating lets' still make over £100/acre. Current high prices for sheep and cattle have improved the optimism of the industry which in turn has translated once again into higher rents.

Many independent observers of the hill farming sector would suggest that while ever the market is greatly distorted by support payments, land prices and rents will be artificially high. By removing these payments, prices would be allowed to settle at a level that better reflected the actual value of the land. There is clearly an element of truth in this. However, the shortage of land in the UK per se will always be the over-riding factor in determining the price of this rationed commodity.

It is likely that if direct support payments do diminish substantially, or if they are replaced by agri-environment schemes, rents may start to fall and this can only be a good thing for the future of the industry. In particular, it may provide the necessary break for new blood to enter hill farming and this is the single most critical factor in determining whether farming in the hills can adapt to meet the challenges of the future.

Versatility and flexibility

In the UK, the size of farm required to support a family has increased exponentially over the last thirty years. Few upland farms are of a sufficient size such that they can generate enough income to support a family. Most commercial farmers will now rent a significant area of land in order that they have a viable business. In many cases, much of this land may be some distance away from the holding and therefore may be used for forage conservation or in some cases, grazing youngstock.

Rents in upland areas have remained stubbornly high, despite the low profitability of many farm businesses. In some cases, it is difficult to see how these additional acreages are adding income, rather they appear to be increasing turnover whilst adding little to the bottom line.

In Ireland, I found that whilst many farms do rent some land, the proportion of owner-occupied farmland was far higher. Farm sizes were much smaller but instead of farmers choosing to rent in additional land, most farmers seek off-farm opportunities to generate more income. This might be from farm related activities such as contracting but very often would be unrelated to agriculture.



The 'Part – Time Farmer' (also a musician), Valentia, Co. Kerry

One farmer I met was a semi-professional musician, another worked in a garage. Tourism is obviously another substantial source of income as many farming families also had B&Bs, holiday cottages or camp sites.

The Irish Government also encourages diversification and part-time farming. The Farm Assist scheme is funded by the Irish Government (not the EU) and its Rural Social Scheme and Rural Community Schemes pay an average of €214 per week per farmer in 2009 (source: Irish Farmers Association) and require them to work a minimum of 19½ hours per week off-farm. Even in the current dire economic climate in Ireland, this scheme is still very generously supported by the Treasury.

Part-time farming in Ireland is not frowned upon in the upland areas, more it is viewed as a fact of life. I found that many farmers felt that their quality of life had increased as a result of new challenges and greater social interaction. They also found that they enjoyed the time that they spent farming more as a result of not farming full time.

Embracing Farming for Conservation

Agri-environment Schemes have also been another mechanism that has allowed many farmers the opportunity to semi-retire or seek off-farm opportunities. In England where the Higher Level Scheme is targeted at areas with the greatest landscape and ecological value, most hill farmers,

especially those in National Parks, find that they can enter the scheme. It is not very lucrative, but does provide a relatively secure, reliable source of income in increasingly unpredictable times. As a result of entering the scheme, farmers will reduce their stocking rate in order to meet the prescriptions within the agreement. Any 'income foregone' is compensated for by the Scheme payments.

In West Cork, the Rural Environment Protection Scheme provides on average €6000 per annum to farming families which makes up over 20% of their total business turnover. A survey of 65 farm holdings in the Bantry area indicated that the 29 farmers that were not in REPS worked on average an extra 7 hours per week compared to the 36 that were in the scheme (53 hours compared to 46 hours per week spent on farming). Many of the farmers that were in the REPS scheme also had off farm jobs or had spouses that worked away from the farm.

In France, agri-environment schemes are very much in their infancy and only a very small proportion of farms are signed up. This is surprising given the ecological value of many of the agricultural habitats and the emphasis placed on environmental assets in the country. Farmland that does not form part of a Natura 2000 site receives a basic payment for grassland management. The conditions attached to this payment are generic rather than tailored to the individual site. A more detailed scheme is available for Natura 2000 sites where the farmer can choose prescriptions that best fit his farming system and the habitats that he has on his farm.

In Canada, each province will have its own Stewardship Scheme. In Alberta, the schemes are offered through the Growing Forwards initiative.



Stewardship at the Lucasia Ranch, Alberta

Farmers sign up for Stewardship Plans and in the first instance, must complete an Environmental Farm Plan. As part of this, they will have to complete a Work Plan which lists the actions that they will undertake over the Plan period to address the highest environmental risks that they have identified. Farmers can then chose to apply for funding relating to activities in three specific areas:

- Grazing and winter feeding management
- Integrated Crop Management
- Manure management

Funding of up to 50% of costs is available to farmers for specific items such as fencing to protect sensitive areas, shelterbelt establishment and riparian area management.

Agri-enviroment funding is therefore available to many farmers in the uplands. These schemes should be viewed by farmers as a form of diversification. It provides an additional source of income and it requires a different approach to certain aspects of farm management. Nevertheless, a well designed scheme should integrate seamlessly into best farm practice and should not prevent the farmer from running a commercially viable farm business. Indeed, in many cases, entry into such a scheme can be the trigger needed to re-appraising the farm business and seeking a way forward that is more sustainable, robust and better placed to meet future challenges.

In summary, during my travels I have identified four broad types of agricultural system:

- Large, relatively efficient units that have secured economies of scale and gain most of their income from the primary agricultural business
- Small efficient units that have diversified on or off farm, either through a business that is related to the farm (eg. Farm shop, tourism) or through a member of the family going out to work full or part time
- Lifestyle farmers who have a significant source of income from another source (inheritance, previous lucrative career or business) and for whom the farm is essentially a hobby, albeit one that may be full-time
- Subsistence units where farming is the main source of income but where it is rarely sufficient to provide a reasonable standard of living

The efficient units are usually run by the younger generation (<50 years old) and are often family farms although some are tenanted or purchased. These units, whether small or large were characterised by the following:

- A clear business plan with identifiable short and medium term goals;
- Energetic, enthusiastic and intelligent individuals;
- A specific outlet for their animals defining what, when and how they produce;

- A willingness to exploit new opportunities such as agri-environment schemes, rural development grants, the offer of relevant training and prospects for co-operation

The lifestyle farmers are growing in numbers in all of the countries visited to date. In England, this sector of the farming community is often dismissed by much of the industry. In France, however, the life-stylers seem to be an integral part of the farming community.

Subsistence farmers still represent a significant proportion of farmers in the uplands. There is no single typecast for them but the following traits can usually be recognised in these farm businesses:

- The farmer is usually over the age of 55
- There is often no obvious successor to the farm enterprise
- The farm nearly always operates with minimal commercial interaction with surrounding enterprises
- Little change has occurred within the business in the previous 2 – 3 decades despite a revolution in their market
- They often have excellent stock husbandry and landscape maintenance skills and knowledge
- The farmers often view new grants or initiatives with suspicion and are usually strongly antagonistic towards new legislation and incentives

It is inevitable that for demographical reasons, this type of farm business will decline dramatically over the next decade. There may be some positive impacts from this such as being bought up by a younger generation who are more likely to make a success of the holding.



Sheep Farmer 'Shearing' near Bantry, West Cork, Ireland

There are, however, some possible negative impacts, including:

- Loss of an important skills and knowledge base
- The possibility that more marginal land such as the west coast of Ireland or the alpine regions of France will go out of production and 're-wild'
- These smaller farms may be amalgamated with large farms which may result in a degraded landscape where the farming system becomes either more intensive or extensive
- Effect on the local rural community as it is no longer a working farm unit

It is unlikely that this group of farmers would have survived without the existence of the support payments and the Hill Farm Allowance that is available across the EU.

MARKETING

A principal conclusion from my study was that food produced on hill farms will never be able to compete on price. The reasons for this are set out in previous sections of this report. As a result, hill farmers will need to secure a premium on their animals if they are to recover these costs and make a profit.

Selling the Story

The unique selling point that upland farmers have is their story. Whether it is the method of production, or the environmental credentials of their farm or their well known location in the Lakeland Fells or North Yorkshire Moors, upland farms can conjure images in the minds of consumers. If the farmer or retailer can tell the story effectively and better still, convert it into a recognisable brand, the product can command a premium compared to anonymous meat on a supermarket shelf.



Sign for a Farm Shop near Montbrun, Lozere Region

Until recently, the technique by which food was sold as 'local' or 'environmentally friendly' was referred to as niche marketing. Now it is recognised that locally produced food is mainstream. A quarter of consumers now purchase locally produced food; this figure has doubled in the last three years. Future growth represents a huge opportunity for farmers in upland areas.

Here in the Hope Valley, we are lucky enough to retain quality butchers in the villages of Hope and Stoney Middleton who source all their beef and lamb from their own farms. Our situation, is, I fear the exception to the rule. In many towns and villages, the butchers have closed long ago, pushed out of business by out of town supermarkets.

In Ireland, huge importance is placed on the Irish origin of meat but there is little or no local identity. Local butchers are still common place and the Irish consumers did seem to be discerning as to where their meat came from. However, branding of meat produce was barely evident. Ireland is seemingly well behind even the UK when it comes to branding a quality product that has outstanding environmental credentials.

A lesson in product branding

In Canada, the situation is very different. With a population of just 33.74 million but a total land area of just under 1 million sq km, it has one of the lowest population densities in the developed world. The Province of Alberta has a population of just 3.69 million people but has nearly 6 million head of cattle. As a result, 90% of the beef produced is exported. Due to an absence of slaughterhouse capacity, the majority of Albertan cattle are exported live to Montana where they are slaughtered for consumption in the US.

In 2003, however, everything changed when the US discovered the first case of BSE in a cow from Alberta. Instantly, the US border was closed to beef from Canada. Farmers found that they had lost the market for almost all of the beef that they produce. Furthermore, they were not able to slaughter most of it as virtually all their slaughter house capacity was also located south of the border.



Cattle in a Feed Lot near Calgary, Alberta

In response to this situation, some producers did set up their own abattoirs with cutting and packing plants. One or two examples were on a large scale with initial investments exceeding \$30 million. Ultimately, nearly all these ventures failed. Other producers opted for the direct marketing option, selling at farmers markets or direct to consumers. Although they did secure a premium for their product, for many, the time that they had to invest in selling and marketing was prohibitive. The other issue that confronted these producers was what to do with the less desirable cuts. As soon as the export ban was lifted, these farmers very quickly reverted back to selling a commodity for export.

Some producers did manage to make a success out of this crisis. In most cases, they grouped together as co-operatives or alliances in order that they could supply supermarkets and other retail outlets. By ensuring that they could supply all year round, and supply the quantities and cuts required, these producer groups secured contracts. They also came up with a story to sell their beef at a premium. There were a number of successful examples of 'story beef' as the Canadians called it.

A successful example is Heritage Angus Beef. This producer group comprises 14 producers and there are strict criteria for joining the group. The cattle must be reared mainly from grass; if they are finished in a feed lot they must spend less than 90 days there. All the producers have closed herds and all animals are raised from birth to slaughter by the producers. The producers do not treat the cattle with any form of hormone or steroid or anti-biotic. All the producers have to sign up to a farm environmental plan and meet set environmental criteria. Unlike much of the beef animals in Canada, all cattle sold as Heritage Angus Beef must have full traceability records.

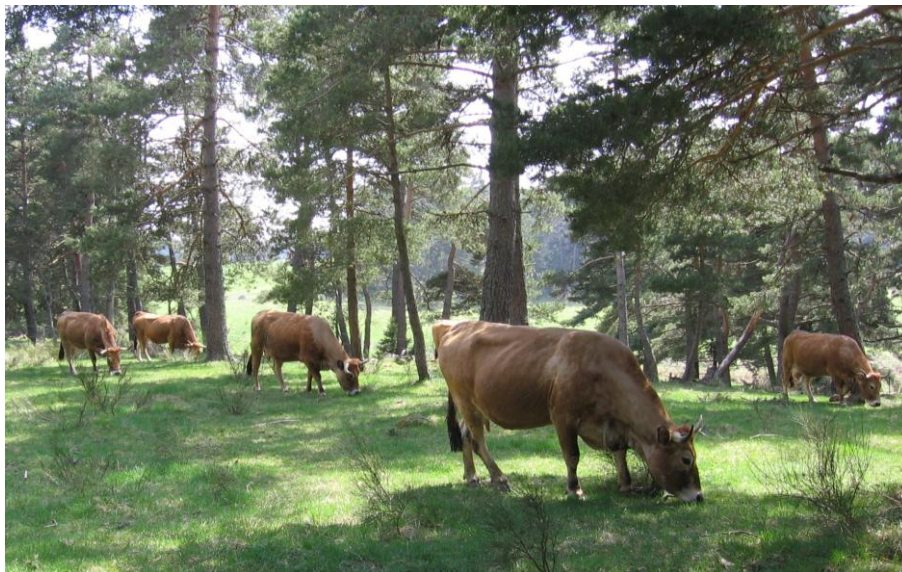
This producer group have invested in a strong brand to enable them to sell at a premium. An excellent website, www.heritageangus.ca/public/index.jsp provides all the information consumers or retailers need to know. All the producers in the group are listed and most have links through to their own websites. The website also lists all the retail outlets where the beef can be purchased.

The stories that they tell are very persuasive. One ranch, Spirit View Ranch, states that it believes that it needs to be in the lowest 20% of producers for cost and the highest 20% for marketing to succeed. The website demonstrates how they have conveyed the message and cost control has been achieved by making best use of natural resources on the farm and an eye for detail.

Keeping it Local

In France, all the farmers that I met in the Lozere region located on the edge of the Massif Central, sold direct to a local butcher or restaurant. From my discussions with many farmers, it seemed that the majority of farmers in the hill and mountain areas secured local markets for their produce. Supermarkets and large food retailers sourced their meat from the larger farms in the lowland areas in the north of France.

Butchers and restaurants exhibited a strong preference for meat from local breeds such as the Aubrac. While in the Lozere region, I did see continental breeds but the Aubracs were more numerous. They were strongly favoured by the farmers in the area despite the fact that they are not as efficient at converting energy to live-weight gain as the Charolais or Limosin. I ate at a number of restaurants in Lozere that advertised the fact that they were selling beef from Aubrac cattle. Some farms keep them as a true general purpose cow and still milk them but these are a small minority and most farmers that I talked to said it was more of a lure to the tourist trade than a genuine farming enterprise.



Aubrac Cattle Grazing near Le Savignier, Lozere Region

Farmers in France have the perfect scenario in which to market their produce. They have a population that is obsessed with food and supremely proud of its national identity and everything that it produces. This is borne out simply by driving down a toll motorway and looking at the cars that pass; even today, over 80% are French Marques. It is difficult to see how direct marketing of meat from hill farms in Britain could achieve the same market penetration as is achieved in France due to the domination of supermarkets here.

Nevertheless, if recent trends of local food consumption continue, it will certainly be more main-stream than niche in the near future. Demand will only be met through the formation of collectives or co-operatives to achieve a constant supply to suitable retail outlets. Branding schemes such as the Peak District National Park Authority's 'Environmental Quality Mark' will be essential if product differentiation is to be easily recognisable and successful.

The Peak District 'EQM' scheme is one of the first of its kind in the UK. It is funded by the National Park, the Peak District Leader initiative and the local Development Agency, EMDA. Business members do not have to pay to join the scheme but rather they must meet stringent environmental and quality criteria. They are required to:

- Contribute to the conservation of the Peak District National Park
- Use locally grown and made products and services
- Use environmentally friendly products
- Demonstrate efficient use of energy and water
- Minimise the production of waste by reducing, reusing and recycling
- Provide environmental information to customers



Businesses can be farms, Bed and Breakfasts, food retailers (restaurants, cafés or grocers) and craft shops. As well as benefitting from an increasingly acclaimed brand that is trusted and reasonably well understood by consumers, the business members also work together to promote each other's businesses. Many members of the EQM state that the network and the referrals that they receive from one another is one of the most valuable elements of the scheme.

Given that farmers are notoriously bad at co-operating on a formal basis, perhaps these looser associations that offer many of the benefits of a co-operative without the politically sensitivities may be the way forward for local groups of like-minded farmers. It is important to note, however, that this scheme is generously supported by the public purse and that additional tensions might be created if individual members had to pay into the scheme.

DEMONSTRATING THE WAY FORWARD

During my travels I met many innovative, driven and inspiring people. In this report, I have selected the individuals or the initiatives that may offer part of the solution. The examples included provide pointers as to how the hill farming industry in the UK might respond to the challenges that lie ahead.

The inclusion of these farms, individuals and initiatives does not mean that they are doing everything right or that they are phenomenally successful, but rather that they have found a solution that works for them and allows them to continue farming. In every case, the people I spoke to were absolutely dedicated to a future in farming and the alternative sources of income were primarily a key to allowing them to do this. In a number of cases, the names of the individuals have been changed to maintain their anonymity.

Part-time Farmers in South West Ireland

Farm holdings in the South West of Ireland are small. The average holding size in Cork is 32 ha. Therefore it is not possible to make a full time living from the farm alone. There are also fewer opportunities to buy or rent in more land. Therefore most farmers have to supplement their farming incomes with money from other sources.

Donal, a dairy farmer I met in Valentia, Co. Kerry, milked approximately 30 Montbeliard cattle on a holding of approximately 25 ha. He had switched from Holstein Fresians just over 2 years ago after encountering fertility problems and ongoing incidences of mastitis within the herd. His Teagasc adviser had suggested that he might look at a hardier breed such as the Montbeliard as they may be better suited to the very wet, exposed climate of Valentia.

Donal imported 20 Montbeliard cows from France and has never looked back. Furthermore, by opting for a breed that is better suited to the prevailing conditions, he has reduced the management time required. This has enabled him to pursue his alternative career as a musician in a semi-professional traditional Irish band. His band play 2 to 3 gigs a week in the Clare, Kerry and Cork area and this provides him with an extra €200 - €300 per week.

Furthermore, since switching to the Montbeliards, Donal said that he had increased his margin on the milk, as well as producing more valuable bull calves. He said that due to the higher butterfat content of the milk, whilst average yields were slightly lower, he received a better price per litre. Furthermore, yields were more consistent, due to an improved calving interval and fewer problems with lameness. In addition to this, Donal suspected that the cows would have a longer productive life, although he admitted that only time would tell whether this was really the case. He also commented, with some satisfaction, that his neighbours, having initially sneered at his change of direction, were now very interested in what he was doing and were making polite enquiries about his cows and how they were faring!

Richard, a farmer near Schull, in South West Cork, is also a dairy farmer, but he has chosen to remain faithful to his Holsteins. However, instead of

seeking to expand his herd from the 50 head of milking cows plus followers, he has looked for supplementary sources of income. His wife runs a successful bed and breakfast which is a very typical diversification in this very touristy area. He has opted to become an approved REPS (Rural Environmental Protection Scheme) Planner and now completes REPS Plans for other farmers in the area.

He finds this work extremely interesting and rewarding, remarking that it is a dream come true to be able to get paid for looking at other people's farms. He can also balance this work with the busy times on his own farm, as there is no absolute deadline for scheme applications.



Richard making Bird Boxes on his Farm near Schull, West Cork

His farm is also a demonstration farm that is used by Teagasc for the various training courses that other REPS agreement holders are required to attend. Richard comments that farmers are more comfortable with his role as a planner knowing that they will be able to come and look around his farm too! For him, conservation is his passion and so maintaining his farm to the highest environmental standards is part of his ethos and way of farming.

Despite these other diversifications, Richard is adamant that his farm must be profitable in its own right. He manages costs on his farm extremely tightly and believes that attention to detail with dairy cows is the only way to ensure that they will make money for him. He keeps to a minimum the amount of capital tied up in equipment, making use of specialist contractors wherever possible.

Despite the prevalent doom and gloom in the dairy industry during the summer of 2008 due to high input costs, poor weather and low prices, Richard remained very upbeat. He has a clear direction for his business and was confident that he could make a success of it irrespective of the economic climate.

Producing for a Niche Market in France

Dunni is in his late 20's and farms near Termes, a small town in the north west corner of the Lozere region. He has recently bought his farm from the family and has ambitious modernisation plans for it including the construction of a new farm house, new livestock buildings and the purchase of more land. Dunni works on his own, just employing an extra man for short periods during harvest time where he harvests a small area of triticale and maize.

Dunni has a herd of 40 Limosin and Simmental cattle and his primary product is veal. The calves are kept in straw pens and are fed purely on a milk diet but drink directly from the cows. The calves are suckled by more than one cow but only at specific times. Because the veal is purely milk-fed, it is stamped with a unique mark that guarantees this and as a result, Dunni receives a premium price of 40c/kg over the average market price. Dunni admitted that he would rather feed the calves a more diverse diet but that the premium he receives is the difference between his farm being viable or not. He sells to two local butchers who take all his calves. He has to calve all year round to maintain the supply to them. His calves consistently receive the highest grade at the abattoir but he does not receive any additional payment for this.



Dunni and his Limosin/Simmental Cattle at Termes, Lozere Region

Dunni must contend with extreme conditions where he farms in Lozere. The summers are very short – there is grass from early to mid-May through until mid-September and then the cows are housed for the rest of the year. By growing just a small area of triticale, he can provide some of his own straw which if he has to buy it in, is very expensive at €70-€80/tonne. If he had to buy in all his concentrate, it would also be prohibitively costly.

Dunni is in the LFA and therefore receives an extra €6k on top of his Single Payment totalling €30k. This additional income is soon accounted for within his farming system. He explained that he is currently spending €140 k on a new building which would cost him €50 k less if he was in a lowland area as it would not require so much insulation and could be smaller as some cows could be turned out for longer.

Dunni admits that even with the premium he receives for his milk-fed veal and his low cost system, he could not survive without his single payment. He explains that he would rather farm without subsidies, although believes that whilst regulation has become a burden, he feels that good environmental practice should be at the heart of every farming operation.

I identified three key elements within Dunni's business which were instrumental in its success. They were:

- Awareness of the individual components of the farm's cost base which enables him to take effective action to control certain expenditure
- Two reasonably secure outlets for his product which is sold at a guaranteed premium
- A clear business strategy and the energy and ambition to support this

The Burren Life Project

The Burren upland region is without doubt, one of Europe's most important, distinctive and best loved landscapes. The Burren extends to approximately 36,000 ha of terraced upland limestone with a further 20,000 low lying limestone pavement. It is probably most famous for its flowers; three-quarters of Ireland's native flower species are found here including most of the Irish orchid species. In turn, these flowers support a large number of insects such as butterflies, beetles, bees and moths. The unique natural and cultural attributes of its enigmatic landscape is increasingly valued and as a consequence is designated as five separate Special Areas of Conservation under the 1992 EU Habitats Directive.

Cromwell's officers described the Burren as having 'not enough wood to hang a man, not enough earth to bury a man nor enough water to drown a man'. This accurate description portrays this harsh landscape which is extraordinary, both in its beauty and uniqueness.

I have chosen to include the Burren LIFE project over and above other similar examples I encountered because it has many commendable features, including:

- It was established by representatives of the local community who were concerned about the decline of the ecological and landscape value of the Burren
- It focuses on one of the most extraordinary, beautiful and awe inspiring places in the world that is the way it is largely as a result of agricultural management
- It seeks to tackle management issues from the farmer's perspective so that it can help them to return to traditional management practices but still maintain farm viability
- It takes a holistic approach to securing a sustainable future for the area by addressing all of the issues that will contribute to future success
- The project focuses on action on the ground rather than glossy leaflets and logos



The Burren: the Highlight of My Nuffield Travels

The BurrenLIFE project is the first major farming project in Ireland. Over the last two decades, farming practices on the Burren have changed markedly. The astonishingly rich flora of the Burren has developed as a result of the ancient tradition of transhumance, known locally as 'winterage'. This is where cattle are grazed on the limestone pavement over the winter when water is available and the varied herbage provides vital winter sustenance for the cattle.

More recently, as the farmers across the Burren have responded to market pressures and EU production subsidies, most have switched from native, small hardy breeds of suckler cow to the larger continental breeds which are unable to survive on the pavement over the winter. As a result, cattle have grazed the more palatable lower ground, leaving the upland winterages to become undergrazed, with scrub and more aggressive herb species becoming dominant over the rarer flowering plants. Silage feeding on parts of the winterage has further exacerbated the problem, leading to nutrient enrichment and minor point-source pollution with effluent.

A number of local natural historians, academics and farmers became increasingly concerned about these changes and began to discuss how this degradation could be reversed. They set up the Burrenbeo project which set out to undertake research into the history, significance and science of the Burren and to promote its importance and interest to the public. A trustee of Burrenbeo and very enthusiastic volunteer, Dr Brendan Dunford, had spent many years undertaking research work on the Burren and recognised that a properly funded project was needed to address the issues that they had identified.

The team from Burrenbeo prepared the application to the EU Life Fund and were successful in securing €1.7 million of the total €2.3 million project budget, which was to be spent over five years.

The primary objectives of the BurrenLIFE project were to:

- Implement best-known management practices on 2,000ha of the Burren, including new feeding systems, redeployment of existing livestock and targeted scrub removal
- Increase understanding of the relationship between land management practices and the natural heritage of the Burren
- Develop new support mechanisms for the sustainable management of the Burren habitats through research and advisory services, marketing initiatives, co-operative structures and the revision of existing agri-environmental schemes
- Enhance awareness and skills relating to the heritage of the Burren and its management through a range of practical initiatives aimed at empowering local communities
- Disseminate information relating to the agricultural management of areas of high nature and cultural conservation value in Europe through literature and the media

I was lucky enough to meet with Dr Dunford and was inspired by his absolute dedication and commitment to the project. As well as being an extremely competent scientist, he was also a fantastic communicator. This combination of skills had enabled him to complete a programme of pioneering research that had provided the key elements of understanding about the Burren to allow the team to develop an effective action programme.

Fundamental to the BurrenLIFE project was the involvement of 20 selected farmers in the trials that aimed to establish a suitable management regime for their cattle that would:

- Encourage them to graze their continental cross cattle on the winterage
- Provide feed to the animals that would achieve the necessary live weight gains without discouraging foraging or causing damage to the ecological status of the burren but would also meet the nutritional needs of the cattle
- Not incur additional management time as many of the farmers now worked off-farm for at least half their time
- Achieve the overall project objective of delivering a new model for 'Conservation Agriculture' in the Burren

The farms selected cover a total of 3,097 ha of the Burren and include 12 beef enterprises, 2 dairy farms and 6 mixed cattle and sheep farms and four of these farms are organic. Twelve of the farmers are full time and eight are part-time; 16 of the farmers participate in the REPS scheme. The average holding size is 155 ha, ranging from 40 ha to 448 ha. The average whole farm stocking rate is 0.43 LU/ha. Ecologically, the farms selected represent a full range of habitats and the conservation status of these farms represents the full range of habitats and a varying conservation status from favourable to unfavourable declining.



The Unique Flora of the Burren

A unique Farm Management Plan is developed for each holding and the plans are reviewed twice yearly. The plans contain a list of actions to be undertaken, including recommendations on stocking and feeding on the winterages.

Pivotal to the success of the implementation of 'Conservation Agriculture' across the Burren has been the development of the BurrenLIFE Project (BLP) feed ration for those cattle that are grazing the winterage. A need for mineral and vitamin supplementation for animals grazing the Burren winterages was identified after ongoing forage and blood analyses were undertaken that identified deficiencies. The BLP concentrate ration was developed on the back of these results and is proven to include the full recommended daily allowances of minerals and vitamins for a suckler cow. Over 100 tonnes of BLP ration is fed to cattle on the 20 farms each winter. This is fed as a replacement to silage, which is not allowed to be fed on the winterages. The benefits of feeding this ration have been proved as:

- Animal health benefits including improved calving success, better general good health and improved weight scores throughout the winter – these findings were confirmed by vets who were involved in the project
- Improved movement of animals across the winterage leading to better grazing
- Zero wastage of ration
- Improved ease of management as cattle will gather in one place at feeding time, making it quicker and easier for part-time farmers to feed animals, especially when it is dark.

Providing a reliable source of water for the grazing animals has also been crucial so that the farmers are confident that their stock will always have access to water, in drought or freezes. The project has funded a range of solutions, each designed specifically for the individual situation, including 'hydram pumps', pipes, tanks, cleaning out old springs and walling off new ones.

The 'Burren Beef and Lamb' Producers Group was formed in March 2007. The vision of the group is to become the leading producer of quality Burren beef and lamb. The group underwent intensive training funded by LEADER and the group has now launched its product range which is fully butchered and presented in individual cuts in freezer bags. Beef and lamb orders can be placed on line or over the phone and delivered throughout the west of Ireland.

All members of the Burren Beef and Lamb Producers Group who supply product as part of the Burren Beef and Lamb Producers Group:

- Actively farm sustainably for conservation in the Burren
- Follow the highest possible animal welfare standards
- Feed their livestock a nutritious largely grass-based diet, predominately on Burren winterage (upland) areas

- Produce 'conservation grade' quality beef and lamb from farming on priority Burren habitats including the three major designated Special Areas of Conservation
- Manage their farms to enhance the local biodiversity of the Burren, thus protecting flora and fauna

The success of this highly innovative project has been rewarded because the Irish Government has now granted a further €3 million of funding over three years to support the Burren farmers. EU LIFE has also grant aided a six month extension to the project.

The defining feature of this project is that the research and the practical implementation of its findings go hand in hand. It is also a true partnership, with the constituent groups having evolved together, rather than having just been made to work together. The key individuals that are running this project have been involved in the area for many years and were instrumental in getting the project off the ground. In the UK, so many projects do not achieve their objectives because a 'project officer' is dropped into the role for a short fixed term period, with little or no knowledge or experience of this area. In contrast, the BurrenLIFE project is driven by those who have an intricate understanding of the area and will remain involved long after the project lifetime has ended.

The project actions are based on sound research and the ongoing findings further develop the research base to inform future plans. Disseminating the findings of the research also takes place at frequent seminars, conferences and field days. Practitioners are encouraged to attend as the researchers are keen for their findings to be implemented on much wider scale. All the research considers the financial impacts of any new ideas, particularly where it is expected that the farmers will be asked to change their practices. Wherever possible, solutions are found to ensure that the farmers do not lose out financially when they instigate conservation measures on their farms.

Most of all, the key project leaders understand farming and farmers. They recognise that a project that relies entirely on the goodwill and co-operation of farmers for its success, must see things from their point of view. The extent to which the project has succeeded in bringing farmers on board is the fact that when they asked for more farmers to take part in the project, they were inundated with volunteers.

This project is important for me because it represents a solution for special areas that are of exceptional conservation interest but that rely on private landowners for their appropriate management. In the UK, management of special areas is done via agri-environment schemes and regulation. It is often approached in a piecemeal fashion, and very often several different agencies are involved in liaising with the farmers, and within those agencies there will be a high staff turnover. The financial incentives available to the farmers are often short term or linked to complex prescriptions or schemes.

For all the reasons described above, the BurrenLIFE project has been hugely successful in a relatively short time period. By seeking to address those barriers that prevent farmers from managing the Burren landscape in the old traditional manner, the project has developed a sustainable solution that can

be continued long after the project has come to an end. The farmers can see the benefits of what they are doing, and enthusiastically embrace the objectives of the project.

The project staff and volunteers involved are committed emotionally and professionally to the project, so are keen to make it work in the long term, rather than just for a two year contract. By basing all project decisions on up to date sound science and research, the project activities have enormous credibility with academics, Government, farmers and conservation groups.

At a cost of €2.3 million, this project is relatively low cost compared to some of the more ambitious conservation projects in the UK and offers far better value for money in terms of what it has achieved. The BurrenLIFE project is a first class blueprint for future initiatives in other special upland places.

Bienvenue à La Ferme

In the UK, the Farmstay network has gone from strength to strength in recent years. However, in France, the national agri-tourism network has gone several steps further, providing a wonderful insight into farming life for visitors from town and country, for locals or visitors from a foreign country and for children and adults alike.

When I was in France, I stayed at Bienvenue a la Farm destinations as much as possible. The quality of the accommodation was first class and all the participating farmers were strong advocates of the network and the services that it provides.



The Bienvenue A La Ferme network includes a range of diversified farm-based businesses including those that offer:

- accommodation - bed and breakfast, camping, self-catering gîtes and bunkhouses
- produce from the farm – cheese, vegetables, honey, milk, yoghurt, ice cream, meat and fruit
- open farms – these would typically offer tours around the farm or would be open at set hours for visitors to look around

- educational farms – where teachers can arrange visits for their classes
- hunting and shooting
- Equestrian ‘farms’ that provide trekking and lessons

All businesses that sign up to be part of the Bienvenue a la Ferme agree to abide by a set of standards and regulations, as well as a charter which sets down the key principles of the network. The network fosters a strong belief that farmers should seek to explain more about what they do to their customers and therefore visitors to the farm should leave knowing much more about what they have bought or experienced and how it was produced.

I was particularly impressed by the effective marketing of this network. Bienvenue a la Ferme has an excellent, informative website. Every tourist office had a good supply of Bienvenue brochures for their local area. They were also available in some newsagents and at all the larger service stations on the motorways and Peages. All members of the network display the easily recognisable logo outside the farm. Whenever you stayed with a Bienvenue member, they always helped you make a booking with a neighbouring member.

As a loyal advocate of Farmstay accommodation, I believe that this network could form the basis of a very successful wider initiative that incorporates farm shops, open farms and other diversified businesses. By making more of the educational offer on the farm, Farmstay could also help to convey the vital message regarding the role that farming has in a modern society. Furthermore, by widening membership categories, Farmstay could provide significant member benefits for the wider network of farm food retailers and other diversified businesses by providing:

- Farm to farm referrals – encouraging members to promote each other’s businesses
- Economies of scale in relation to a wide range of marketing and advertising costs, group buying of certain items and services
- A strong brand signifying quality, service, high environmental and animal welfare standards and value for money
- Training and education opportunities to ensure that their members are kept abreast of the latest regulations, standards, funding and business opportunities
- Links to sister organisations in Europe and further afield, eg. Bienvenue A La Ferme to provide additional market penetration

In the Peak District, the Environmental Quality Mark brand (referred to earlier in this report) seeks to offer many of the benefits listed above to its members. It may be that other national parks and AONBs could seek to develop similar initiatives so that the businesses in these areas could maximise the benefit of their unique selling points of location, environment and tranquillity.

CONCLUSIONS

Everyone that I have met who has asked me about my Nuffield Scholarship has said:

‘So, **is** there a future for Hill Farming?’

My conclusion at the end of my study is an irrefutable ‘Yes, there is’. But there are buts... most which relate to things that will need to change if there is to be a secure future.

The responsibility for change lies with everyone that has a stake in the future of the hills, whether it be as a farmer, policy maker, Rambler or tourist operator. For some, it is simply a change in attitude, but for most, it will require changes in policy, changes in priorities and changes in practice.

Who Pays for the Environment?

Fundamentally, those who gain advantage from the hills, have to recognise that someone needs to pay for the benefits that they bring. Currently, the price paid for beef and lamb by consumers does not cover the cost of producing that animal, providing a decent return to the producer and delivering all the other benefits that extensive sheep and beef production brings with it. In order for it to do this, the price of meat, even at today’s higher prices, would have to treble, meaning that it would be perceived to be unaffordable by many consumers.

Currently, the myriad of other benefits provided by farmers in the uplands are paid for through a combination of the Single Payment Scheme and agri-environment funding. Both funding streams are rather blunt instruments with which to encourage farming practices that are expected to deliver so much. Even the new Upland Entry Level Scheme focuses largely on biodiversity, with an element of landscape, historic environment and resource protection. Payment rates relate to a combination of income foregone and the cost of fulfilling option prescriptions but do not reflect the value that society places on these ‘public goods’.

It is argued by many that the process of calculating a monetary value for many of the public goods that we expect from the hills is inextricably complicated in the absence of any marketplace to do the sums for us. However, it will be essential that we can do this with a reasonable degree of accuracy as in the future we will no longer be able to rely on a generation of farmers that are prepared to work for a subsistence existence.

Survival of the Fittest

There are a significant proportion of producers in the uplands who will not survive without any form of direct farm payment, even if recent price increases were to continue at a similar rate until 2013 when EU subsidies are likely to decrease significantly if not disappear altogether. These farmers will go to the wall or retire. Support and assistance must be provided to these businesses

over the next three years to give them every chance to re-structure. For many, this will not save them and the inevitable outcome must also be planned for in order that the impacts on the wider rural economy are not disastrous.

The best performing farmers in the uplands have demonstrated that it is possible to run a viable business now that prices have improved. Very few are currently making a profit without the Single Payment, but this goal is now within their sights, if prices can remain stable or increase slightly.

Investment that Meets the Needs of the Next Generation

Policy makers and industry leaders need to focus their attention on these farmers that can manage a commercial farm business that can perform even in 'severely disadvantaged' circumstances. In the past, research and extension has focused on highly productive and usually intensive agriculture at one end of the spectrum, and farming for conservation at the other. What needs to happen is that investment should be now channelled towards these farmers in the uplands that farm extensively, but efficiently, delivering enormous conservation and environmental benefits at the same time.

Low input, medium output farming is far more likely to solve many of our problems in the future than the intensive systems that have allowed us to increase yields exponentially over the last fifty years. These systems are ideally suited to the hills where maximising resource efficiency and providing a high quality meat product is ideally suited to conditions.



Sheep Grazing on the 'Sheep Peninsula' West Cork, Ireland

Where initiatives and projects in the uplands are funded fully or partially from the public purse, they must seek to effectively address the root causes of environmental change. So, where management practices have changed leading to the deterioration of habitat(s), the project should first seek to understand why management has changed. Then, once a clear understanding has been obtained, the initiative must then establish how the relevant land managers can be supported and incentivised to change their way of doing things. Incentives will be financial but projects should also look to providing hands on support, rather as the BurrenLIFE project does do successfully.

The Age of Stupid

One of the most topical issues for British farming in 2009 was the debate about eating red meat and climate change. This argument is seen as a threat by many livestock producers. I view it as a huge opportunity for the livestock industry in upland areas. The hills cannot grow vegetables and cereals without unrealistic levels of input. They grow grass, albeit for a shorter season, but are also far less threatened by drought which could spell the death knell for livestock production in the south and east of the UK.

Meat produced in the hills has a higher carbon footprint per kilogram of carbohydrate than a vegetarian diet. However, it is produced in an area where the only vegetation that grows satisfactorily has to go through a ruminant to be utilised effectively. Furthermore, at the same time as producing a high quality, delicious meat product, these livestock producers are also delivering some of our most valuable habitats and precious landscapes.



Philippe Dejean Leading his Flock of Organic Sheep Across 'Le Causse'

Food security is now firmly back on the agenda. The theory that we can simply import food to feed our growing population is now out of favour even with those politicians with only a token interest in farming and food production. The consumer is beginning to become more aware of food miles and is the more discerning shopper is making choices accordingly. Hill farmers have a vital role to play in the campaign to produce more of our own food in an environmentally acceptable manner.

Recent climatic incidences such as the drought of 2006, the floods of 2007 and more recently November 2009 and the year on year increases in temperature show that we cannot rely on historic weather patterns to predict future conditions. What is clear, however, is that the uplands of the UK are less likely to be affected by prolonged shortages of water during the growing season. As Southern Europe becomes progressively more drought stricken, the UK and Ireland will be increasingly important for the production of beef and lamb.

Natural England recently launched its Vision for the Uplands 2060' which caused understandable controversy as a result of making scant reference to the importance of farmers and food to the future of the uplands. Mike Keeble of the Tenant Farmer's Association suggested that the 'authors of this report have clearly taken their inspiration more from Lewis Carroll than from the experiences of those who live and work in our upland communities. It is long on aspiration and short on the practicalities involved in being an active land manager in some of the harshest yet paradoxically most beautiful environments in our country.'

It will be an unforgiveable crime if those who are responsible for setting the environmental framework for the hills ignore the importance of food production to the future of the uplands. Food production is the *raison d'être* that will facilitate the delivery of all those benefits that the population expects from its most treasured landscapes.



Sheep Grabbing a Quick Drink En Route to Summer Grazing....

Recommendations

It is now over two years since I applied for a Nuffield Farming Scholarship. During this time, there has been much discussion and debate about the future of hill farming. It is also the end of the first decade of the twenty first century. It would seem, therefore, an appropriate moment to consider what needs to happen in order that hill farmers and farms are 'fit for purpose' in order to meet the challenges of the decades ahead.

Recommendations to Industry

If the farming industry is to survive the next ten years, it will have to change. This process will be painful at times, but will lead to a fitter, leaner industry. In the words of Will Cockbain, Upland Spokesman of the NFU, 'the English uplands will have a growing opportunity to respond to the food production challenge - to produce more and impact less'. Some of the recommendations below are aimed at farming organizations, some are for individual farmers to consider. They include:

1. Defining a new approach to succession – it is vital that industry leaders work together to seek ways that can facilitate planned succession within farming families. Only if the industry leaders are able to offer a range of practical models that can apply to different scenarios will the next generation of farmers gain the opportunity to farm before they lose all enthusiasm and inspiration to do so.
2. The Stay on a Farm (Farmstay) organization is renowned as a network that guarantees extremely high quality bed and breakfast and self catering accommodation. The Open Farm Sunday initiative has proved to be an enormous success. Industry representatives should consider how these initiatives might be expanded along the lines of the 'Bienvenue à la Ferme' in France so that it includes farm shops and demonstration farms that are prepared to welcome the general public on to their farms.
3. LEAF demonstration farms have proved an important resource for sharing best practice and new ideas. LEAF should seek to recruit more demonstration farms in upland areas.
4. The levy boards and allied industries need to provide some financial support to contribute towards the cost of setting up monitor research farms in the uplands as outlined in the recommendations to Government (below).
5. The beef and sheep sectors have traditionally been slow to embrace innovation and training opportunities. Recent initiatives led by Eblex in England have helped to increase engagement by this sector. Such training should be expanded under the RDP livestock funding streams and the requirement for private match funding should be waived for farmers in the Less Favoured Areas to encourage attendance.

6. As we enter a period where oil prices will inevitably increase, farmers in the uplands need to consider how they can make their systems less reliant on fossil fuels. Opportunities that might be considered include:
 - a. The inclusion of leguminous crops in the rotation of temporary grassland on land that does not have a high botanical value
 - b. More rigorous use of soil sampling on which to base fertilizer application recommendations – my research suggests that many farmers in the LFA do not base fertilizer applications on the results of recent (< 20 years) soil sampling
 - c. The adoption of farm scale renewable energy technologies – higher intervention rates for RDP funding should be available within the LFA to support the adoption of this technology on hill farms
7. A considered approach to choice of breed based on market demand but also farm conditions. Is the Holstein the most appropriate dairy breed for hill farms? At higher altitudes, could the Ayrshire or Montbéliarde demonstrate better performance over the medium and long term? Further work on cross breeding with specific reference to the less favoured areas is desperately needed to provide accurate data on key traits and relative yields.
8. My observations and discussions with farmers indicate that there is a continued reliance on appearance rather than published performance records, particularly with hill sheep breeds. The industry needs to move towards the selection of replacement animals based on accurate genetic data rather than personal preference based on visual characteristics.
9. Nearly all of the projects in the uplands relating to the conservation of important habitats and species are driven by conservation organizations. Farmers are then approached to get involved once the project objectives, targets and brief have been decided. In most cases, this means that the farmers have little or no say in the shaping of the project and therefore have little 'ownership' of the desired outcomes. The end result is that these initiatives have only limited success that is usually only sustained for the lifetime of the project.

Farmers and farming organizations should be more pro-active when they are informed of such projects to ensure that they have a central role in many of the major upland initiatives that will develop over the coming years. This will lead to a better outcome for the farmers and their businesses, but will also mean that the projects are infinitely more successful in the medium and long term.
10. All farming organizations need to become more actively engaged in the current debate regarding the valuation of the public goods provided by the uplands. There is a danger that food production will be entirely overlooked in this debate and yet the uplands will be key to the provision of quality meat that is reared with a minimal carbon footprint.

Recommendations to Government

In the spring, the Commission for Rural Communities will report on the long awaited Inquiry in the Future of Upland Communities. It is anticipated that this report will have a significant bearing on the direction of Government Policy towards the rural hill communities.

In the light of this document and Natural England's Vision for the Uplands, I have sought to consider measures that could be adopted by Government that would assist in providing hill farmers with the necessary tools to meet the challenges of the next decade. The following list contains suggestions that are feasible within current funding regimes rather than ideas that would be impossible under existing arrangements.

1. A package funded by the Rural Development Programme (RDP) (via the Regional Development Agencies) to encourage younger farmers (those less than 40 years old?) to develop their farm businesses. The measures might include;
 - a. Increased intervention rate for RDP grants, for example up to 70% for capital grants and 90% for training grants
 - b. Better funding opportunities for international exchange programmes and Nuffield Farming Scholarships
 - c. Funding to cover the cost of temporary staff to allow the farmer to undertake training off farm or visit demonstration farms
 - d. Advice and counseling on succession issues which could be funded by the RDP
2. To undertake a review of all the RDPE schemes in England offered by those Regional Development Agencies with Less Favoured Areas within their jurisdiction to ensure that they are sufficiently accessible to upland farmers and that a higher intervention rate is offered to LFA farmers to encourage applications
3. To commit to review the Upland Entry Level Scheme after one year of operation to assess whether uptake has been sufficient to spend the provisionally allocated budget of £24 million per annum. If not, the Government should considering raising the per hectare rate of payment (and therefore point scores for the requirements) to ensure that all the money allocated for the Severely Disadvantaged Area is spent there and not re-allocated to the mainstream Environmental Stewardship Scheme.
4. Ensure that sufficient funding is directed at research focusing on upland hill farming systems and that the results of this research are disseminated via an effective extension service and easily accessible web-based media. To date, research has largely been focused on arable and intensive livestock enterprises rather than maximizing the efficiency and sustainability of extensive hill farming systems.
5. Support multi-objective projects in special upland areas but make sure that they represent a true partnership and are not simply a single issue

initiative disguised as a holistic collaborative venture. Benefits and outcomes from projects that are just about species or habitat restoration and do not seek to address the root causes of changes in agricultural practice will not survive beyond the project lifetime. Similarly, initiatives that don't provide practical solutions for farmers and land managers who will be ultimately responsible for future sustainability of these areas simply won't work.

6. Direct a proportion of the RDP funding in each region with SDA land towards the establishment of monitor farms in the uplands. These farms should be run on a commercial basis but should incorporate relevant trials and plots including:
 - a. Demonstrations of different grazing regimes with cattle and sheep including out-wintering options
 - b. Alternative forage crops that are suited to upland areas
 - c. Best practice implementation of agri-environment scheme prescriptions
 - d. Nutrient and soil management solutions

Life After Nuffield

2010 will be a significant year in the English Uplands. The new Upland Entry Level Scheme will be launched. Farmers will receive their last Hill Farm Allowance Payment. The Commission for Rural Communities will publish its long awaited report on upland communities. There will also be a General Election and many predict a change in Government as a result.

This year will also be an important year for the Farming and Wildlife Advisory Group as we will have a pivotal role in helping farmers through the changes presented by the change to their LFA payment. As a farmer led organization that bridges the gap between production and the environment, we can also work with our members and other farmers that engage with us to help them to meet the climate change challenge and make it work for them – that is, to help them ‘to be part of the solution’.

My passion for the Uplands has only been intensified by my Nuffield Scholarship. As a result of everything that I have learnt over the last eighteen months, I hope that I can help the industry respond to the challenges that it will face by:

- Seeking opportunities to talk to farmers, the general public, representatives of Government and its agencies and conservation organisations about my study and to share my ideas and recommendations
- Continuing to influence the way that FWAG delivers advice to farmers in the Uplands to ensure that our clients, members and supporters are best placed to develop and enhance their business and environmental performance
- Striving to influence agri-environment policy and delivery wherever possible to ensure that it meets the needs of the upland environment but also helps farmers to respond to changing priorities
- Developing projects and work programmes in partnership with other farming and conservation organisations that focus on the key issues for the upland environment. I hope that these initiatives will secure funding that will deliver highly relevant advice and where possible, targeted capital grant money to farmers in the uplands

I will also encourage other farmers and individuals that I know who believe passionately in the farming industry to take up the Nuffield challenge and gain the once in a lifetime experience that I have been lucky enough to enjoy.

Chloe Palmer, December 2009.