RURAL DEVELOPMENT CONFERENCE

Limassol, Cyprus

16-17 October 2008

Speech by Martin Haworth
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Ladies and gentlemen,

**Slide 1 - Introduction**

The climate is changing and reacting to these changes is crucial for the future of farming. There are few other sectors of industry that are at the frontline of climate change impacts. More than half of our members surveyed in April this year believe they are already affected by climate change and nearly 70% expect to be affected in the next ten years. Ours is an industry which is already adapting to future climate change and current climate variability. My organisation, the National Farmers’ Union of England and Wales is actively engaged so as to provide solutions for our industry. The Farming industry wants to be part of the solution….

**Slide 2 - NFU Reports**

NFU - Climate Change Task Force report 2007
NFU - Agriculture and Climate Change report 2005

**Slide 3 - The impact of Climate Change on UK Farmers**

I would like to set the context for you from my part of Europe. With our relatively mild climate, UK agriculture is well placed to meet the challenges of climate change. Better placed than many of our EU and global competitors, who may face more severe climate changes. But that is not to say we will be unaffected by the effects of climate change.

We know that concentrations of CO2 in the atmosphere are rising and will continue to rise. Elevated CO2 is known to stimulate plant growth and also to increase the efficiency of water use, but the interaction of CO2 with other factors limiting plant growth is complex. We could also see changes in the leaf / sheath ratio, reduced nitrogen and increase fibre content of our plants with knock-on implications for arable crops and pasture quality.

Temperature – The average annual temperature is expected to rise by between 0.1°C and 0.5°C per decade. These warmer temperatures may provide opportunities for diversification into new varieties and types of crops (there are now 163 vineyards in England and Wales and growing fast) plus we can expect an extension of the range and yields of crops northwards. One of our members in the south-west of the UK is already experimenting with almonds, olives, peaches and apricots.
Slide 4 - Factors affecting yields

Increasing temperatures, particularly in the summer can have a detrimental effect on some crops with the timing of maturity, crop uniformity and quality all affected by temperature. Warmer summers may also cause heat stress in animals, increasing ventilation and shade requirements. Protected crops or housed animals may benefit from higher temperatures in the winter also potentially reducing heating costs, but more energy will be needed to control temperatures in the summer.

Water – the expected trend is that precipitation in the UK is likely to increase in winter and decrease in summer. The need for irrigation will increase with water scarcity issues arising[1]. Lack of water will impact on both crop quality and variability. Drought resistant varieties may need to be developed to adapt to decreased water availability. Some wetter parts of the UK may become more suitable for arable crops and less prone to poaching and water-logging. However an increase in winter rainfall could increase problems such as flooding, particularly on poorly drained soils.

Weather extremes - in other words more damaging weather events such as heatwaves, storms or heavy rainfall are likely to increase crop damage or loss and impact heavily on livestock as seen this summer and the last[2]. In the UK, a number of arable farmers have changed the way they manage their soil, to limit the risk of soil erosion by heavy rainfall.

Pests and Diseases – The range of pests and diseases is likely to change significantly. A key example of this is the emergence of bluetongue disease in Northern Europe. At the higher temperatures that this region is now experiencing, transmission occurs earlier, more frequently and more extensively and has extended the ability to transmit the virus to additional species.

Sea level rises - This will be an increasingly severe problem with net sea level changes by 2080 ranging from 15-85cm over much of England. 57% of Grade 1 land in the UK lies below the 5m contour which means it may be subject to flooding, inundation, erosion and salinisation of fresh water and therefore a loss of our most productive land, reducing our capacity to produce food.

[1] Irrigated agriculture only uses 1% of the UK’s water, but 60% of the irrigated area and 57% of the volume of water used for irrigation is in Eastern England which will be one of the regions most impacted by climate change [2] we will be able to get an estimate of harvest loss by next month if you need another example
Slide 5 - How should we adapt

Comprehensive, early action is preferable as, like the Stern report has shown, the costs of inaction could be quite substantial.

Adaptation measures should work towards reducing the vulnerability and increasing the economic, environmental and social resilience of the agricultural sector and the rest of the rural community.

We must also make sure that farmers are able to seize the opportunities presented by climate change. (The NFU took a keen interest in the wine reform negotiations with 163 vineyards and growing, in England!)

Slide 6 - Comprehensive early actions

We should give priority to no-regret options and rapidly implement adaptation responses defined as win-win solutions. Many on farm adaptation responses are likely to fit into this bracket, like more resilient shelter and improvements to farm layout and access.

Knowledge transfer and education are essential to ensure success. Farmers already adapt on farm on a day to day basis, but in order to increase our adaptive capacity, advisory systems and appropriate incentive structures are key.

Communication - Farming Futures project

Slide 7 – Case Studies

Slide 8 – Fact Files

Slide 9 – Farming Futures farmers

My own organisation has already engaged in the work to identify and promote so called “soft measures” of adaptation. These are concrete examples of things farmers can be doing now on farm: collecting rainwater for use in dry periods, spraying crops at night to prevent evapotranspiration, preparing buildings for more stormy weather, planting shelter or shade belts to protect livestock.

Slide 10 - Water Wise - a survey of NFU members

There is a lot of focus on water management – much due to the fact that the most challenging aspects of climate change, certainly from an agricultural
perspective, are likely to be water-based. We are working hard to improve our, in a global perspective, unparalleled environmental performance and using water wisely is a priority for farmers.

In late 2006, the NFU asked its members how they use water, what they are doing to conserve it and how they expect this to be affected by the impact of climate change. We found that

- 82% of respondents said they were more aware of water efficiency than they were five years ago.
- 88% of farmers carry out at least one water saving tactic (e.g. insulating pipes to prevent leaks, emptying and closing unused pipes in winter, employing leak detection systems, having stop valves or drain valves at pipe locations.)
- A further 55% have undertaken additional measures to increase their water efficiency. These include the use of water harvesting, and employing irrigation techniques which are more directed to the crop, such as trickle irrigation.
- Farmers are spending on average £7350 on additional water efficiency measures

The Rural Development Regulation is helping….

Examples of water projects funded under ERDP so far…

1. In Hadlow Kent, a reservoir for the storage of 55,000 cubic metres, filled by winter abstraction from the river Bourne. The water will be used to irrigate lettuce.

2. Bosham - West Sussex - a 45,000 cubic metre reservoir for winter abstraction for the irrigation of leafy salad.

3. Chichester - a 40,000 cubic metre reservoir for winter abstraction to irrigate vegetable production. The reservoir will also be used to alleviate winter flooding which occurs along the river which runs adjacent to the farm.

4. Midhurst, west Sussex - A 38,000 cubic metre reservoir for winter abstraction to irrigate leafy salad.

In addition the Rbat/Lantra training project will deliver some courses on climate change mitigation, energy efficiency, efficient irrigation techniques

SEEDA are also considering an application to fund a series of training seminars and workshops specifically on water management and a separate application to deliver training to the horticulture sector on energy efficiency. However, these are still only applications and have not been approved yet.

Slide 11 - Water
Slide 12 - Water

Climate change is going to intensify the pressure on our natural resources, and a balance needs to be struck between all the competing demands; it is essential that agricultural needs (and therefore ultimately food production) are part of the debate. My organisation is already acting to find solutions e.g. working with the UK Irrigation Association and the Environment Agency to formulate a strategy ensuring that agriculture has a fair share of the available water resource and consequently uses it in a more sustainable and efficient way. Again, win-win solutions will benefit all including the natural environment.

Slide 13 - Increasing the resilience of the sector

Applied science is going to be vital, as is knowledge transfer. We need to predict local impacts of climate change and adapt our farm management accordingly. At present however, applied R&D is poorly funded, and we need new technology more than ever.

In a wider context, we all know that we need to at least double global production in the next 40 years, and yet annual yield increases seem to have come to an end. In our view this is connected to the decline in public funding in research that began, on both sides of the Atlantic, 20 years ago.

In the NFU we think that there is a serious case for funding research and development in the Rural Development Programme.

The combination of the need to increase production, while improving our environmental performance and dealing with climate change is an enormous challenge.

New smart technologies will increasingly give us the capacity to do more……

New varieties (GM) are being developed which will help address the challenges of the future e.g. Drought tolerant, salt tolerant, under-water tolerant (!) plus protection against pests and diseases. These varieties will deliver multiple benefits such as greater efficient use of fertilisers and plant protection products. Not having to go onto the land as often will mean less fuel consumption during farm operations.

At a farm level, more and more farmers are engaged in “precision techniques” - again a "win-win" in light of growing input costs (price of nitrogen, phosphate etc) eg. mapping of particular crop or soil characteristics can lead to more precise application of inputs like seeds or fertiliser, providing an opportunity for more efficient production, the reduction of waste and on-farm GHG emissions
Slide 14 - Fulfilling the opportunities of climate change

Farmers can take advantage of the opportunities offered by climate change by being ahead of the game. Much can be done at the farm level, but other adaptation steps require policy makers to optimising the legislative framework that farmers operate under. . .

We welcome many of the steps proposed in the Health Check of the CAP, but that is not the focus of my presentation today.

The role of the existing Rural Development Regulation should not be underestimated. The potential of the measures are good (eg knowledge transfer, modernisation, renewable energy supply etc) but we constantly see battles over priorities/funding between axis and measures. Unfortunately in the UK, there are few voices to champion climate over biodiversity.

The Rural Development Regulation does have some weaknesses which need to be ironed out – We have long called for a fairer allocation of funds between member states. Whichever way you look at it, the UK is disadvantaged under the historical allocation basis.

We often see false barriers created between measures which sit in different axis of the Regulation. Take anaerobic digestion for example, we would like to see the advancement of AD technologies on farm developed with the assistance of rural development funds, but we are told the measure would have to sit under Axis 3 diversification as opposed to Axis 1 modernisation despite the obvious benefits with regards to on farm resource use. We need a system which allows for the “pick and mix” of measures to fulfil the objectives and one which is not constraint by false barriers between axis.

The UK has been the pioneer and greatest exponent of the use of agri-environment schemes in the European Union. 80% of the spending in the English RDP goes to these measures. To be frank, English farmers would prefer to see more money spent on axis 1 measures, particularly measures to improve competitiveness.

There is a further issue with our agri-environment schemes. In our mind they are too much directed to bio-diversity and landscape, with insufficient attention to resource protection and climate change. The biggest scheme we have- the so-called Entry Level Scheme- where the ambition is to cover 70% of our agricultural area, is coming to the end of its first 5 years. We see a big opportunity to extend its scope to encourage carbon saving measures- for example appropriate change of land use, water capture and preservation of peat bogs in our less favoured areas. These are measures that would have benefits in addition to the climate change aspects.
We wish to highlight our continued dissatisfaction with the payment basis – income foregone plus the costs of management. We understand that this formula is required under the current regulation and reflects a long standing basis for reward of agri-environment commitment common applied across the EU. However, it provides neither adequate reflection of the value to society of farmers’ public good provision, nor of the multiplier benefits for the rural economy derived from a well maintained, attractive and accessible countryside. Farmers rarely gain economic advantage from their public good provision – the value of an attractive national park to the local economy being many times any agri-environment payment. Therefore we urge the Commission to amend EU legislation in respect to this payment calculation, which both limits the direct benefit an individual farm can receive as well as the flexibility that member states have to incentivise publicly beneficial land management

Thank you for your attention.