Farming for a Better Climate

Ednie

Name	Peter Robertson and Elaine Booth
Farm	Ednie
Locality	St Fergus, Peterhead
Type	Arable and suckler cows
Size	471ha owned + contracted
Staff	2 full time and 1 part time

Ednie Farm has been in Elaine's family for 4 generations. As well as growing OSR, wheat and barley, we run a suckler herd with up to 190 cows and their followers. The herd is in the PCHS scheme and our high health status stock achieve a premium price.

We have a wind turbine development underway and we are evaluating other potential renewable projects with biomass.

Ednie Farms won Royal Northern Agricultural Society Good Farming Practice Award in 2007 which recognises success in combining business efficiency with a high standard of environmental management.

How might Climate Change affect the farm?

We have moved early towards assessing and harnessing the farm's renewable energy potential and we view the likely future pressure on fossil fuel sources as a very real business opportunity. We try to maximise the efficient use of resources by recycling all materials used on the farm wherever possible.

The likelihood of more extreme weather events concerns, particularly heavy rain in late summer and autumn on our heavy clay land which makes harvest and establishment more difficult. Temperature increases will mean a slightly longer growing season but may bring additional disease pressures in both crops and stock.

We anticipate that there might be Climate Change-related controls with regards to livestock in the future. This may mean re-evaluating herd management and rations for increased feed conversion efficiency and increased productivity per cow.

We have concerns that there may be future, more stringent, controls on N applications too. We are in an NVZ and so we already closely control nutrient application rates and timings but we do have some flexibility over individual field limits which we hope will be retained. This year, we purchased a precision fertiliser applicator and we expect this to help with both costs and yields with the cost of the equipment potentially being recouped in 2 years through fertiliser savings.

We try to cause as little damage as possible to soil structure and maintain our soil organic matter because we recognise not only that this protects our valuable soil resource but it also allows our soils to continue to provide significant carbon sequestration.

Case Study

Find out what other farmers are doing to improve profitability and adapt to a changing climate in our series of case studies.

There are five sets of Practical Guides covering :

Use energy and fuels efficiently

Develop renewable energy

Lock carbon into soils and vegetation

Optimise the application of fertilisers and manures

Optimise livestock management and the storage of manure and slurry

Find further information, including links to other Practical Guides and Case Studies, at

www.farmingforabetterclimate.org

Funded by the Scottish Government as part of their Climate Change Advisory Activity

Websites

www.farmingforabetterclimate.org
www.sac.ac.uk/climatechange
www.farmingfutures.org.uk
www.bbc.co.uk/climate
www.soilassociation.org
www.dairyco.org.uk
www.scotland.gov.uk
www.ipcc.ch
www.carbontrust.co.uk
www.sepa.org.uk

SRUC

The Scottish Government
Riaghaltas na h-Alba

Ednie

"Climate Change is one of a series of challenges to be faced by agriculture, albeit a major one.

Farmers have coped with a huge amount of change in the last century, altering production and practices to respond to society's needs.

There are a number of ways that agriculture can help to address Climate Change issues and farmers will rise to the challenge". Elaine Booth.

Renewables

- In the past, hydro-power was generated on the farm using the River Ugie which runs through the farm, and channels from an old canal.

  Unfortunately the canal is now in poor condition and the river doesn't have sufficient head to support redevelopment so we have looked at other renewables options.

- We gained planning permission for a wind project to feed electricity into the grid and are currently installing a 0.8MW turbine. We would consider more turbines.

- We are hoping to develop a biomass project using woodchips from our woodland for local heating.

- AD isn't feasible for us as we don't have access to a suitable feedstock like slurry or food waste.

Energy and Fuel

- The fans in our old ventilated bins were energy intensive. We have replaced them by extending the bulk storage shed which will use more efficient low air volume fans.

- We plan to carry out a whole-farm energy audit and expect that we will identify energy-saving potential.

- We use our local Machinery Ring for baling, spraying and silage making which helps us to maximise machinery utilisation efficiency.

Fertilisers and Manures

- We are in an NVZ so we pay particular attention to N application rates and timings. However, we know that cereals' autumn N response wouldn't justify application at that time of year.

- When we're Nutrient Planning we use "standard" figures for our manure fertiliser value and so we need nutrient test to improve that.

- We have increased our use of clover in grass and we will consider legume catch crops.

Locking up Carbon

- We control soil erosion around watercourses by watering stock off-stream via water troughs, and by fencing.

- We don't plant arable crops on the river haughs - instead we have put them to permanent pasture. This also helps reduce the impact of summer flooding.

- We have a small area of raised bog as well as ground near St Fergus moss and these are not cultivated at all.

- All of our straw is baled for bedding and feeding but it is returned as manure.

- We have created several medium and small-scale and small-scale woodlands with hard- and soft-wood species with support from RSS and the Farm Woodland Grant Scheme. We're applying to SRDP for funding to help manage some established woodland areas and plant another shelter belt.

- If conditions allow, we use reduced tillage. This helps us to minimise soil disturbance and maintain soil organic matter. It also helps us to reduce soil erosion potential.

- We are careful to retain winter cover and have overwintered stubble in some fields. We take steps to reduce soil erosion throughout the year.

Livestock Management

We have high health status for our cattle enterprise.

We see real benefits of that in terms of fertility and calf vigour. Both of these help improve herd productivity and hence reduce Greenhouse Gas emissions associated with the end-product - for us, per kg of weaned calf.

We have a mini co-op with a neighbouring farmer who takes all of the cattle for finishing. We retain a share in their ownership and work closely with our co-op partner to optimise their performance after they leave Ednie.

We are increasing the proportion of Aberdeen Angus in our herd. Although calves produced are lighter than continental breeds, the smaller cows require less feed and so we can have a higher stocking rate and produce more kgs of weaned calf per hectare so reducing our GHG emissions per unit of output.

Case Study last updated April 2015