

Ardoch of Gallery

Learning journey

Ardoch of Gallery
Climate Change Focus Farm

Notes from the Discussion
Group Learning Journey on
14-16th June 2017

This was the eighth meeting of the Ardoch of Gallery focus farm discussion group, considering practical and profitable ideas to improve the farm business.

The group visited two farms on the way to the Cereals Event in Lincolnshire

Visit 1 - McGregor Farms, Coldstream Mains, Berwickshire by kind permission of Colin McGregor

McGregor Farms is a large scale arable farming business, farming both in-hand land and under contract farming agreements. The Ardoch group got the opportunity to see the buildings and machinery that the business uses to operate at this scale. Machinery was large but was used with great efficiency, covering large areas quickly and minimising downtime through planning and logistics.



Attention to detail is important to the business, making sure that inputs are applied at the correct time to maximise their efficiency and minimise the risk to the environment. Precision farming is widely adopted by the business for the application of fertiliser and for machinery operation.

Key Points

- Efficient use of machinery and fertilisers can help maximise profits and minimise environmental risk.
- Considering soil health and different forms of crop establishment could help to maximise yields.
- Precision farming and alternative methods are quickly becoming easier accessible and cheaper alternative to conventional agriculture.

Colin McGregor and his team take their environmental responsibilities very seriously. The business uses a large volume of liquid fertiliser and agrochemicals. This is all applied through the farm's two self propelled sprayers. These obviously need to be cleaned between applying different chemicals and the wash water is treated through the farms home built biobed. The biobed has been built from an old storage tank with the top cut off and has been filled with straw, peat and soil. Washings are pumped into the biobed through a sprinkler system and once the water has been treated it can be safely released into the environment.

Visit 2 - The Cereals Event, Boothby Graffoe, Lincolnshire

The annual cereals event is the leading arable show in the UK. It brings together all the leading machinery manufacturers, chemical companies and plant breeders to provide a one-stop-shop for all things arable. The main topics the group looked at were:

- **Machinery Management** - The group had the opportunity to look at and discuss the machinery to reduce/change their crop establishment systems from that of full inversion (plough based) to non inversion, strip till and direct drilling. How this could be successfully incorporated in a Scottish system was discussed at length.

Visit 2 - The Cereals Event (continued)

- **Efficient Use of Inputs** - The latest in chemical application technology was also on show from sprayers to different nozzles to reduce drift and environmental impact.
- **Soil Management** - Soil management was also on the agenda with many of the top speakers on soil health and nutrition giving talks throughout the day. The group heard from one supplier how biostimulants were being used to reduce pesticide use and give benefits to the soil.
- **Varieties, Rotation and Cover Crops** - There were numerous trial plots of all crops including different mixes of cover crops with differing associated benefits. The challenge by the group to the breeders of the cover crops were to think of mixes which would establish and survive in the colder, wetter Scottish climate. Many new varieties were on show and the group took advantage of seeing these crops in the ground
- **Precision Farming** - The developments in precision farming and agronomy is moving at pace and the group could see the latest in drone technology and how this could be used to make better on farm decisions.



Visit 3 - G H Hoyles Ltd, Monmouth House Farm, Luton, Lincolnshire

The group were welcomed by David Hoyles to the 700ha farm of grade 1 silt. Monmoth Farm is



approximately 2 metres **below** sea level with the land being reclaimed in 1660. The farms rotation was based around the high value crops of potatoes, vining peas, sugarbeet, mustard and beetroot and wheat.

Over the past few years the business has invested heavily in 3 solar panel arrays producing 115,000 kWh/yr and 100kW wind turbine producing 200kWh/year. David has also invested in an 18million and 4 million gallon irrigation reservoirs and is using cutting edge technology to harvest the fresh water proportion of the tidal water flowing out from the river Sutton. This is unique to the UK and means the

business does not have to draw water from boreholes which are often salty due to being below sea level. Details of the businesses inputs, energy use and carbon footprint are in the tables below:

Input	2016	2015
Diesel (L)	82,190	95,251
Derv (L)	11,476	15,081

Input	2016	2015
34% Nitrogen (T)	364	277
Water (m ³)	1,338	1,888
Pesticides (£)	204,538	239,297

Input	2016	2015
Electricity (Kwh)	359,951	363,120
LPG (L)	1,128	1,551
Carbon Footprint (t/ha)	2.63	2.089

There are nine climate change focus farms in Scotland.

Keep up to date with their activities at www.farmingforabetterclimate.org

Find us on Facebook or follow us on Twitter @SACFarm4Climate



Meetings are free to attend and all farmers are welcome.

For Ardoch of Gallery, contact farm facilitator David Ross in the SAC Stonehaven Office on 01569 762 305 or david.ross@sac.co.uk

Farming for a Better Climate is funded by the Scottish Government as part of the Farm Advisory Service (FAS). The Climate Change Focus Farm programme is supported as part of its Veterinary and Advisory Services (VAS) legacy activities.

