

Castlemains

Introductory meeting

Castlemains
Climate Change Focus Farm

Notes from introductory meeting on 26th February 2015

The first meeting at Castlemains gave an introduction to some of the practical topics we could cover as part of the climate change focus farm discussion group.

Key points:

- Know what it costs to carry out routine activities 'measure to manage'.
- Renewables can reduce the fuel bill whilst also cutting the farm carbon footprint
- Maintaining good soil structure will help to achieve target yields
- Benchmark farm resource efficiency - how do you compare?
- Greenhouse gas emissions are a waste from the business - this waste could also be reducing profits.

Practical ideas to improve farm profits

Bob Simpson at Castlemains is one of nine farmers working with SAC Consulting over three years as a volunteer *climate change focus farmer*. With help from SRUC consultants, specialists and other working farmers, the focus farm will investigate and share practical and profitable ideas to increase the efficiency of arable production at Castlemains and other similar units.

Unnecessary greenhouse gas emissions can be viewed as a waste - this waste can reduce business profits and increase the farm carbon footprint. By investigating and developing practical efficiency measures which suit farms like Castlemains, we can **improve profits** whilst also reducing waste.

Following a welcome from chair Chris McDonald from SAC Consulting, host Bob Simpson and Stuart McNicol (NFUS Chairman Lothian and Borders), plus an informative overview from outgoing climate change focus farmers Robert and Jac Neill from Upper Nisbet, four guest speakers covered topics ranging from renewables, to how reducing our carbon footprint can improve farm profits.



Here we look at some of the topics covered on the day.

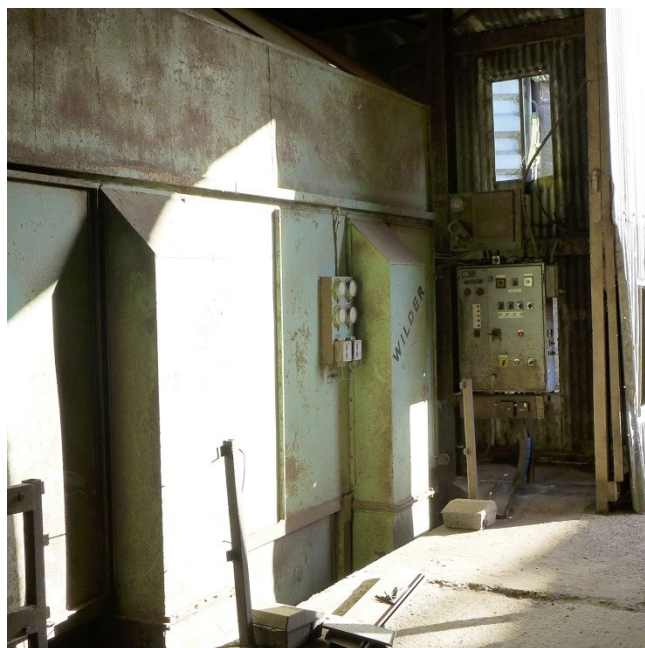
Grain dryer; time for an upgrade?

With a grain dryer installed in the 1970's, is the dryer at Castlemaids still as efficient as it could be?

The Wilder Robomatic 8 tonne batch grain dryer deals with around 1,500 tonnes of cereals and OSR annually. Technology has moved on; are there more cost effective options to consider?

SRUC's John Farquhar estimated that the dryer uses about 8,000 litres of red diesel a year, which equates to about 80,000kWh of heat. Assuming an average harvest moisture of 19%, this gives a drying efficiency of about 70% which is excellent for such an old dryer and is in part, down to Bob's management and keen attention to detail when using the dryer.

A brand new dryer would unlikely to be much better than 80% efficient, therefore in this instance, purchase of a new dryer whilst this one is still operational does not seem justified.



Benefitting from renewables

Like most arable units, demand for energy can be high, especially when grain drying or running fans in storage sheds.

In addition to the grain dryer, Bob also has four 15kW wind turbines, one of which supplies energy solely for the farm business. Solar photovoltaic (PV) panels are next on Bob's list for consideration, however obtaining grid connection may be an issue.

Protect farm soils

Poor soil structure could impact on yields and profits

Regular trafficking of soils, especially in poor conditions, can lead to an increased risk of compaction. According to SRUC's Euan Hart there is a cheap, quick and easy way to establish if you have soil compaction issues and help you to decide any remedial action - get a spade and take a look. *Our Visual Assessment of Soil Structure (VESS) guide may help too; you can find it in the Practical Guides section of the website.*

Investigating precision farming

Attention to detail is key

Numerous activities can fall under the heading of precision farming, for example GPS analysis of soil nutrients, pH and organic matter, variable rate spreading, sowing and yield mapping. SRUC's Euan Hart talked through some of the benefits of precision farming methods. Examples included:

- *Improved use of resources* - GPS soil mapping can help you target areas for pH improvement; as a starting point Euan recommended carrying out GPS on a few fields to demonstrate the value of it to your farm. You may not use less fertiliser across the farm as a whole, but you will be able to be more precise in placing applications where they are needed, support target yields, improve efficiency and reduce waste.

- *Better crop quality* - GPS systems can cut overlapping by 10%, with a corresponding reduction in fuel use, giving a more even treatment across the field.

Euan's talk generated plenty of discussion, highlighting how recording a combination of farm data over the years will quickly build up a picture, helping you to make best use of resources and maximise the likelihood of achieving target yields.

It's a topic we will definitely be returning to explore in more detail at future meetings.

Reduced-till?

Research suggests that ploughing, cultivation and sowing can use up to **60 litres of fuel per hectare**.

Direct drilling can be done using about **12 litres per hectare**.

Would a min till system work for crops on your farm - what difference could it make to your fuel bill?



What's next?

From soils and nutrients to energy use and prep for harvesting; there's no shortage of practical topics to discuss. Following feedback from the first meeting, **farm soils and cover cropping** will be covered at the next meeting, planned for June 2015.

The Climate Change Agenda

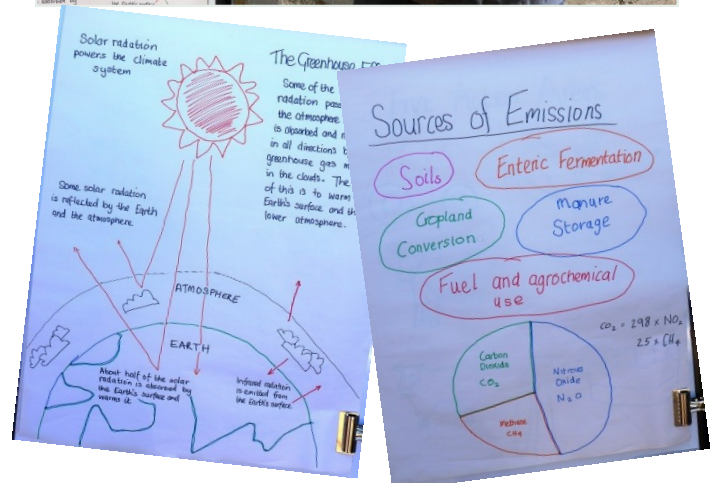
How can we turn it to our advantage?

Gordon Struth (pictured), Scottish Government Policy lead for the *Farming for a Better Climate* project, provided a brief reminder of some of the issues surrounding climate change. He also explained that as well as emitting greenhouse gases, farms could also 'lock up' carbon in soils, crops, trees and other vegetation. Gordon highlighted a range of practical measures promoted by *Farming for a Better Climate* that could either **make or save you money, improving farm profits**.

Reducing the carbon footprint can be a profitable strategy for the farm. Practical ideas were suggested by SAC Consulting's Donald Dunbar, with a view to investigating in more detail, and he asked the groups what they thought. The farmers present wanted to hear more about efficiency topics ranging from different **crop establishment** methods and **reducing losses from crop pests**, to **importing organic wastes and composts**. Some groups thought that getting policy makers

more involved in these meetings could be beneficial too.

As a focus farm, Bob and the Castlemains discussion group will be able to trial and investigate a range of efficiency measures with a view to increasing yields and ultimately farm profits.



There are nine climate change focus farms in Scotland. Keep up to date with their activities at



www.farmingforabetterclimate.org

Meetings are free to attend and all farmers are welcome.

For Castlemains, contact farm facilitator Chris McDonald on 0131 603 7522 or via email at chris.mcdonald@sac.co.uk for more information.

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