The Farming for a Better Climate (FFBC) newsletter keeps you up to date with some of the ideas discussed on the Focus Farms and at FFBC meetings across Scotland to improve farm efficiency and profitability, which in turn could result in fewer emissions per unit of production and a lower farm carbon footprint.

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What's been happening?

We have been working with both the host climate change focus farmers and visiting other farms across Scotland to share practical ideas and tips to improve efficiency and reduce the farm carbon footprint.

Steps to reduce agricultural emissions, such as efficient nutrient use and optimising livestock production, can also lead to improved profitability, so reducing the farm carbon footprint can really benefit the farm business.

Recent reports from Scottish Government show that Greenhouse gas (GHG) emissions from Scotland’s agriculture and land use sector have fallen 25% since 1990, but work is still needed across all sectors to help achieve Scotland’s Climate Change targets.

See our webpages for the five key action areas. - even the most technically efficient could still pick up a few tips and ideas to benefit the farm at home.

Keeping up to date

Our Facebook page and Twitter accounts are steadily gaining in popularity. From photos and information about meetings to findings from others in the Facebook and Twitter community, there’s plenty of useful bits of info. Find us at Farming for a Better Climate on Facebook or follow us on Twitter @SACFarm4Climate
Blood testing in the dairy herd - what can it tell you?

You could gain valuable insights about herd health and cow nutrition from a simple blood test. That was one of the findings from a recent meeting with Ross Logan and Family at Hillend, near Alloa.

Blood profiling technology allows herd managers to check if cows are performing efficiently on their current diet. In mixing the ration, known quantities are combined but with cows sorting feed and different animals eating varying amounts, this could result in a diet which is not the same as it appears on paper. The results of the blood profiling give an indication if what is being fed is actually what is being delivered to the cow and if it is meeting its nutritional needs to maximize efficient milk production.

The group heard how Ross Logan and family at Hillend use this system and have been pleased with the results to date. Ross is now able to tweak rations accordingly to make sure his cows are getting the full benefit and bought in feed is being used cost effectively. For more information, see the meeting notes on our webpage.

Making big decisions

With low milk prices, short term survival has been the focus for many in the dairy sector. Efficiency measures have been explored at both of the dairy focus farms, most recently at Woodhead, where SAC speakers David Keiley and Consultant Jim Ritchie stressed the importance of taking a second look at your business and identifying if there are other things you could consider to improve farm efficiency. Within the group, approaches ranged from moving to a flying herd to make better use of labour and time, to reassessing the machinery fleet - one group member said they were considering selling the feed mixer wagon and using a simpler system with one less tractor. For this farmer, small losses in yield were deemed to be worth the significant cost saving.

Slurry and manures - get your moneys worth

Get the full financial value of N, P and K within these rich organic fertilisers and top up with purchased inorganic fertilisers. There can be wide variability in slurry in both dry matter and nutrient content between farms and even individual tanks on a single unit.

We’ve heard from a number of different farmers, farm consultants and specialists about the financial benefits of getting slurry and manures sampled and analysed and targeting applications accordingly.

Analyses will allow you to work out how much N, P and K is in a typical application (e.g. 2,000 gal/acre). You can then deduct this from the total fertiliser requirement.

SRUC Technical Notes can help you work this out on paper, or you can let PLANET Scotland do the calculations for you at www.planet4farmers.co.uk
Getting to grips with grass - Soil pH

Correct soil pH is a crucial requirement of any crop, including grass. In soils with low pH, useful elements such as phosphate and potassium become harder for the plant to take up - whilst those potentially toxic to the plant such as aluminium become more readily available.

Some crops are more able to tolerate low pH conditions, for example barley is less susceptible to aluminium toxicity than wheat, but yields of all crops, including grass, will do better in soils with a minimum pH 6.0. Plants (and farmers) rely heavily on soil micro-organisms to break down organic matter (such as slurry) into a useable form. These ‘bugs’ also prefer less acidic conditions (>pH 6.0).

The availability of nitrogen, phosphate and potassium is all significantly better at pH 6.0 versus pH 5.5. Maintaining the correct soil pH will help you to get maximum value out of both home supplied and purchased fertilisers and achieve target yields.

Boosting soil organic matter

Are you buying in organic manures and composts? That was a question asked at a recent meeting of the Castlemains group, hosted by Bob Simpson. SAC Consulting Soil and Water Specialist Bill Crooks suggested that if you do buy these in, ask for a nutrient analysis so that you can accurately allow for the nutrient content during nutrient planning. It is best to quickly incorporate organic manures to make the most of the nitrogen value. Regular soil sampling will enable you to target manures and composts to fields that need it the most and avoid areas that are high in P and K as part of your nutrient budgeting process.

Cover crops

Along with protecting farm soils from erosion, cover crops can help to recover around 15-18 kg N/ha, with potential for around 15-50 kg N/ha to be taken up by the subsequent potato crop. This was according to SACs Potato Specialist Stuart Wale speaking at Ardoch of Gallery, where host Willie Officer considered how cover crops might fit in with the potato rotation.

Cover crops can improve soil organic matter and help prevent run off from fields over the winter. The group discussed which species would be most suited to Scottish conditions – oil radish and winter rye were just two options worth considering. With optimum sowing dates of mid to late August in Scotland, early and uniform establishment was deemed essential for a successful crop.

Our Newsletters from 2015 also have some useful info about trials on different cover crops.
Are you Valuing Your Soils?

We spent an afternoon with farmer Robert Ramsay at Kinblethmont putting together a video outlining some of Roberts experiences with controlled traffic farming and the benefits its brought to the soils on the farm.

The video is one of a number of short films which accompanies the new Valuing Your Soils brochure. The brochure, supported by Farming for a Better Climate, was written by a team from SRUC with input from working farmers and funded by CREW. Two of the videos, along with a link to the brochure are currently hosted on the Farming and Water Scotland website.

Is your soil already a top performer?

Early identification and remediation of soil problems is key to farm productivity and profitability. Soil health can also play an important role in reducing our farm emissions. We've demonstrated the Visual Evaluation of Soil Structure (VESS) guide at a number of the focus farms, with farmers finding it an easy method to use at home. Needing only a spade, it's a quick and easy way to have a look at what's happening below the soil surface and assess the structural quality of your soils, helping you to decide if you need to take further action. You can get more information on VESS in the above Valuing Your Soils brochure.

Farmers on film

Sticking with the soil theme, Bob Simpson at Castlemains is the first of our Focus Farmers to produce a video introducing us to his farm – as a bonus we have also included some of the information that SAC Consultants Bill Crooks and Donald Dunbar covered in the recent meeting looking at soil organic matter.

You can view the video via the Castlemains page on at www.farmingforabetterclimate.org

Going on [P and K] Holiday?

Where soil P and K levels have been built up to ‘high’ or ‘very high’ then reducing or even stopping input of purchased P or K is a real possibility. However the decision must be backed up by a nutrient budget - soil analysis and a fertiliser calculation, either using PLANET Scotland or SAC Technical Notes. SAC regularly run a number of free workshops on these topics over the winter months.

Contact Sarah.Kerr@sac.co.uk for more information.
Lower prices, less intensity, more sustainability?

Faced with low prices and depressed markets, farmers have a choice; to intensify, by increasing output per unit area or; to extensify, reducing production but cutting costs even more steeply, writes SAC Rural Business Consultant Julian Bell. Many farms in Scotland carry high fixed costs, particularly machinery, which are hard to change quickly and this can hinder the move to lower output system. However, already on beef and sheep farms in Scotland, there are signs that some farmers are seeking to extensify by keeping the minimum number of animals necessary to qualify for subsidy (Basic Payment Scheme and LFASS). Thereby being able to cut back heavily on labour, machinery, feed and fertiliser costs and so retain as much of the subsidy cheque as possible. There are also signs that arable farmers are adopting a similar strategy by moving from capital and input intensive winter crops to lower input/lower output spring crops.

These moves to lower intensity are purely rational business decisions. However they also present opportunities to improve the long term sustainability of the farming system. Reducing the intensity of production can allow farmers to address long running pest and disease problems. On livestock farms lower stocking intensity can reduce worm burdens and ensure clean grazings are available for young stock. On arable farms the switch to spring cropping can enable effective grassweed control. Lengthening the arable rotation by bringing in fallow, cover crops or grass can help reduce levels of soil borne pests and diseases and improve soil structure.

The most important asset the farm has is its soil. Damage caused by intensive production may have been justifiable where profits could be made. However in the current period of low profitability, continuing to over cultivate and damage soils for no short term gain is bordering on madness. Better to take the opportunity that low returns present by rebuilding organic matter, repairing soil structure and supporting long term fertility to be utilised when higher prices return.

This article was originally published in our column in Farming Scotland Magazine.

Another way to look at farm efficiency?

Even the most technically efficient can find tweaks or changes to boost farm efficiency and maximize outputs. At a recent meeting at Ardoch of Gallery, carbon footprints were discussed as another way to look at farm efficiency. The aim is to reduce carbon emissions per kilo or litre of production with no loss of productivity.

SACs Gillian Reid explained that the most common sources of emissions from arable farms are fertiliser, fuel and electricity. Making more efficient use of these/optimising production can also cut costs.

Greenhouse gas emissions can be measured with a carbon footprint. You can benchmark yourself against year on year performance, and against other similar farms using AgRE Calc – a free resource efficiency calculator available at www.agrecalc.com
Tips and ideas shared at events across Scotland

It's always good to hear what other people are doing. There have been a number of Farming for a Better Climate meetings looking at a range of small, practical changes that could make your business more resilient; here is a round up of some of the topics covered at these additional events held across the country.

Over 100 folk turned out to hear Joyce Campbell of Armadale Farm in Sutherland. Liver fluke and foot trimming were just two of the topics, along with a farm tour looking at hill reseeds and flock management during this excellent visit.

The Stewarts at Bomakelloch Farm near Keith kindly hosted us back in February, where we looked at a range of wintering options, handling systems, sheep nutrition and even hosted a mini stock judging competition.

Grass is the cheapest feed you can use. Portree Consultant Ross MacKenzie developed his own twist around the 'top trumps' theme based on livestock feed values at a recent 'Graze' meeting exploring how we can get the most out of grass and other feeds.

Significant savings in the cost of feeding ewes can be made if silage is analysed and fed along with good quality protein, that was the message from SRUC Sheep Specialist John Vipond at a meeting at Laxfirth Farm, Sheltand. John has produced a useful guide to feeding digestable undegradable protein (DUP). It was put together for farmers at the meeting, but deemed to be too useful not to share. Its available via our Practical Guides section.

Cattle heath planning was discussed with a group on North Harris with SRUC Vet Dr Franz Brulisauer and Skye SAC Consultant Janette Sutherland. Franz discussed health planning and testing, the use of benchmarking, and led a practical workshop on weighing cattle courtesy of D J MacInnes on North Harris (and his cows).

Strategies for both stomach worms and liver fluke control in cattle and sheep were explored in a series of events across the south west of Scotland with SRUC Vet Heather Stevenson. Both fluke and worms are a significant cause of loss of production in cattle and sheep. Heather explained how control strategies are not a one size fits all approach and can depend on previous treatments, climatic conditions, housing etc.

Making the most of your land was the theme of a chilly visit to Mulben Mains earlier in the year. Drainage, rush control, pH and improving pasture were all topics for discussion.

Making the best use of inputs and improving livestock health and performance could improve profitability and help to reduce your farm carbon footprint.
With Scottish Government funding and support from NFUS, SAC Consulting are running the Farming for a Better Climate (FFBC) initiative. With input from working farmers, FFBC considers straightforward and practical ways we can improve business profitability, which will turn help to reduce farm greenhouse gas emissions linked to climate change and demonstrate that farmers are also taking action to tackle climate change.

There's no one measure, but instead a whole range of ideas suitable for most farms that could benefit the farm business and help to reduce emissions through improved efficiency. Tips and ideas are grouped under five key action areas.

Heifer rearing
Replacement heifers are one of the biggest costs to the dairy enterprise and farmers reasonably aim to minimise this expense. However the rearing of these animals can impact on their lifetime profitability, whilst at the same time using valuable and generally limited resources such as land, buildings and labour and having an impact on the farm carbon footprint, so it’s worthwhile getting the basics right.

How much do you spend on fuel?
You might be surprised when you tot up how much you are spending on fuel in a year and exactly which practices are using most fuel.

SAC Renewables Consultant Jim Campbell has put together a practical guide and three spreadsheets for us to help monitor farm vehicles, grain dryer and electricity use and match fuel use against key tasks.

Find these and other Practical Guides via the front page at www.farmingforabetterclimate.org

Farming for a Better Climate - more profitable than you might think
With Scottish Government funding and support from NFUS, SAC Consulting are running the Farming for a Better Climate (FFBC) initiative. With input from working farmers, FFBC considers straightforward and practical ways we can improve business profitability, which will turn help to reduce farm greenhouse gas emissions linked to climate change and demonstrate that farmers are also taking action to tackle climate change.

Five key action areas:
- Using electricity and fuels efficiently
- Developing renewable energy
- Locking carbon into the farm
- Making the best use of nutrients
- Optimising livestock management

There's no one measure, but instead a whole range of ideas suitable for most farms that could benefit the farm business and help to reduce emissions through improved efficiency. Tips and ideas are grouped under five key action areas.

Notes from focus farm meetings and details of upcoming on-farm events are available via our Facebook and Twitter accounts or at www.farmingforabetterclimate.org
Where are our previous and current focus farmers...

... how can you benefit?

It’s always good to see what others are doing, identify tips and share your ideas about common issues. Each Focus Farm hosts a series of practical, on-farm meetings with farmer speakers, SRUC Consultants and industry specialists to look at practical ways to strengthen and develop the farm business.

The Focus Farms have around 5 meetings or visits each year at times to suit the farming calendar. Meetings are free of charge and all farmers are welcome to attend.

If you farm and would like to come along to the meetings you would be very welcome. You can read notes from previous meetings on the project website at www.farmingforabetterclimate.org via the individual climate change focus farmer pages. Meetings and events are advertised through our Facebook page or on our Twitter account @SACFarm4Climate. You can also discuss the programme in more detail with your local farm facilitator.
Further information and contact details

There is more information about what we are doing, along with dates of our forthcoming meetings on our Facebook and Twitter feeds. You can read more about the farms, download practical guides and case studies at www.farmingforabetterclimate.org

Get in touch - contact one of the team:

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Visit the website at www.farmingforabetterclimate.org

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