

FFBC News

The Farming for a Better Climate Newsletter

Dec 2014 (no. 9)



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Farms with a low carbon footprint are often also the most efficient

From on-farm renewables to making the best use of fertilisers, the Farming for a Better Climate (FFBC) newsletter keeps you up to date on activities under the initiative. We highlight practical ideas that have helped others improve farm efficiencies and increase farm profitability, which could result in fewer emissions per unit of production and a lower farm carbon footprint.

Climate Change Focus Farms

Over the next three years, our volunteer host farmers, with the help of other working farmers, farm advisers and industry specialists will look at practical ideas to improve farm efficiency and profitability, which will in turn reduce the farm carbon footprint.

In this newsletter, we give an overview of some of the things we have been looking at to date with the five farms currently in the programme. We plan to explore these and other topics in more detail with a total of nine host farms and farmer discussion groups in the coming months.

What tips could you suggest and how do you think you would compare?



There's more information about joining the discussion groups towards the end of the newsletter – meetings are free and all farmers are welcome.

Woodhead Dairy hosts first meeting

Ranging from management of the dry cow to ways to save on the energy bill, a number of practical ideas were discussed at the first meeting at Woodhead near Newmilns in Ayrshire in September with host dairy farmers John and mum Anne Kerr.

SAC Dairy specialist David Keiley with David Norrington, from Valley Vet Centre discussed the impact of fertility management on herd performance. They also looked at issues that could affect cow fertility with a focus on dry cow management and metabolic diseases and the impact these have on fertility and profitability.

With challenging forages and tightening margins it has never been more important to know what you are feeding; SRUC's David Keiley and Robert Logan along with Matt Palmer of Harbro agreed that regular forage sampling throughout the winter is essential to optimise output from cows this winter.



Hugh McClymont didn't disappoint with a good insight into slurry management at the Crichton Royal Farm in Dumfries. As farm manager, Hugh has reduced the volume of bagged fertiliser bought from 130 tonnes per year down to less than 50 tonnes, with no reduction in productivity. In that time, he has also managed to eliminate the need to spread phosphate and potash, as all the farms P+K is supplied from home produced nutrients (slurry).



Adrian Jones from A&M Jones Consulting gave an insight into fuel costs associated with milking. From correctly sizing the plate cooler, to tips about siting cooling fans, Adrian identified a number of areas that with a bit more investigation could yield small but daily savings on the electricity bill, adding up over the year.



Visitors were also treated to a preview of the woodchip boiler that was in the process of being installed and commissioned. We will be taking a look at the above topics, plus other practical ideas for improving profitability on the farm in more detail in the coming months.

If you farm and would like to know more about the programme of meetings at Woodhead and being part of the discussion group, contact farm facilitator Robert.Ramsay@sac.co.uk

Nether Aden; focusing on marginal gains

Did you know that to produce 180kg of weaned calf, it takes around 6t of silage, 5t of water, 9t of straw, 100l of diesel, 9 hours and 2 acres (0.81 ha), as well as building space?

With so much going into each calf, there is plenty of scope to look at each step and identify small 'marginal gains' to help reduce costs and cut the farm carbon footprint. That was the message from SRUC's Robert Logan at the opening meeting with hosts David and Nicola Barron at Nether Aden near Mintlaw. Robert, along with farm vet Randal Mathers of Meadows Veterinary Centre, discussed how to maximise livestock health and reduce stresses to help give the weaned calf the best start. More calves in better health will increase output giving more profit and lower environmental impact per kg of beef produced.



Keeping animals with the best feed conversion ratio (FCR) decreases the time taken to finish the animal; FCR is better in younger cattle and is also better in bulls vs steers vs heifers. Dr Jimmy Hyslop, SAC Consulting beef specialist advised taking advantage of the increased FCR to get animals finished sooner.



An increase in efficiency could also be achieved by breeding heifers at two, as opposed to three years of age. For breeding heifers, Jimmy noted that its essential heifers are large enough to mate - ideally 65% of mature cow weight. For example, an Aberdeen Angus cross Simmental has a mature weight of around 740kg therefore at 14/15 months of age, the heifer should be around 480/490kg. It is important that heifers are fed high quality forages.

Bull fertility

Is your bull working as well as he should? Bull soundness and fertility should be checked annually as its estimated around 30% could have a problem. This was a recent topic at a discussion group meeting at Nether Aden with some interesting findings; keep any eye on our [Facebook](#) page for more information from this meeting.

How to get efficient grassland production and use it was the message from guest speaker Michael Blanche (QMS). Michael explained how to make your 150ha seem more like 200ha in terms of grazing potential. The grassland theme continued, with SRUC's David Ross and George Duncan demonstrating some of the benefits of GPS sampling. Soil sampling is a starting point to better management of nutrients on the farm; it identifies areas where nutrients are most needed and helps you to make the most of both bought in fertilisers and organic slurry and manures.

If you farm and would like to know more about the programme of meetings at Nether Aden and being part of the discussion group, contact farm facilitator Alan.Bruce@sac.co.uk

Condition scoring

Within the suckler cow herd, it is important to manage Body Condition Score effectively to ensure both bull and cow is in optimum condition for the performance being asked of them.

HiFEN – Highland Farming Efficiency Network

As part of the CCFF programme, three farms in the Highlands are working together to identify efficiency savings as a 'Highland Farming Efficiency Network'. Jason and Victoria Ballantyne at Clynelish near Brora, Sheena, Stephen and Donald Mackenzie at Auchmore near Muir of Ord and the Girvan Family at Corrimony near Glenurquhart are all sharing results (and meetings) over the next three years to explore efficiency savings that could work for them and other farmers with similar enterprises. Here is an overview of the introductory meeting at Auchmore.



Identify and maximise the efficient use of resources was the message from SRUC's Dr Jimmy Hyslop. Jimmy discussed with farmers at the meeting where to look for efficiencies in a beef system and the value of matching your system to maximise the resources available on the farm, be that sheds, labour, machinery grazing type and availability.

Know feed quality

When feeding forage, it is useful to carry out analysis and adjust the ration appropriately e.g. a good quality silage can allow up to 2 kg of barley less to be fed which can amount to a difference of 20 p/kg of liveweight gain.

Breed selection, hybrid vigour, the use of EBVs for growth and for maternal abilities, retention of homebred heifers and the age at first mating were all thrown into the mix and sparked many ideas to follow through at future meetings.

Sheep production wasn't neglected, with some top tips on tugging and improving flock performance from SRUC's Kirsten Williams and Graeme Swanson, from Conanvet. They highlighted the following points:

- Check tups prior to use - body condition, feet and fertility exam.
- Make sure he's fit not fat – he's got a marathon to run.
- Look after him pre and post tugging – tups are half your flock.
- Teasers are undervalued - tighten up lambing, plan feeding, labour, etc.



- Ewes - correct body condition.
- Avoid stress during mating period.

Getting the most from grass is a topic that all the CCFF host farmers are intending to explore in more detail. SRUC's David Lawson looked at the influence of soils in grass growth and controlling grass productivity, highlighting some of the pros and cons of earlier heading grass varieties and which clover varieties to include within a sward.



At Auchmore, installation of a 100kW high head micro hydro scheme was well underway. Guest speaker Nick Forrest from Hydrobot explained benefits of microhydro on farms, and with routine maintenance, how a well planned and installed scheme could be generating electricity and revenue for over 100 years.

The micro hydro development at Auchmore utilises an old lade as part of the route to pipe the water from the hill; water will be piped into the powerhouse to drive the Gilkes turbine and then be returned back into the watercourse. The group could see the start of the construction of the penstock, powerhouse and channel for the water to be returned back to the river.



The renewables theme was taken a bit further by SRUC's Simon Amor, who discussed opportunities for heat from biomass and farm woodlands. Farm woodland can represent an additional source of income for all land owners (assuming appropriate scale and access). There are also other benefits to farm woodlands, such as increased livestock productivity through shelter, carbon sequestration, amenity and financial opportunities. Woodfuel can make a viable cost saving both through grants income and savings on fuel supply.

If you farm and would like to know more about the HiFEN programme of meetings and being part of the discussion group, contact farm facilitator Jenny.McCallum@sac.co.uk

NEW FFBC Facebook page



Have you seen our new [Facebook](#) page? We will post details of all our events here, both at the Focus Farms and across Scotland, plus tips and ideas from others about practical efficiency measures. You can also follow us on Twitter [@SACFarm4Climate](#)

Dates for the Diary

There are a range of events focusing on improving profitability happening across Scotland, both within the FFBC programme and with others; we'll post details on Facebook and Twitter. Here are just some of the efficiency focused events coming up across Scotland in the next month or so;

Resource Efficiency workshop

Monday 12th and Tuesday 13th January 2015 at SRUC Crichton Royal Farm, Dumfries.

With price pressures and reductions in CAP funding many farmers are looking hard at the efficiency of their businesses and the way they use resources like energy, nutrients, soil, slurry and water. A two day workshop, at the Crichton Royal Dumfries, on Monday 12th and Tuesday 13th January will look at the latest science and review appropriate ways to improve the business efficiency of farms while reducing their carbon footprint.

The event is aimed at farmers and their agricultural and veterinary advisors but also to all those involved with regulating the industry or developing agri-environment measures. It is a collaborative project between SRUC and Bangor University. Full details of the workshop are [here](#), or atp-enquiries@aber.ac.uk or 970 823 224 for more information.

Orkney - Beef Production Efficiency

Tuesday 13th January 2015 at The Old Kirk, Westray or Wednesday 14th January 2015 at Lower Cottisgarth, Rendall.

Two free meetings will consider key health issues affecting beef production efficiency. Contact the SAC Consulting's Orkney office for more details on 01856 872 698.

HGCA/SRUC Winter Event: Agronomy 2015 for Cereal Growers

Thursday 15th January 2015 at Perth Racecourse or Tuesday 20th January 2015

At Thainstone Agricultural Centre, Inverurie.

These one day workshops for growers and their technical advisors will consider pest and disease control, variety choice and management, and review the impact of world markets for grain and the new CAP regime from Europe and help to drive arable businesses forward. For more details or to register, see the [HGCA website](#) or contact events@hgca.org.uk or phone 0247 647 8723.

Driving efficiencies into livestock farming

Wednesday 4th February at Midtown of Glass, Huntly by kind permission of Gary Christie.

An on-farm tour with tips from industry experts on improving beef output through focusing on critical efficiency factors. For details or to book a space, phone SAC Consulting's Thainstone Office on 01467 625 385.

Maximising efficiencies in the beef herd

The Scottish average for the number of calves weaned per female mated is 84% while a target of 95% is achievable. Each 1% improvement in weaning percentage increases the economic sustainability of your suckler herd and reduces greenhouse gas (GHG) emissions. A software package such as [FertBench](#) can show where a problem is, whether this is getting



the cow in calf, producing a live calf at birth or a live calf at weaning.

Choosing the right finishing system for your cattle can increase efficiencies within your system. In the USA, the average finishing age of cattle is 14 months. In Scotland it is 23 months.

SRUC's beef specialist Jimmy Hyslop questions if we shouldn't all be finishing cattle sooner? Jimmy said "To make efficiencies, farmers need to ask

themselves: how do I maximise use of my building space & costs, and how do I produce more while making my life easier?"

Trial to treat soil compaction

A group of farmers saw the benefits of using a soil aerator first hand at Aberdeenshire's Soil Nutrient Network Farm meeting at Ednie, near Peterhead by kind permission of Elaine Booth and Peter Robertson.

Following a meeting in 2013, SRUC Consultant David Michie set up a trial to compare the performance of an aerator with a sward lifter and with no treatment at all, in a compacted field. One third of the field had a sward lifter go over it, one third had an aerator go over it, and the final third had no treatment at all.

Rectangular soil blocks were dug and assessed using the new VESS (Visual Evaluation of Soil Structure) for grassland, currently being developed by SRUC. David said "*The new VESS really worked – the farmers were able to give the soil blocks a score using the simple instructions – it then told them what they should do to sort out the compaction problem, if there was a problem in the first place*".

There was a clear difference between the areas that had been treated with the aerator or sward lifter, and those that had not. The untreated area was compacted, getting a VESS score of 4, which recommends using an aerator. The treated areas had a good soil structure, getting a VESS score of 2, requiring no further treatment. "*It is definitely worth digging a few holes to see what your soils are like – getting the spade out and finding no problems is a lot cheaper than running a sward lifter over all your grass parks as a matter of course*" added David.

Sward lifter



Aerator



No treatment



Soil structure in July (pictures at the top), and recently (pictures at the bottom) following different treatments

There was not a very clear difference between the aerator and the sward lifter; but the sward lifter used did not have wings, making it less effective than it could otherwise have been.

SAC will run more Soil Nutrient Network meetings, looking at many different soil topics throughout the country over the next few months (keep an eye on our [Facebook](#) page for

details). The VESS for grassland will be made available in the near future. The original FFBC VESS is available as a practical guide. You can read more about the Soil Nutrient Network farms [here](#).

Practical Guides and Case Studies

There are a range of farmer [case studies](#) on our webpages. Our [Practical Guides](#) include information ranging from how to identify any soil structural problems using the VESS guide, to information on cover crops, to FITs and RHI schemes. You can find them at www.farmingforabetterclimate.org



What is FFBC?

Messages in the media can often leave you confused about climate change and the impact it could have on your business. With Scottish Government funding and support from NFUS, SRUC are running the Farming for a Better Climate (FFBC) initiative, focusing on improving the profitability of the farm business, which in turn will help to reduce farm emissions linked to climate change and help to demonstrate that the agricultural sector is taking action.

We all want to hand on a thriving and profitable business. With changing weather conditions and increasing prices, this is becoming more of a challenge.

The key to reducing greenhouse gas emissions is **improved efficiency**, which is also vital for a sustainable and profitable business. Working with volunteer climate change focus farmers the initiative promotes 5 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

Join one of the farmer discussion groups

It's always good to see what others are doing and identify tips and share your ideas about common issues. With support from specialists from both within SAC Consulting, industry and other farmers, the farmer discussion group explore a range of practical topics to help to strengthen and develop your farm business. As part of the farmer discussion group and through a series of on-farm meetings and visits you can:

- Identify key areas to improve farm profits
- Benchmark farm performance; both against national KPI data and within the discussion group
- Exchange ideas within the discussion group; what are others doing that you could benefit from? How are others approaching similar issues?
- Access specialist advice and guidance at the meetings



- Suggest topics for future meetings, visits and guest speakers
- Improve farm efficiency and reduce the farm carbon footprint.

It's free to join the focus farm discussion groups and all farmers are welcome to attend. The focus farms have around 5 meetings or visits each year at times to suit the farming calendar. If you farm and would like to be involved, contact your local farm facilitator:

- **Auchmore, Clynelish and Corrimony** 'Highland Farming Efficiency Network' Focus Farms Facilitator - Jenny McCallum SAC Consulting Farm Business Services (FBS) Inverness Office. Email jenny.mccallum@sac.co.uk Tel 01463 233 266
- **Nether Aden** Farm Facilitator Alan Bruce SAC Consulting FBS Turriff Office. Email alan.bruce@sac.co.uk Tel 01888 563 333
- **Woodhead** Focus Farm Facilitator - Robert Ramsay SAC Consulting FBS Ayr Office. Email robert.ramsay@sac.co.uk Tel 01292 525 252

More farms will be joining the programme in January 2015.

Thank you for reading the newsletter. If you would like to be notified when the next newsletter is out, email climatechange@sac.co.uk and ask to be included on the mailing list. Your email details won't be shared with anyone else. You can also keep up to date with the project via our [Twitter](#) feed @SACfarm4climate or find us on [Facebook](#).



Visit the website at www.farmingforabetterclimate.org



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