



Profiting from Improved Efficiency at Woodhead

Tuesday 16th September 2014 by kind permission of John and Anne Kerr.



As the first meeting in the programme at Woodhead, SAC Consulting's event chair and Farm Facilitator Robert Ramsay welcomed all visitors to Woodhead to hear about the aims and objectives of the Climate Change Focus Farm initiative.

Working with host farmers John and Anne Kerr, the three year programme at Woodhead could help both the Kerrs and farmers in the discussion group maximise herd performance, improve grassland, optimise nutrient use, reduce energy bills and realise the potential for renewables. Improving farm efficiency could also lead to a reduction in the farm carbon footprint.

Host John Kerr gave an overview of the activities at Woodhead and hoped that his participation in the initiative will help him to achieve increased output whilst improving overall farm efficiency. Host of a previous climate change focus farm, Ross Paton at Torr near Castle Douglas, saved £37,000 and reduced the farm carbon footprint by 10% with no loss of production.

The aim of the introductory meeting was to highlight some of the topics John and Anne will be investigating over the coming years and how it can also benefit farmers in the discussion group. The meeting touched on four key topics:

Fertility management – David Keiley, SRUC Dairy Consultant and David Norrington, Valley Vet Group

SAC Dairy specialist David Keiley highlighted the importance of good fertility management on dairy herd performance, he was supported by the farm vet, David Norrington, from Valley Vet centre.

The herd at Woodhead have been moving towards a double block calving system over the past few years. The system is very efficient and allows John to make good use of grazed grass throughout the year while maintaining a fairly level milk profile. However, the system is heavily reliant on good herd fertility, a low calving index is essential in order for a block calving system to operate.

After giving a bit of background into the reproductive cycle of the cow, David looked at issues affecting cow fertility with a focus on dry cow management. If cows are managed correctly through their dry period, then they have a far better chance of calving down normally, milking well and most importantly, getting back in calf.



David Norrington looked at the impact of metabolic diseases and the impact they have on profitability. A case of milk fever has a huge impact on a cows ability to milk and to get back in calf.

Hypocalcaemia causes a cow to have weaker contractions meaning labour is a long drawn out process, putting pressure on both cow and calf. The cow will then have difficulty cleaning, causing metritis issues. If the cow is down and unable to get back, it increases her chance of picking up mastitis, further affecting cow health and milk quality. Milk Fever is also a painful experience for the cow. All these things combined have a massive effect on the cows welfare and ultimately bottom line profitability. Dry cows are the most important group on the farm.

Improving grassland, forage and nutrient use – Hugh McClymont, Crichton Royal Farm, Dumfries

Hugh McClymont gave the group a very good insight into the Crichton Royal Farm in Dumfries. Hugh has been instrumental in reducing the volume of bagged fertiliser used at the Crichton. Over his time as farm manager, he has managed to reduce the volume of bagged fertiliser bought from 130 tonnes per year 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. All the farms P+K is supplied from home produced nutrients (slurry).

Hugh also looked at the trial work at the Crichton and various practical outcomes from this academic work. The group heard about the various crops that have been grown at Crichton to feed the cows which are fed on a totally home produced ration (for research purposes). Maize, Beans, Lucerne, Red Clover and grass silage are all grown at Crichton; Hugh discussed the benefits of these crops and where he sees them fitting on a conventional dairy farm.



Hugh discussed the merits and challenges of milking 3 times a day on a paddock grazing system. Over the last 20 years, the importance of good grassland management has been overlooked on many farms. With a reduction in agricultural support payments, Hugh sees good grassland management as being vital to ensure farms are profitable but also to reduce carbon footprints and make businesses more sustainable.

Reducing energy use – Adrian Jones, A&M Jones Consulting

Adrian took the group on a brief walk around the steading and discussed opportunities to cut the farm fuel bill:

- **Renewables** – One of the more obvious ways to reduce electricity demand was generate power on the farm through renewables; John and Anne are in the process of installing a woodchip boiler to provide heat and hot water for both cottages on the farm and use in the parlour. With additional planting, Woodhead could secure a home supply of woodfuel, adding to a reduction in farm fuel bills. Adrian briefly touched on the scope for using waste heat from anaerobic digestion, which some farmers are doing, as a complimentary renewable option that would fit with wood drying for the woodfuel boiler.
- **Tank room** - Adrian suggested it would be worth upgrading the plate cooler at Woodhead to a larger model. Adrian said that using a correctly sized plate cooler and relying on cold



water to drop the temperature of the milk is a much more efficient way to cool milk than relying on refrigeration, especially when combined with a well insulated milk tank.

- **Metering** – knowing what you are spending on which activities is the first step in making best use of energy, and reducing running costs. For example, knowing how much refrigeration is costing you can help you decide if upgrading the plate cooler is a profitable step.
- **Water use** – Water supply to the dairy is in part via a borehole, yet John still has to pay to pump this water, so it's not 'free'. For example, borehole wash water could be costing John around **£0.90/m³** in terms of fuel needed for pumping, mixing and land application, illustrating the financial need to minimise water use where possible.
- **Variable speed vacuum pump** – Adrian recommended this type of system for every liquid pump on the farm. By regulating the operating speed, power can be used more efficiently. Slower speeds also reduce the risk of cavitation. Adrian stated that a 10% drop in speed can give a 50% saving in input power, assuming the system is sized correctly. This gives a huge opportunity for small savings which will add up on a daily basis.

Livestock Nutrition – David Keiley and Matt Palmer, Harbro

David noted that feeding cows is a real challenge at the moment; low dry matter silages make it difficult to get adequate volumes of feed into cows to produce milk.

The feed market is interesting as there are a large number of "cheap" feeds available. Farmers have lots of options to reduce feed costs and improve ration composition.

At Woodhead, 2014 was a challenging year for making silage but John is currently making use of Vitagold as a cheap replacement for blend. Hay has also been added to the ration to try and increase the overall dry matter within the diet.

Care must be taken when changing ingredients in the ration, it is important to check that including cheaper ingredients won't have an adverse effect on milk yield or quality.



With challenging forages and tightening margins it has never been more important to know what you are feeding. Both Matt and David agreed that regular forage sampling throughout the winter is essential to optimise output from cows this winter.

Summary

Key points from the meeting included

- Routine activities can have a hidden fuel cost; monitor to measure
- Regular forage analysis is critical to achieving balanced rations
- Look for cheaper alternative feeds this winter
- Good dry cow management is crucial
- Good nutrition will improve fertility and improved fertility will increase profitability.

Robert thanked the group and invited speakers for their input; visitors were given a token and asked to vote for their preferred topic to cover in more detail at the next discussion group meeting; the results of the vote were:

- 34.7% - Reducing the fuel bill
- 34.7% - Improving grassland, forage and nutrient use
- 21.7% - Livestock nutrition
- 8.7% - Fertility management

Next meeting

The next farmer discussion group meeting is provisionally planned for February at Woodhead. For further details contact Robert Ramsay at robert.ramsay@sac.co.uk or telephone 01292 525 171.

Do you farm and would you like be part of the discussion group?

With the support of specialists from within SAC Consulting, industry and other working farmers, the discussion group will 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 will have the opportunity to:

- Identify key areas to improve farm profits
- Benchmark farm performance; both against national KPI data and within the Woodhead group
- Share ideas within the farmer discussion group. What are you doing differently; how are others approaching similar dairying issues?
- Access specialist advice at the meetings
- Prioritise and shape the direction of future meetings, visits and guest speakers
- Improve farm efficiency and profitability. This will also reduce your farm carbon footprint

Woodhead meetings will have a dairying focus, however all farmers are welcome to attend. There will be around 5 meetings or visits each year at times to suit the farming calendar. Meetings are free and you will not be expected reveal financial data about your farm. For more information, contact Robert Ramsay at robert.ramsay@sac.co.uk or telephone 01292 525 171.



Visit the website at www.farmingforabetterclimate.org

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