

ABOUT BORDERS MONITOR FARM

Farm name	Whitriggs, Denholm, TD9 8QR
Meeting Number	17- Preparing and managing change in the lead up to organic conversion
Meeting Date	Wednesday 31st July 2019
Next Meeting	Wednesday 25th September 2019

Whitriggs Farm, near Denholm, is run by Robert and Lesley Mitchell and their son Stuart, with support from Stuart's brother, Alistair, during busy periods.

The Mitchells currently farm 442 hectares of mainly semi-permanent and permanent grassland.

Cattle; 140 Shorthorn X and AAX, with all calves not required as replacements finished on the farm.

Sheep; Currently 1000 Easy Care and Blackface lambs on a B&B basis. Future flock is under review.

Arable; 28ha of Wheat & Oats fed to cattle, 30ha of spring barley to be sown 2019

Deer; 300 Red Hinds, with a further 30 calves which will calf in 2020. Currently planning on building to 215 hinds, close herd and breed own replacements.

In the absence of chairman Andrew Tullie, Stephen Young welcomed around 35 farmers and trade to Whitriggs to discuss a range of topics looking at what is changing in livestock farming. The aim of the meeting was to look at the changes required as the business approaches the decision to go organic.

Management Team; Andrew Tullie (Chair), Robert Catlin, Scott Girvan, Giles Henry, Megan Mabon, Andrew Robinson (Vet) and Jonny Williams.

KEY MESSAGES

James Bretherton

- 1200 Soil types in the UK - 3100 in EU
- Soil is a living thing
- Soil Wrong – Livestock Wrong
- Ploughing loses 45% of soil moisture
- Currently 32% more grass than this point in 2018
- Earthworms are key and live to 12 years of age
- Good earthworm population move 40t/soil/acre/year
- Take 4-5years to get earthworm population back if damaged
- 20% of all carbon in the atmosphere is due to centuries of ploughing
- pH of 6.2-6.5 soil could still not be working
- pH is critical but need a balance of Ca 68% Mg 12%
- Know what it is that makes up your pH



- pH is the handbrake on the system
- 1 inch of rain equals 100t/acre
- It takes 250kg water to grow 1t/DM
- Soil Organic Matter 5-7% can be lifted by 0.5%/year

Johnny Williams – finished livestock markets update

- Cattle - Conventional 330p/kg/DW – Organic 400-430p/kg/DW
- Lamb kill 36% ahead of same time last year
- Lambs – conventional 370-375p/kg/DW Organic 30-35p premium
- Significant increase in lamb & ewe export demand this week
- Cattle finishers £200/head back on year
- Dairy Bull calves - threat to beef market but also an opportunity

Cost of Food

- There is a need to understand food from the consumers point of view
- It is unlikely that the spend of average families on food will increase or that government will allow it
- There is greater chance of retaining more of the retail price through working with supply chains, although it is very hard.

AREAS OF DISCUSSION

James Bretherton – Soil Specialist / Enthusiast

James Bretherton, a self proclaimed soil enthusiast from Preston gave a fanatstic talk on the importance of the links between soil, plants and animals. James spoke about soil being a living thing and how we need to manage the soil like a cow and feed the bugs, much like a rumen and how the pH balance in soils is critical. If we get the soil wrong the livestock will be wrong. There are 1200 soil types in the UK and 3100 across the EU and testing the soil type is useful to ensure the soil health is maintained. Getting a detailed soil analysis (eg Albrecht) can provide very valuable information.

Soil	%
Water	22-24%
Air	22-24%
Organic Matter	5-7%
Mineral	44-45%

James was armed with a huge number of soil facts which he shared with the group. He mentioned that 20% of the CO₂ in the atmosphere is down to centuries of ploughing. (this generated good dicussion). Also, aeorbic soils work 4 times faster than anearobic soils but it takes 250kg of water to grow 1kg/DM and 1inch of rain is equal to 100t/water per acre.

James then went on to talk at length about pH balance in the soils and how the wrong pH balance is the handbrake on any system. A soil can have a pH of 6.2 – 6.5 but it will not be working if the pH balance is not right. The Base cation saturation raio (BCSR). What he means by this is, the balance between Calcium and Magnesium in the soil. The ratio should be 7-1 Calcium to Magnesium or 68% Calcium versus 12% Magnesium. Once the Magnesium levels rise above 15%, soils begin to stop working. Potassium and Sodium make up the 4 key parts of the lime/alkalinity element of soil pH. Having the correct pH balance helps palatability and

livestock perform better on balanced soils. Interestingly the ideal rumen pH in a cow is 6.2 which is the same as soil.

James also covered soil bacteria, fungi and the importance of the living organism in the jungle below ground, where earthworms eat everything except moles who could be classed as the kings of the jungle. Soil organic matter is also important, and the target is 5-7% with some neglected or exploited soils now down at 2%. Soil Organic Matter can be lifted by 0.5% per year but can take years to lift when depleted.

The importance of carbon was also discussed and the avoidance of ploughing as CO₂ emissions are significant along with soil moisture losses. There was very positive discussion on the opportunity for no-til/min-til/zero-til options. James spoke of the importance of using the correct drill. Cross slot disc drills are ideal but can be expensive but any direct drill with discs and a good seed placement work well. As with all good in field soil sessions, the discussion could have gone on for hours.



Johnny Williams – Farmstock – Market Update

Johnny delivered an excellent market update on both the Beef and sheep and explained the reasons behind the depressed markets are present. The beef trade is currently sitting about £3.30/kg/DW despite UK cattle numbers being at historically low levels. Beef Finishers are back £200/head on the year, and this will have a detrimental effect on the store sales this backend. More worrying issues, are some processors are cutting the maximum carcass weight to 380kg and are reducing their kill numbers for various reasons, including Brexit and labour issues. Further pressure on the beef industry will come from the dairy sector as milk processors put a ban on shooting bull calves and more dairy farmers revert to using sexed semen to produce heifers and then using AA or BB to produce beef animals. There are good contracts out there for finishers to get involved and this is where opportunities may lie for farmers with spare sheds. The organic premium is still significant with organic cattle achieving £4-4.30p/kg and some up at £4.70p/kg. More farmers are considering organic, it will be interesting to see if the numbers come through and if demand stays ahead of supply. The Angus and Shorthorn premiums are remaining at 30+35p/kg/DW.



Lambs are killing out well this year with weights up 0.5kg/DW on average and kill numbers are 36% ahead of this time last year. Current lambs are 370-375p/kg/DW and exports orders have kicked in this week. There is also an increase in export demand for ewes and organic lambs are still holding a 30p premium. There is abundance of grass around and with the kill so far ahead of last year store lambs may not be a bad option but then again, who knows what will happen politically this back end.

Cattle Fertility

The group discussed the work so far at Whitriggs, in particular reducing the calving block to just 6 weeks and the use of synchronisation and AI. The details of which can be found on the Monitor Farm Hub Theme report. As the Mitchells will be unable to continue to use synchronisation after organic conversion, the group made a range of suggestions. Including increased number of bulls, potentially using a teaser bull and using technology to ensure cows in heat are recognised and served. Similarly breeding and retaining cows only with good fertility will be required to maintain such a tight calving pattern. It was recognised that getting over 90% cows in calves in a 6- week block is almost impossible, so a degree of reduced output must be accepted.

Changes at Whitriggs

1. Calving at 2years
2. Use of Synchronisation & AI
3. Heifer selection policy
4. Condition scoring of Bulls & Cows
5. Calving block reduced to 6weeks
6. Cows "pulled" forward by up to 7wks at calving

David Cairns – MSP

David discussed issues of weeds in grassland, particularly the level of infestation which many farmers under estimate. If a 7ha field has a 10% dock infestation it can carry 26 less sheep, or 3 less cows. Currently at Whitriggs docks are controlled by regularly cutting for silage and using rotation with arable crops and re-seeding. A dormant seed bank can however survive for up to 80yrs for some weeds, making it difficult to eradicate. Seeds can also survive in dung and slurry which is why many dairy farms have issues with docks. Composting dung to a high temperature can kill the seed.



Key Points:

- Docks and weeds are the symptom not the cause
- Rushes can be controlled but wet ground must be dealt with first
- Two types of chemical control are : Thistlex, (clopyralid + triclopyr) Dockstar Fluroxpyr, (Triclopyr). and Forefront (aminopyralid) will have greatest effect.
- Cost can be £10-50/ha, but results will be variable
- Chemicals must be applied at correct stage, must be to growing plant and in accordance with the label
- Use plenty of water, at least 300litres/ha with application
- Very few chemicals are approved through a weed wiper
- Spot treatment can reduce costs in a small area

FARMERS UPDATE

Stuart gave a comprehensive update on progress since the last meeting.

Deer – Calving looks like 60%, which is acceptable, one group better than other, nine stags purchased this year from Aberdeenshire and Woburn. Last group of 100 breeding females arrived, now a closed herd of 300 breeding females. Started another 800m fencing last week.

Cattle – Calving finished after 6 weeks, went well with only one cow leaving the shed without a calf, twins helped, 170 cows to bull and bulls out 3 days earlier. 37 heifers have been AI ed with a stabiliser bull as it may be last time AI can be used as organic does not permit synchronisation drugs. Bullocks are still at grass and doing well, look to start selling them soon, although prices do not look great.

Forage- 2000t of silage has been made, also 125 bales which have been placed in a long line on the hillside to go with deferred grazing trial this winter as Organic stocking density rules restrict the housed cattle numbers due to higher space requirements. Huge surplus of grass and 500 bales of hay have been made. Which may be useful next year.

Cereals – winter barley has been cut and yielded well, just waiting on whether to bale remaining straw.

OPPORTUNITIES/CHALLENGES

- Organic Conversation- Cattle prices – Brexit

FACTS & FIGURES DISCUSSED

- 36% more grass so far this year versus 2018
- pH Balance 68% Calcium versus 12% Magnesium
- Families in the UK only spend an average of around £55/week on food
- In a challenge the groups were between 3-13% out on their valuation of food

FACILITATOR CONTACT DETAILS

Stephen Young,	07502 339613	stephen.young@saos.coop
Colin Macphail,	07747 046461	colin@macphailconsulting.co.uk
Fergus Younger	07771 966649	Fergus.younger@saos.coop



Scottish Rural
Development
Programme