

ABOUT NORTH AYRSHIRE MONITOR FARM

Farm name **Girtridge Farm, Drybridge Road, Dundonald, Kilmarnock, KA2 9BX**

Meeting Number **03 Grassland management (Michael Blanche) and Carbon Footprint (Carol Anne Warnock)**

Meeting Date **Thursday 6th July 2017**

Girtridge Farm is run by the business of Messrs John Howie, a partnership consisting of John Howie, his mother Margaret and his sister Mary. The business farms a total of 140 hectares of non-LFA land and 35 hectares of LFA grassland.

Finished Cattle: Approximately 230 finishing cattle purchased through the local market all year round. The aim is to sell cattle at R4L deadweight through either Stoddarts or Highland Meats.

Sheep Flock: 140 cross ewes put to Suffolk, Texel and Beltex x tups. All lambs are sold finished through the live market. All replacement females are purchased through the market.

Breeding Cattle: 10 mixed breed spring-calving suckler cows running with a Limousin bull. Calves transition to the finishing cattle system.

Spring Barley: 28 hectares of Spring Barley. All barley and straw is used on farm.

Forage: 2 cuts of silage are taken with 7.13 hectares of hay also being produced.

The management group is chaired by Craig Bryson and includes John Howie, William MacTier, Andrew Welsh, Beth Errington, Gordon Walker, Louise Walker, Hazel Muir, Iain Reid, James Morrison, John Cowan, John Hunter, John Paterson, James Smith, Matt Mitchell, Philip Close, Robert Munro, Willie Campbell, & David Young

KEY MESSAGES

- pH and lime are the most important factors in optimising grass growth. Get these right first before spreading N, P and K and reseed.
- If pH is not on target then up to 50% of your fertiliser could be wasted.
- Rotational grazing can increase your DM utilisation by at least 20% when compared to set stocking.
- Rotational grazing does not need to be complicated. Simply mob up groups and move them round your farm, keeping a close eye on your grazing residual.
- As a rule for cattle, enter a paddock at 10 cm, exit at 4 or 5cm. For sheep enter at 8 cm exit at 4cm.
- Increasing your kilogrammes of dry matter utilised = increased profitability.
- Carbon footprinting can identify areas for improvement in your enterprises. At Girtridge increasing farm output and cattle growth rates, reducing the time to slaughter and making better use of fertiliser will help to reduce the footprint as well as increase profitability.
- Speciation of coccidial oocysts can determine if there is a need to treat as not all cocci are pathogenic.

AREAS OF DISCUSSION

Grassland Management

Michael Blanche (Farmer and Nuffield Scholar) emphasised that it is important to manage a farm from the soil up and not the stock down.

- Michael explained that pH is the most important factor when it comes to managing grassland. Grass grown at a pH of below 5.7 only uses a maximum of 49% of the available nitrogen, 36% of phosphate and 57% of potash whilst a pH of 5.9 to 6.0 allows grass to utilise a maximum of 82% of the available nitrogen, 50% phosphate and 82% of potash. Soil phosphate, potash, calcium: magnesium ratio, structure and organisms must also be managed well. Healthy soils should contain 25 to 30 worms per 'spade cube' of soil!
- Reseeding gives better grass production, particularly early in the year. Although cheaper, rejuvenating a sward through a one pass or direct drill method may not give as good results (due to competition) when compared to a full reseed.
- When starting rotational grazing it was recommended to begin with a few paddocks in a rotation (eg 4) and gradually make more smaller paddocks and move stock onto new paddocks more often.
- Entry and exit height of grass for grazing in paddock systems is important to get the right residual height and achieve quality. This comes down to rotation length.
- How far John could push paddock grazing at Girtridge was discussed. This included how much pasture he could grow, how much he could utilise and whether the ground conditions would allow for a longer grazing season. In conclusion: the quantity of dry matter utilised is directly linked to profitability and that paddock grazing could be the way to maximise dry matter utilisation

Carbon Audit

- Carol-Anne Warnock began by detailing the sources of the three main greenhouse gases (CO₂, CH₄ and N₂O) and that a farm carbon audit/footprint is an estimation of the carbon emissions produced from the whole farm, enterprise and products.
- Attendees were taken through Girtridge's carbon audit. The total CO_{2e} emissions from farming is 1, 064, 632 kg CO_{2e} (1064 tonnes) of which the beef enterprise produces 968, 775 kg CO_{2e} (968 tonnes).
- Benchmarking revealed that the highest opportunities for improvement in the beef enterprise at Girtridge were enteric fermentation (medium opportunity), manure management (high), fertiliser (medium), fuel (high) and other (high). Fuel (medium) was the area for most improvement for the sheep enterprise.
- Attendees were asked to discuss what actions could be taken to reduce the carbon footprint at Girtridge. Points considered included reducing period to slaughter, grazing outside for longer, maximising the use of farm yard manure and slurry, reducing unnecessary journeys, reducing the use of external haulage for internal movements and considering renewables and tree planting.

FARMERS UPDATE

Sheep - FEC have been carried out on the lambs, aborted ewes have been blood tested and 8 week weights calculated. Ewes were shorn on 17 June and moved onto a paddock grazing system and are growing well. Drench efficacy faecal egg counts have been carried out on the lambs and a bulk FEC taken for the ewes.

Cows - The sucklers have been moved away from the home fields and the bull was turned out on 12 April

Finishing cattle- currently 69 are grazing on a 12ha paddock system (4 ha less than when set stocked and fed. Paddock grazing has been a steep learning curve but John has found that the cattle have been quieter and easy to handle and move on the paddock grazing system. John is only working with one electric fence unit and it takes one hour to move it once per week. They were finished off grass with no concentrates and were approx. 27 months old. Few store cattle have been purchased due to the higher price and lower quality

Silage -32ha of silage was cut on 17th June, 2 weeks later than normal but in good weather conditions. Green pit covers have been purchased to stop birds pecking the sheets. Silage fertiliser has still to be applied and following the success and saving (circa £600 on the grazing land at Ashyard compared to bagged fertiliser) of applying liquid nitrogen, John is planning to spread liquid N again.

Sheep handling -Following the last meeting, John purchased a mobile sheep handling unit to allow him to handle sheep at all locations, reduce time and labour and increase sheep numbers. This was preferable to constructing five sets of satellite sheep pens at different locations at a similar net cost. The mobile sheep yards will save John at least 80 hours a year per year on sheep work compared to the existing arrangement on the current flock size.

FACTS & FIGURES DISCUSSED

Lamb 8 week growth weights were recorded from the mid-point of lambing (10 days after lambing starts)

	Suffolk singles	Texel singles	Suffolk twins	Texel twins
Ave 8 week weight (kg)	30.48	28.45	25.14	22.49
Ave birth weights (kg)	6.78	5.22	5.57	4.68
Ave DLWG to 58 days (grams)	409	401	337	307

The target growth rate for lambs up to 8 weeks should be at least 250 g/day. Blood tests were carried out by farm vet Willie MacTeir on behalf of MSD on eight of the ewes that aborted. Five of these were found to be positive for Toxoplasmosis. If only 10 of the aborted lambs had made sale then their value would have paid to vaccinate the entire flock for Toxoplasmosis. Ewes were treated with a flukicide to take out adult fluke and rumen fluke. Eggs from both types of fluke were identified in the bulk dung sample.

Cattle sale data

The beef price has been good and a recent batch of finished heifers (mostly AA) has averaged R4H grades at 298 kg DW at a price of £3.90/kg.

OPPORTUNITIES/CHALLENGES

- To date rotational grazing has improved grassland utilisation and afforded the opportunity to look at increasing grazing cattle and sheep numbers.
- The management group are keen to explore whether there is a cost benefit of grazing finishing cattle when compared with intensive finishing indoors on a forage system. John is about to purchase a set of cattle weigh scales which will allow us to compare daily liveweight gains.
- As the bruiser and mixer need repairing/replacing - grain storing and handling options will be explored.
- The sheep are tidying up their grazing platform and are moved at a residual of 4 cm (after 3 days). Post-grazing topping will help tidy up-headed grass this year. Lambs will be weaned on to 2nd cut silage aftermaths when they become available.
- Worm egg counts have shown moderate to high levels of worm eggs and coccidiosis oocysts in the lambs. Drench efficacy testing has shown that following treatment with a white drench there was an acceptable reduction in Nematodirus and Strongyloides but no reduction in Strongyle eggs in the lamb faeces. The Speciation of coccidial oocysts has shown that only 30% of the cocci present in the faeces were pathogenic, and given that the lambs are growing well there would be no benefit in treating the lambs for cocci at this stage.

ACTIONS FROM LAST MEETING

- John is pricing cattle weighing equipment to allow him to calculate DLWGs and sale weights of cattle. Prices have ranged from £300 to £1,400 + VAT for load bars and a display.
- John is going to weigh the finishing cattle and weigh at sale to allow us to calculate the DLWG at grass.
- Residual grazing heights of 4 cm (1650 kg/DM/ha) have been just too low for his finishing animals. He will target a 5 cm residual (1880 kg/DM/ha) and depending on the paddock size move cattle on half a day earlier. On average the finishing cattle are on 3 grazing day paddocks.
- In the absence of a low priority follower grazing group, John will consider topping cattle paddocks.
- As a result of the positive test for Toxoplasmosis, all replacement gimmers will be vaccinated at a one-off cost of £4.32/hd. The community group agreed that it would also be beneficial to vaccinate the one-crop ewes. It was felt that vaccinating for enzootic abortion at an additional cost of £2.31/head was not necessary as it had not been found in the flock.
- John will not treat his lambs with Vecoxan (for coccidiosis) saving £1.44/head (dose 12ml/30kg lamb).

FACILITATOR CONTACT DETAILS

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