

# THEME REPORT



## BORDERS MONITOR FARM Dealing with a Maedi Visna Outbreak

### THE CHALLENGE

In the first year of the project, a series of financial and technical benchmarks were undertaken to give an assessment of the current performance of each enterprise at Whitriggs. This threw up some areas to investigate. The table below highlights some key areas where the performance of the sheep enterprise could be improved.

	QMS lowground average	Whitriggs
Ewe Mortality	4%	5.5%
Replacement rate	17.3%	34%
Lambs born/100ewes	176	167
Lambs reared/100ewes	160	149
Value of lamb sold/hd	£86	£82
Full Economic Margin/hd		£5.09

While the performance was not too far from what would be expected, there was a feeling that with the type of farm and system the performance could be a little better. Purchased feed was very low at 2kg/head which may have been a cause, although lambs finished were well below the averages used.

The challenge was to investigate the limiting factors of the sheep enterprise and create a plan to improve on this. Consultant Ian Cairns shared his thoughts and the group came up with a “faster Lamb Finishing Blueprint” for the Mitchell family and the group to work through.

- Reduce the number of rams, increase quality
- Use ewe body condition score (BCS) as a measure of adequate ewe nutrition
- Monitor ewe nutrition against demand
- Plan and monitor grass supply and demand
- Establish whether lambs need mineral or trace element supplementation
- Monitor the need for worming
- Check the efficacy of worm drenches
- Consider weaning lambs from mid-July to manage lambs on the best grazing
- Continue to select lambs to achieve current payment weights and grades (target 20kg DW at U/R, 2-3L)
- Carry out testing for “iceberg diseases” to ensure none of these are the limiting factor.

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## WHAT WE DID ON FARM

Initially the group wanted to look at lamb finishing and condition scoring of the ewes. Matt Colston led a live demonstration of condition scoring of the ewes, where the group felt that although slightly low, it was not a major issue. This was done and suggested the ewes were in good condition. Metabolic blood testing for energy and protein levels was also carried out and did not highlight any major issues pre-lambing. Before going further, farm vet Andrew Robinson and management group member suggested ruling out some of the “Iceberg diseases” which could have an effect. This was not due to any thought that there was an issue, but to simply to rule this out.

Twelve older ewes were selected and tested, of these 10 tested positive for MV. There were then discussions with the group as to how to respond to deal with the issue. Further tests were carried out on a mixed group, which had 10/12 positive and in the gimmers 5/12 were positive.



To find out more about the disease Lyn Gibson from SAC Vet services gave a presentation on the issues around MV, how it spread and options to deal with it. Estimated costs of MV outbreak in a 1000 ewe flock with 10% mortality and lambing percentage of 150% vs standard 180%, with figures adapted from a costing done by SAC in 2010. These figures would possibly be much higher given the high numbers of positive tests at Whitriggs.

Loss of income from adult cull 100 ewes @ £90/hd	£9,000
Carcass disposal costs 100 @ £15/hd	£1,500
Replacement costs 100 @ £150/hd	£15,000
Loss of lamb income 300 less lambs @ £75/hd	£22,500
Annual Cost of Outbreak	£48,500

These costs do not consider labour or treatment costs.

Management group member Scott Brown shared his family’s experience in dealing with MV, where they isolated ewes, snatched lambs and tried to maintain the integrity of the genetics in the flock. Scott estimated the cost of dealing with the outbreak amongst his 500 pedigree Texel’s and 150 pedigree Suffolk’s at around £250,000 in 1997.

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At a Monitor Farm meeting, following the speakers and much discussion, the community group were asked to vote on the action that they would recommend to the Mitchells.

Advice was also taken from farm vet Andrew Robinson, Hawick Vets, Moredun Research Institute and results shared with Nottingham University who are running a study on the transmission of MV and other

iceberg diseases. The final batch of ewes were sold to the Royal Dick Vet, in order for post mortem examinations to be carried out and used for research into MV. When carrying out blood sampling, vet students from Edinburgh University were involved and received a talk and practical demonstration from Andrew Robinson.

The Mitchell family decided to split the flock, with all Gimmers tested and all “clean” gimmers handled and lambed at Denholm Hill while the main flock remained at Whitriggs. It was hoped that this would allow the genetics to be maintained and a new flock developed while retaining output from the bulk of the ewes, most of which showed no signs of any issues. This involved taking on an extra student to help at Lambing and extra bio security measures put in place to minimise risk of transfer between the flocks.

Alongside this an offer was made to the monitor farm community group to test flocks in the area to try and get a handle on just how prevalent MV is in the area.



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## THE RESULTS

After splitting the flock, there was an entire flock test carried out to understand how severe the effect was and to judge whether the “clean and dirty” method had worked.

- Of the main group of 901 ewes less than 717 were positive (80%) were negative
- Of 50 tups only 16 were negative (68%)
- Two thirds of gimmers who tested negative in January were now positive. This may have been that some were already carrying MV, but it can take 3-6 months before that would show in the blood test. Highlighting how difficult it can be to have a “clean” flock system.

Alongside this testing there were also tests offered to members of the community group. Of 24 flocks tested four had positive responses (16%), this highlighted the extent of the issue. The results of this cannot be extrapolated as the test was voluntary and potentially not representative as some put their flocks forward as they thought they had an issue, while others were simply interested to find out.

There were discussions with MV Diagnostics, who are looking to develop and market a new more sensitive test for MV. The thought being that if animals who have the disease but weren't shedding the disease it could be possible to effectively breed out the issue. However this test is not commercially viable currently and needs further research and development to become available to UK sheep flocks. Due to the concerns of the threat of iceberg diseases to the sheep industry there are research projects underway across the UK and a technical guide for farmers has recently been produced.

Another result of this work was to spread the messages to a wider audience. Andrew Robinson was pivotal in this due to his knowledge and enthusiasm. Andrew has been able to use the evidence found at Whitriggs and the wider group to explain the benefits of regular testing for iceberg diseases amongst his client base. The monitor farm project, and the willingness of the Mitchell family to share their experiences with brutal honesty has opened a range of conversations in the industry and raised the level of knowledge and information on iceberg diseases. Andrew has also spoken about MV and his experiences at a number of events, including:

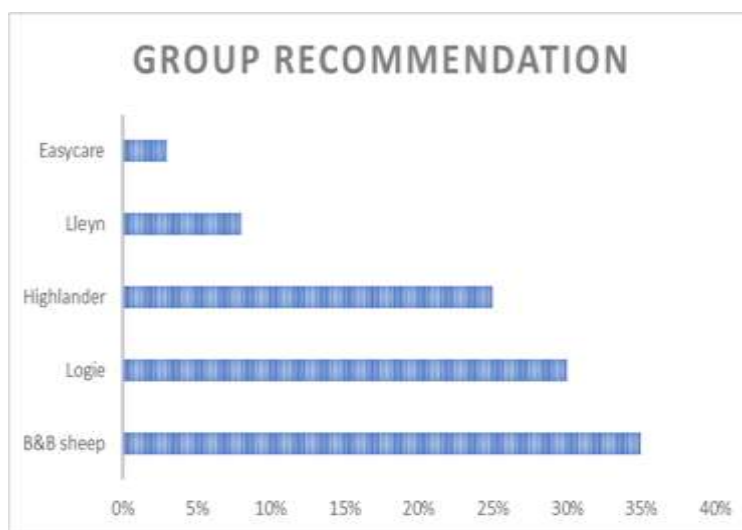
- World Sheep Vet Conference, Harrogate in May 2017 - short presentation as part of a session on iceberg diseases.
- Northern Ireland NFU meeting November, held in Hillsborough at the research institute.
- Ayrshire Vet Association meeting October 2018 held in Ayr.
- Scottish NFU local branch meeting held in Denholm February 2019

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## WHAT HAS CHANGED ON FARM

Initially the splitting of the flock was the most obvious change, as well as lambing hogs in an effort to build up total numbers. As a result of the testing process the decision was made to cull the entire flock. Due to the prevalence it was the only reasonable option to control the issue, working on the “first loss is your best loss” philosophy. Although will have been costly (Cull price being around £90/hd and replacements likely to be £150/hd) it has allowed fresh look to be taken of the business. There was always



the intention to increase cattle numbers, which will now happen, however it has also given impetus to the establishment of a deer herd, which will fill much of the gap of the sheep, both in terms of utilising the farms and family’s assets but also with a more diverse income stream in an unsupported sector.

The family and group acknowledged that sheep played an important role in the farm business, not only in terms of the financial benefits they bring but also to the faming system, utilising poorer quality grass as well as cleaning up pasture for cattle to graze. It was felt that if and when sheep are returned to the business mix it would be in smaller numbers of around 500.

The group discussed several breeds to potentially replace the current flock and voted on their recommendations (see graph). However it was felt that with uncertainty over Brexit and future finances of the sheep sector it would be more prudent to hold off making a decision and simply winter sheep for others. This would also free up time to develop the deer enterprise fully and ease cash flow issues of establishing a deer herd and sheep flock in quick sucession. The flock were sold in batches direct to slaughter to ensure they weren’t inadvertently bought as breeding stock.

### FACILITATOR CONTACT DETAILS

Stephen Young, 07502 339613 [stephen.young@saos.coop](mailto:stephen.young@saos.coop)

Colin Macphail, 07747 046461 [colin@macphailconsulting.co.uk](mailto:colin@macphailconsulting.co.uk)

