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It's already August and we hope you have had a successful start to the summer! ADAS is planning to roll out a quarterly newsletter to deliver industry news, inform you about what has been happening on the monitor farms and to let you know what, when and where the next ADAS Knowledge Exchange event will be.

NEW DEVELOPMENT FARMS ON BOARD

This year we welcomed Will Cain at Glendown Farm and David Cooil at Ballagawne Farm as the two new monitor farms which form part of the Knowledge Exchange program which ADAS is running on the Isle of Man. To kick off their tenure, ADAS completed a carbon audit on the two new monitor farms as well as the two original monitor farms operated by Chrissy Cannell and Daniel Creer.

WHAT IS CARBON AUDITING?

A carbon audit is a process that quantifies the amount of greenhouse gas (GHG) emissions produced directly or indirectly by an individual, organization, product, or event.

The purpose of a carbon audit is to identify, measure, and analyse the sources of GHG emissions. It gives clarity to farm businesses so they can understand their emissions, and it provides a baseline which will help to develop strategies to reduce emissions and mitigate environmental impact.

There are many different carbon auditing tools available. ADAS used the Agrecalc tool designed by SRUC to complete carbon audits on the Isle of Man. Agrecalc measures greenhouse gas emissions per unit of output, whether this is per litre of milk, kg of meat or ton of grain.

WHY IS LIVESTOCK VENTILATION IMPORTANT?

There are three main drivers of disease – environment, immunity and pathogens/bugs. The environment the livestock are in when housed has a strong bearing on both environmental diseases and the presence of pathogens. Stale air in a livestock building can harbour bacteria, viruses, spores, ammonia and dust, all of which can have a negative impact on livestock health. Well ventilated buildings allow enough fresh air in and stale air out to create an environment suitable for the stock being housed.

WHAT ARE THE IMPACTS OF POOR VENTILATION?

Ventilation requirements vary between different livestock and age groups. Young calves can't fully thermo-regulate and rely on the air temperature and bedding to be able to help control their temperature. Cold calves have to use energy to keep themselves warm, rather than being able to use energy for growth. Disease in young calves also affects their future performance – a case of pneumonia in a young dairy heifer can reduce their productive capacity by as much as 20% in their lifetime. That could be equivalent to losing over 2,000 litres a year in high performing cows!

Growing cattle produce a significant amount of heat due to bacteria in the rumen. Cows that are too hot will spend more time standing to help cool themselves, so using more energy than they would when lying, sleeping and ruminating; and will reduce their feed intake. Less energy intake combined with increased energy expenditure contributes to reduced growth rates, and thus extended finishing time.

The optimal environmental temperature for a dairy cows health and production is 3°C. Once temperatures get to over 18°C they will begin to use energy for cooling themselves, reducing their energy usage for milk or meat production. Heat stress can also affect fertility. Firstly, because stress affects cows behaviour making them less likely to display fertile behaviours. Secondly, heat stress damages the cows eggs and the damage can last up to 120 days resulting in potentially 4 cycles of poor quality eggs and a reduction in pregnancy rate.

Authors

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HOW CAN YOU IMPROVE VENTILATION IN EXISTING SHEDS?

Building new sheds with optimal ventilation is an additional expense that may not be justified on many farms. There are a number of ways that existing infrastructure can be improved though – this could include opening the ridge, removing or adding Yorkshire or space boarding, Positive Pressure Tube Ventilation (PPTV), blast fans or High Volume Low Speed (HVLS) fans. Different solutions will suit different types and ages of livestock and conducting an assessment of your sheds will help to identify where improvements could be made.

SHEEP - WHEN IS THE RIGHT TIME TO WEAN?

The last two years have thrown up plenty of challenges with the weather and the knock-on effect to forage growing conditions. With an eye on weaning, finishing lambs and grassland management here are some points to consider.

At 8 weeks of age, lambs are likely to get much of their energy from grazing and will be competing with their dams for grazing. At 12 weeks old, the lamb should have reached the optimum age to be weaned from its mother.

If grazing is tight, it is time to prioritize. Ewe body condition score (BCS) at weaning is already beginning to dictate your next lambing percentage. Farms should aim to wean lambs before ewe BCS drops below 2.5 for lowland sheep and 2 for upland/hill sheep. If ewes are dropping below these BCS scores before the 12-week weaning date, consider weaning earlier.

It can take 6-8 weeks for a ewe to gain 1 BCS, this equates to around 12% of the mature ewe's bodyweight. Splitting ewes at weaning dependent on their BCS is good practice. This is a good way to assure ewes with the lowest BCS are allocated the best grass once they have dried off, to help achieve the targeted BCS at tupping.

At tupping, lowland sheep should have a BCS of 3.5, upland sheep a BCS of 3 and hill sheep a BCS of 2.5.

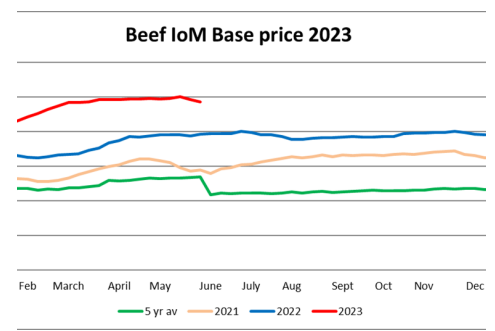
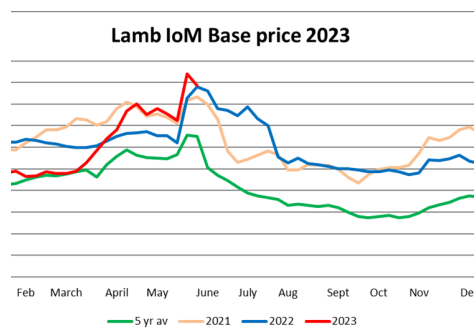
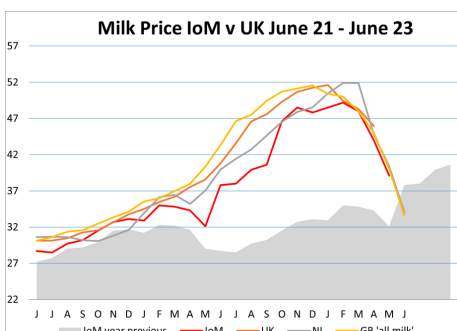
Breeding stock should always take priority as they are key to next year's profitability. If grazing is tight after weaning, then it might be time to consider selling some lambs as stores to enable the business to prioritize putting condition on the ewes to ensure next year's crop of lambs.

UPCOMING EVENTS

The Royal Manx Agricultural Show 11 & 12th August – ADAS will be at the show with our own stand, please drop in and say hello!

Farm Infrastructure Day Thursday 17th August, 11am – We will be hosting a farm infrastructure demo day focusing on livestock building ventilation at D J Enterprises Ballaquinnea Beg, Lhergy Cripperty, Union Mills, IM4 2AH - Please join us (*Food & Drink provided*)

DEFA UPDATE



To read more about the topics discussed, why not check out our Google Drive

If you are not a member of our Google Drive, please manxfarming@adas.co.uk