Teagasc
Advisory
Newsletter

BEEF

July 2021

Sustainable parasite control

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Young calves are not resistant to stomach worms and this is why we need to treat them, especially in their first season at grass. However, spring-born suckler calves do not have a large intake of grass in the early and mid-season period of the year, which means they may not have a large burden of stomach worms until much later in the season. Overusing any anthelmintic product (especially when it is not needed) runs the risk of the worms on your farm becoming resistant to that product and to all similar products in the class it comes from.

Therefore, we should only treat cattle for stomach worms when we know there is a need to treat them. Otherwise you are just guessing. Taking fresh dung samples from suckler weanlings and getting a faecal egg count (FEC) test done on them is an ideal way to tell whether or not they need to be treated for stomachs worms. There are now a number of laboratories that will carry out this test for a very small fee. Some veterinary practices are also providing this service. Most will send you out a number of pots for filling with faeces for returning to them. They will then pool these samples to give you a result for the entire group of stock the samples were taken from. The FEC results will be returned to you within a couple of days and these will clearly show whether or not you need to treat now or can wait until there is an actual need. This will save you time dosing stock that don't need to be treated, money on an anthelmintic and may mean that class of product can be used for many more years on your farm.

Only treat cattle for stomach worms when there is a need to.

Teagasc
Agriculture and Food Development Authority

Five July jobs

1

Stop the breeding season – suckler cows bred in July will not calve until the end of April or into May. Late-born calves in a spring-calving herd do not cover the costs of the cow they came out of.

2

Remove heavy covers of grass as baled silage to maintain grass quality ahead of stock.

3

Castrate bull calves. There is no improvement in lifetime daily gains from delaying this procedure.

4

Spread ground limestone on the grazing fields that need it. This gives the quickest return on investment of all the fertilisers that are brought onto a beef farm.

5

Scan suckler cows 30 days after the breeding season ends. Carrying empty cows is unprofitable and only increases the level of carbon emissions produced on your farm.

Climate actions for July

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If you have oversown clover, graze low covers (1,000 kg DM/ha)

On grass clover swards, reduce N fertiliser applied (half rate)

Apply thick slurry or a protected urea compound with K included to replace the K removed by silage

SIGNPOST
Farmers for Climate Action

Check your slurry storage availability and if it's inadequate, make a plan

Ask your contractor to spread slurry using LESS equipment

Review your fertiliser plan – rectify low P and K index soils and apply lime

Marketing early-maturing steers off grass

Due to the breeding policies in play on dairy farms nationally, a considerable number of Angus and Hereford calves arrive in the second half of the spring-calving season annually. Peter and Thomas O'Hanrahan, participants in the Teagasc Green Acres Calf-to-Beef Programme, had initially operated a system where Holstein Friesian steers were carried to beef at 30 months of age. To increase the farm's output, a primary driver of profitability, a plan was constructed and implemented to see 180 calves purchased annually – reared in two batches in the spring.

The first batch still comprises Holstein Friesian calves, while the second batch – totalling 60 calves – comprises mainly early-maturing Angus and Hereford males. Due to the later birth date of these early-maturing animals, finishing over the course of the second winter is not a viable option; a high level of concentrate input would be required to generate a relatively light carcass. Instead, these animals are turned back out to grass for part of a third grazing season and carried to beef at 26 months of age from June onwards, when 300-320kg carcasses are targeted. To carry these animals to beef successfully, both excellent grassland management and silage quality are required to ensure animal performance is maximised and concentrate input is kept to a minimum. Since enrolling in the Teagasc Green Acres Programme, the O'Hanrahans have been measuring grass on a weekly basis and using this information to make informed management decisions. Silage quality on the farm in 2020 was also excellent, averaging 74.6 DMD for the first and second cuts. With these two key efficiencies ticked, the O'Hanrahans have been able to carry 2019-born early-maturing steers to beef on a lifetime concentrate input of 390kg/head (fresh). Drafting began on the farm in early June, with the initial animals slaughtered achieving 300kg carcasses at a conformation score of O=4-. Drafting will now occur on a weekly basis to avoid animals becoming excessively fat, thus avoiding penalties for over-fat carcasses.

HEALTH & SAFETY

Farm Safety Week

July is the most dangerous month of the year, with the highest levels of farm workplace deaths based on past records. Let us change this trend in 2021. While many farming activities take place in July, tractor and machinery work and children on the farm are particular concerns. Farm Safety Week starts on Monday July 19 when the official launch occurs. Daily themes are as follows: Tuesday – Dying to get the job done? Tiredness can kill; Wednesday – Farm safety may not cost the Earth but not doing it may cost you your life; Thursday – Protecting the public; and, Friday – Your health, your safety, your choice. Farm Safety Week is a collaboration between the farm safety partnerships of the UK (www.yellowwellies.org) and Ireland. The daily themes reflect the fact that safety to a large extent is within our own controls. Follow Farm Safety Week messages in the media. The hashtag for the week is #FarmSafetyWeek.

#FarmSafetyWeek

RESEARCH UPDATE

Reducing methane emissions

SINEAD WATERS and STUART KIRWAN of Teagasc AGRIC, Grange, Dunsany, Co. Meath report on Teagasc's work on reducing methane emissions from ruminants.

Agriculture is the single largest contributor (~30%) to overall greenhouse gas (GHG) emissions in Ireland, with methane production accounting for the majority of GHGs arising from agriculture. Methane is a GHG, which is 28 times more potent than carbon dioxide, and is produced from rumen microbial fermentation and from stored manure and slurry on farm. Under EU legislation, Ireland has committed to reduce GHG emissions by 40% by 2030, compared to 2005 levels.

Hence, there is an urgent requirement for innovative strategies to reduce methane emissions from agriculture. Over 56% of GHG from agriculture arises from enteric fermentation, which provides the opportunity to reduce methane emissions from ruminants through dietary manipulation and feed additives. To date, a number of feed additives have demonstrated their potential in reducing methane emissions in cattle while fed indoor diets. Funded by the Department of Agriculture, Food, and Marine (DAFM), METH-ABATE is an all-Ireland multidisciplinary project, led by Teagasc to develop novel farm-ready technologies to reduce methane emissions from ruminant fermentation and stored manure and slurry. Specifically, the project will investigate a number of promising feed additives to mitigate methane emissions from sheep, dairy and beef production, while simultaneously monitoring their effects on animal productivity, and novel technologies to reduce methane losses from stored manures. To date, a number of *in vitro* experiments have been executed in Grange to assess a number of different additives for their methane mitigation potential. The most promising feed additives from the *in vitro* studies are now under investigation *in vivo* using sheep in Athenry. At different time points over a 16-week period, methane emissions will be quantified using the portable accumulation chambers to assess the mitigation potential of each additive. In other jurisdictions, a feed additive called 3-NOP, produced by the company DSM, has been shown to be effective in reducing methane emissions by approximately 30% in beef cattle. From here, the most promising feed additives in sheep studies will be assessed with 3-NOP in beef cattle under Irish production systems. Research to date has highlighted that in order for any feed additive to be effective in reducing methane from ruminants, the additive must always be present within the rumen. This poses a challenge for pasture-based systems. Therefore, the next phase of the project will develop technologies for pasture-based production systems. Development of encapsulation technologies are currently underway to ensure that the most promising feed additives can be delivered at pasture. Early-life supplementation strategies will also be examined as with early intervention further reductions are achievable. The effect of these technologies on the nutritional and toxicological composition of meat and milk will also be investigated to confirm consumer safety of ruminant products. Sequencing and bioinformatics technologies will allow a fundamental understanding of the mechanism of action of these interventions in the rumen and manure. To ensure appropriate implementation, we will develop a new methane additive component for the existing Teagasc life cycle (LC) analysis models to quantify the LC effect of developed technologies on overall methane and GHG emissions. Finally, farm level cost effectiveness will be evaluated through the National Farm Survey.

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