Teagasc Advisory Newsletter

BEEF

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Test your soil

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Soil fertility levels have declined on Irish farms. Soil samples taken from farms and analysed by Teagasc show that only 10% had optimal soil fertility in terms of pH, phosphorus (P) and potassium (K) (i.e., Index 3 for P and K and pH >6.2). Lime is the cheapest form of fertiliser available; however, only half of the drystock farms in the country have applied lime in the last 10 years. Where lime is deficient in soil, all other fertilisers and slurry will not work as well. For example, about 20% of nitrogen (N) fertiliser will be lost where lime is deficient. Soil P and K statuses of Irish soils are also poor, with over 60% of soils deficient. Silage ground often has the poorest level of soil fertility. Trying to plan fertiliser application strategies without information on soil fertility levels is impossible. Therefore, soil test results for the whole farm are essential. The cost of soil sampling is very small (about €1.50 to €2.50/acre). Although it costs money to increase fertility levels on low-fertility soils, the returns in terms of grass production can be considerable.

Dealing with low-protein silage

Tested grass silage that has come back with very low protein levels may need to be supplemented when feeding it to certain groups of beef animals. The bacteria in the rumen need sufficient protein so that they have enough nitrogen (N) to properly function and digest the silage being fed. Without this animal performance will be at least reduced and it may in some cases lead to more serious problems. Work from Scotland showed that where low-protein silage was fed to suckler cows, there was rumen impaction due to poor fermentation and this led to some cows actually dying. If insufficient protein is available, the cow is forced to mobilise lean tissue rather than fat, and if the

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deficiency is prolonged it can result in poor calves born from thin, weak cows. Colostrum quality may also suffer, and it may cause long-term effects on fertility. How much extra protein needs to be fed will depend on how low the protein is in the silage and the type of animals it is being fed to. Generally, younger growing animals will require a higher level of protein in their overall diet compared to older stock and cows. The choice of protein supplement will be influenced by the different prices that are available. Small levels of soyabean meal can very quickly bring up the protein in a diet, whereas higher feeding levels are required with feeds such as beans, distillers, rape or maize gluten. Most commercial rations on their own will not be high enough to bring up the protein where very low-protein silages are being fed. Speak with your Teagasc adviser about doing up a complete diet for each group of stock on your farm that is balanced for both protein and energy.

Where silage tests show very low protein levels in silage, action needs to be taken.

Vaccinating suckler cows

Abortion and scour are two diseases dreaded on every suckler herd. They can dramatically reduce the output of a suckler herd, are costly to deal with and put a huge amount of stress and workload on the suckler farmer that has to deal with them. Preventing them happening in the first place is without doubt the best course of action. There are a number of vaccines available now that can prevent the common causes of abortion and scour in cows and newborn calves. Talk to your vet about which suits your farm best and how and when they should be given, especially those that need to be given coming up to calving. However, remember a vaccine will only work if it is used correctly and it is reported that 50% of them are not. Vaccines need to be stored and handled properly or they will not work. Always follow the instructions that are given with them. They should always be stored in a fridge at 2°C-8°C. Once opened, check the longevity of the product. Make sure you keep an accurate record of what vaccines were bought and used.

Vaccines are the best option when it comes to abortion and scours.

RESEARCH UPDATE

Anthelmintic resistance detected

Anne Kelleher, Barbara Good and Orla Keane of AGRIC, Teagasc Grange, Co. Meath report on anthelmintic resistance on Irish beef farms.

Grazing cattle are continuously exposed to gut worms. A variety of different worm species can infect cattle, but the main species of economic importance are *Ostertagia ostertagi*, which infects the abomasum, and *Cooperia oncophora*, which infects the small intestine. Infection with gut worms reduces feed intake and can cause parasitic gastroenteritis. Calves are most at risk as animals build up immunity over time. Current methods of gut worm control rely almost exclusively on the administration of broad-spectrum anthelmintic products.

There are a wide variety of products on the market for gut worm control but ultimately all belong to one of three classes, each with a unique mode of action: (i) benzimidazole, commonly known as white wormers; (ii) levamisole, commonly known as yellow wormers; or, (iii) macrocyclic lactones, commonly known as clear wormers (this class includes both ivermectin and moxidectin). Anthelmintic products have effectively controlled gut worm infections for over 50 years; however, recently anthelmintic resistance has been reported. Anthelmintic resistance is the ability of a worm to survive a dose that would normally kill it. It is a heritable trait so resistant worms pass the genes for resistance on to their offspring.

Over the past two years, the efficacy of benzimidazole (17 farms), levamisole (12 farms), ivermectin (17 farms) and moxidectin (12 farms) was tested on dairy calf to beef farms. Anthelmintic resistance was found on a number of the farms (**Table 1**) demonstrating that on many farms, wormers are failing to control worms effectively.

In order to know what products are effective on their farm, beef producers should test the efficacy of their anthelmintic treatments.

Calves are most at risk from gut worms.

Table 1: Percentage of farms with resistance to the different anthelmintics.

Benzimidazole	Levamisole	Ivermectin	Moxidectin
71%	25%	100%	75%

Teagasc/Irish Farmers Journal
BETTER FARM BEEF CHALLENGE

BETTER FARM UPDATE

Breeding and grassland changes

Ger McSweeney's farm is moving to one calving period a year.

Calving has begun on Ger McSweeney's farm in Milstreet, Co. Cork. The 35-cow herd was traditionally split between spring and autumn calving. Ger has begun to cull the autumn herd to focus on a spring calving-only herd. He has begun to purchase in-calf heifers to calve in spring 2019, with a view to calve a total of 40 cows this year. The farm plan sets out a target of 50 cows to calve in the spring by 2021. Ger has planned to move to 100% AI this year with his herd. A vasectomised bull will be used for heat detection and an A/B grazing system will be developed, which means cows will have an allocation of new grass every 12 hours either side of the collecting yard and crush. This will allow easier drafting of cows and heifers for AI as they will have to walk past the handling unit to get to new grass. Maternal sires will be used on the earlier-calving cows and heifers, while terminal sires with as short a gestation as possible will be used on later calvers. This will allow Ger to keep a tight calving spread, while also having enough maternal heifers born early in the year to have a good selection of replacements to breed from. Ger has reclaimed six acres of bog land near the bottom of his farm. In total, it cost around €2,400 per acre including reseeding. A number of deep drains were installed to carry water from springs along with a large proportion of the ground being turned with a track machine. Ger hopes this land will pay for itself in four to five years in terms of grass growth. In 2018, Ger grew a total of 7.5 tonnes DM/ha and hopes to increase this by one tonne DM/ha in 2019. From PastureBase Ireland he can see his top paddocks grew between 12 and 14 tonnes DM/ha, while his bottom paddocks grew under four tonnes.

HEALTH & SAFETY

Aim for zero accidents in 2019

Fatal farm accident levels showed a modest decline in 2018. Throughout the year, being struck by a moving vehicle was the most frequent cause of farm deaths in Ireland, so particular vigilance is needed when operating machinery around farmyards. Vigilance is needed in spring when handling livestock, particularly cows around calving. Freshly calved cows need to be securely restrained before administering a treatment to their calf. To cut accidents, make farm health and safety the most important aspect of managing your farm in 2019. This requires having safe machinery, buildings and equipment. As farming is very dynamic, it also requires constant vigilance to prevent injury situations arising. Examine your farm in advance of the busy spring season to see what safety improvements are needed.

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