

BEEF

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Focus on quality with silage 2019

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For many farmers, winter 2019 fared out much better than they expected. Following on from a disastrous winter and spring the previous year, which left silage stocks eradicated, many feared last year's summer drought and lack of growth would lead to another fodder shortage in 2018/2019 should wet or cold weather have persisted at turnout time. Thankfully, this year proved very close to an ideal spring, which resulted in larger than expected stores of silage remaining in yards in some areas. This creates an opportunity to focus on harvesting crops of higher-quality silage rather than waiting for bulk to ensure sufficient supplies over the winter. Ideally first-cut silage should have

received 100 units of nitrogen (N), 20 units of phosphorus (P) and 100 units of potassium (K) in the form of chemical fertiliser or a mix of cattle slurry and chemical N. While farmers took the opportunity to harvest some silage crops during the favourable early summer conditions in early to mid May, the bulk of silage won't be harvested until late May and early June. Delaying cutting to focus on bulk in the crop is a false economy, especially where weanlings or fattening cattle are wintered on farm. For each week delay in harvesting that takes place, roughly 1.5kg of extra concentrate is required per finishing beef animal daily (**Table 1**). Taking an example of two crops of first-cut silage, one

Table 1: Factors affecting first-cut silage quality.

Factor	Effect
Harvest date	3.3 units DMD decline per week
Crop lodging	3-9 units DMD decline per week
Sward type	Up to 2.8 units DMD decline in old sward
Sward heading date	7 units DMD decline at 50% ear emergence
Wilting	Each day of wilting reduces DMD by 0.5-2.2 units. Rapid wilt of 24 to 36 hours is advised.

harvested on May 20, the other on June 5, the difference in concentrate input to a finishing animal over a 120-day finishing period could be as high as 360kg extra. At a concentrate price of €280 per tonne, this is a cost of around €100 per head extra.

Fertilisation for second-cut silage

While second-cut silage crops tend to be lower yielding than first-cut crops, they can still make up a large proportion of winter feed requirements on

many beef farms. Therefore, it is important to adequately fertilise the crop. If cattle slurry was not applied to the silage ground prior to first cut due to weather or ground conditions, it is important to target this ground with slurry after the first cut has been harvested to replenish the P and K off takes from the first-cut silage (**Table 2**).

N values in cattle slurry are low come midseason at around three units per 1,000 gallons but this may be increased to six units with the use of low-emission slurry spreading equipment.

Table 2: Second-cut silage N, P and K requirements (off takes) – based on grass yield and fertiliser programme.

Grass yield (ton/DM/ha)	N kg/ha (units/ac)	P kg/ha (units/ac)	K kg/ha (units/ac)	Fertiliser options	
				No slurry	Cattle slurry
2 (4t/ac fresh grass)	50 (40)	8 (6)	50 (40)	2 bags/ac 15-3-20	1,500 gal/ac 1 bag CAN/ac
3 (6t/ac fresh grass)	75 (60)	12 (10)	75 (60)	3 bags/ac 15-3-20 0.75 bags/ac CAN	2,000 gal/ac 2 bags/ac CAN
4 (8t/ac fresh grass)	100 (80)	16 (13)	100 (80)	4 bags/ac 15-3-20 0.75 bags/ac CAN	2,500 gal/ac 2.75 bags/ac CAN

Teagasc/AHI health events

Teagasc and Animal Health Ireland (AHI), in conjunction with the meat processors, are hosting another series of beef health check events in June (**Table 3**).

The main themes to be covered at these events will be: antimicrobial resistance (AMR); initial

results of the infectious bovine rhinotracheitis (IBR) pilot programme, which ran on the Teagasc/*Irish Farmers Journal* BETTER Farms along with parasite control in cattle; and, a feature on correct procedures for castrating and disbudding of calves.

Table 3: Dates and locations for events.

Date	Location
June 18	M. Mellett, Shrule, Co. Mayo
June 21	Noel and Robert Brennan, Rathneety, Knockbridge, Co. Louth
June 25	Niall Byrne, Cam, Brideswell, Athlone, Co. Roscommon
June 26	Richard Greene, Castledermot, Co. Kildare
June 27	Robert and Tom Dower, Rathkeevin, Clonmel, Co. Tipperary
June 28	D McKeague, Claggan, Culdaff, Co. Donegal

RESEARCH UPDATE

Controlled breeding of the suckler herd



David Kenny of Teagasc AGRIC, Grange, Co. Meath reports on the positive effects but low take up of AI on Irish beef farms.

Only 20% of calves born annually on Irish suckler beef herds are bred from AI. While most farmers will agree AI presents flexibility and advantages in terms of breeding options and genetic improvement, logistical issues and land fragmentation in many beef herds mitigate against its widespread use.

One advantage of AI is that the semen is rigorously monitored for fertility and is of high quality. The importance of quality replacement heifers in beef herds is becoming increasingly recognised. One of the primary objectives of the current Beef Data and Genomics Programme (BDGP) is to improve the genetic merit of the national beef herd, particularly with regard to maternal traits. In order to meet the requirements of the programme there is undoubtedly a role for AI in most herds.

Recent Teagasc studies on timed AI in beef cows

There has been increasing interest in the use of oestrous or heat synchronisation programmes, which allow the use of timed AI (TAI). This involves all treated cows being inseminated at a pre-determined time, regardless of signs of heat. Teagasc, together with UCD and the Agri-Food and Biosciences Institute (AFBI) of Northern Ireland conducted a series of on-farm synchronisation studies, funded by the Department of Agriculture, Food and the Marine (DAFM). The work involved 85 herds located throughout the island of Ireland, with 2,200 cows enrolled in the studies. Three different synchronisation protocols were compared, all of



While AI is tried and tested, logistical issues mitigate against its widespread usage in beef herds.

which used a progesterone pessary (PRID E, CEVA Animal Health), inserted for seven days. All cows were subjected to a single TAI at 72 hours after PRID removal, regardless of signs of heat. Herd owners were free to use the semen of their choice, and thus semen from a large number of bulls was used across the studies. Despite this, pregnancy rates ranged from 50-70%, with a very acceptable overall average pregnancy rate of 55% achieved to a single timed insemination. Synchronisation also led to a more condensed calving pattern and subsequent breeding period in the following season. In a typical herd, almost 80% of all synchronised cows were pregnant within 23 days of the start of the breeding season. While many herds elected to AI cows that repeated, others turned out stock bulls. This latter practice is very efficient from a labour and stock bull use viewpoint and allows a herd to use maternal genetics through TAI and focus on terminal traits in their stock bull(s). For comprehensive information on these topics, farmers are encouraged to contact their local Teagasc adviser and veterinary surgeon.



BETTER FARM UPDATE

Electronic heat detection for AI

James Flaherty, Cordal, Castleisland, Co. Kerry is tightening up his calving period with AI, and heat detection and synchronisation.

James farms 41 hectares of fragmented land with his father John near Castleisland in Co. Kerry. After discussing breeding options with his BETTER farm adviser, and business and technology adviser, along with visiting some previous BETTER farm participants, James made the decision to move to 100% AI usage on his 50-cow spring-calving herd. Working off farm and living eight miles from there also made heat detection more difficult, especially at grass.

To ensure no heats were missed, James invested in an electronic heat collar, which is worn by a teaser bull. Cows have a special tag on their ear that communicates with the collar and this sends a text to James' phone when the teaser bull mounts the cow. James will AI cows the following day around 12-18 hours after the text is received. James also uses an A/B grazing system to allow him to round up cows more easily. This is done

by having the main grazing block split by a small road. Cows graze in 24-hour allocations with a day's grazing given at each side of the road. When cows cross the road they must pass through a collecting yard that allows James to syphon off cows detected in heat.

This grazing plan is to continue in this manner for seven weeks, at which point breeding will cease. James has synchronised 27 heifers for breeding this year. The intention is to increase to 60 cows finishing all stock. Surplus in-calf heifers will be sold at year end.

In 2015, James had a 19-week calving spread with a 35-cow herd, while in 2019 James had 47 cows calved in seven weeks. The use of AI allows James to access the top bulls from AI companies and also allows him to use both terminal and maternal sires, which allows for the breeding of replacement heifers from within the herd.

HEALTH & SAFETY

Slurry safety

Following silage harvesting considerable quantities of slurry are spread in June and over the summer months. Slurry handling accounts for 9% of fatal farm accidents due to drowning and gassing. It is crucial to put safety first when handling slurry. Always pick a windy day



when agitating slurry. Never enter a slurry tank. Remember, one breath of poison gas, or lack of oxygen, kills. Always guard against falling into a slurry tank by using a physical barrier.

Further information can be found by doing a web search for 'Safe Slurry Handling'.

Protect slurry openings when in use.

