

# BETTERfarm Beef Programme

BUSINESS, ENVIRONMENT, TECHNOLOGY through TRAINING EXTENSION RESEARCH

## Utilising high-quality grass on BETTER Farms



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There is no substitute for spring grass. Not only is grass the cheapest feed source on Irish livestock farms, but when well managed it has a higher feed value than concentrates.

Getting as many days as possible at grass is essential to the profitability of the BETTER Farms. Last week, grass quality was analysed on Mike Dillane's farm in Co Kerry. Grazing swards are well managed on the farm, with a high percentage of ryegrass in swards. The grazing sward had a dry matter of 19.7%, grass sugars of 13.2% and crude protein of 23.8%. Considering that most concentrate rations used on suckler beef farms have a crude protein of 14% to 16%, spring grass can support a higher growth rate in

weanling cattle compared to meal and silage. Even more important is that the higher performance is achieved at a fraction of the cost. The grazing sward also had an energy value of 1.03 UFL which is higher than barley. Getting spring-calved cows out to graze good quality spring grass will lead to an increase in dry matter

energy intake. This can sustain lactation without the requirement for concentrates and have a positive effect on cow fertility. **Grazing rotation** On some of the programme farms, the first grazing rotation is now complete. The first rotation included the silage ground and lasted

between 30 and 40 days. With the silage ground being closed for first cut, the grazing rotation will reduce to 20 to 21 days, which is ideal for the time of year. Fertilizer is being applied at a rate of 30 to 40 units of nitrogen on the programme farms. Urea is no longer being used on farms as weather conditions are less favour-

able. Instead, farms are using CAN where soils have previously been slurried or received 10-10-20. With improved ground conditions, where cattle had been spread over a large area to prevent sward damage earlier in the year, they have now been tightened up into larger groups to simplify grazing management.

**Table 1: Converting growth rate into kilos of liveweight per hectare/acre**

	Daily growth rate kg/DH/HA						
	20	30	40	50	60	70	80
Kg/LW/HA	700-1,000	1,000-1,500	1,400-2,000	1,750-2,500	2,100-3,000	2,450-3,500	2,800-4,000
Kg/LW/Ac	280-400	420-600	560-800	700-1,000	850-1,200	1,000-1,400	1,100-1,600

\*During period of poor utilisation, use figures at the lower end of the range.

## ON THE GROUND PLANNING FOR SILAGE

“Grazing of the silage ground is now part and parcel of the first rotation on the farms”

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The grazing season is only a matter of weeks old for the majority of the BETTER Farm programme farms, but already the attention is turning to provision of winter forage. Grazing of the silage ground is now part and parcel of the first rotation on the BETTER Farms and, for many, this was a new approach to grazing of livestock in early spring. Silage ground is being grazed using two different methods, depending on land type. On drier farms where it is possible to get stock out in late February to early March, the general plan is to graze the driest parts of the normal grazing block first. The silage ground is then grazed afterwards.

grass if regrowth does not materialise on the grazing block. Grazing the silage ground in the second half of March provides an opportunity to get the grazing block fertilised with slurry and chemical nitrogen. It also gives two to three weeks for regrowth on the grazing block in time for the next grazing. On heavier farms, turnout dates are generally later in March if ground conditions allow. As this is closer to the usual closing date for silage and grass growth rates are higher than in early March, the silage ground is grazed and then closed up for cutting. As there is a tendency for silage ground to be the driest fields on heavy farms, grazing the silage ground first gives the benefit of early turnout as well as providing more time for ground conditions to improve on the grazing block.

busy working out their fertilizer requirement for first-cut silage. Fertilizer type and application rate will be based on soil analysis reports from samples taken this winter. Table 1 outlines the nutrient requirement for first-cut silage. The ideal soil index for both phosphate (P) and potassium (K) is three. An index of one or two means that the soil is nutrient-deficient and grass yields will be lower if the crop demand is not met. First-cut silage requires 100 units of nitrogen for productive ryegrass swards. This is the equivalent of 3.7 bags of CAN, or 2.2 bags of urea, assuming that no slurry has been applied to the sward. Ryegrass swards normally utilise two units of nitrogen per day, which means a minimum growing phase of 50 days between closing and harvesting silage. Older swards with a low percentage of ryegrass should receive up to 80 units of nitrogen for first-cut



Photo 1: Bagged fertilizer required where no slurry has been spread.



Photo 2: Bagged fertilizer required with 1,000 gallons/acre of slurry spread.

silage as they are unlikely to utilise the higher rate of nitrogen application. **Slurry** Silage removes large quantities of potassium (potash) from the soil which can quickly deplete soil fertility. Slurry is a fertilizer that is normally high in potassium and can return much of the

soil nutrients that were harvested in the silage back to the soil. But do not overestimate the value of your slurry. Silage that is grown from a nitrogen-only fertilizer such as CAN or urea will be low in P and K unless there are high volumes of meal being fed to cattle during the winter period. Undiluted cattle slurry has the following typical nu-

trient value per 1,000 gallons: 

- ☛ Nitrogen – six units.
- ☛ Phosphate – five units.
- ☛ Potassium – 38 units.

**Silage Quality** Silage quality is influenced by a number of different factors that are outlined in Table 2. While the farms have little control over the cutting date if the weather is not

**Table 1: P and K requirement for first- and second-cut silage**

	Phosphorous (P) requirement		Potassium (K) requirement	
Soil index	1st cut	2nd cut	1st cut	2nd cut
Index 1	32 units/acre	8 units/acre	140 units/acre	56 units/acre
Index 2	24 units/acre	8 units/acre	120 units/acre	40 units/acre
Index 3	16 units/acre	8 units/acre	96 units/acre	28 units/acre
Index 4	0	0	0	0

The reason for this is that grass growth rates are lower in early March and there is a danger of running out of

**Fertilizer** The programme farmers and their advisers are currently





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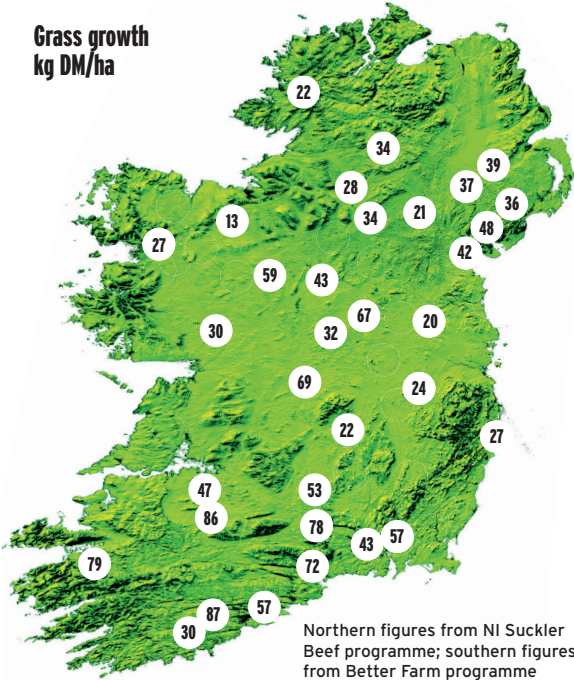
WEEK IN REVIEW

- ➔ Spring calving is all but finished on the programme farms.
- ➔ Ground conditions have greatly improved in the past week, allowing more stock to get back to grass on heavier farms.
- ➔ Improved ground conditions have also allowed cattle to be tightened up into larger groups to ease grazing management.
- ➔ Silage ground is now being closed up, which is reducing the grazing rotation to 21 days on drier farms.
- ➔ Fertilizer continues to be spread at a rate of 30 to 40 units per acre on the programme farms.

➔ Get on top of grassland weeds early in the year before they produce a seed head. If the weeds produce a seed, they will spread and germinate the following year. Spraying once paddocks have been grazed out will increase spray contact with weeds and lead to a better kill rate.

TOP TIP

Grass growth  
kg DM/ha



Northern figures from NI Suckler Beef programme; southern figures from Better Farm programme

FARMER FOCUS

Tom Halpin  
Co Meath

Spring calving has gone well and I have only two cows left to calve from a total of 52 cows. Calving started in mid-February. I lost one calf after a hard calving, but managed to adopt a twin calf onto that cow, so all cows are rearing a calf.

We were a little tight on fodder this winter, but managed to get through it by buying some baled silage and extra hay. Therefore, it was important for me to try to get cattle out to grass as early as possible. I turned out my 2013 spring heifers first in early March. They weighed 365kg on 21 February and are really thriving at grass. I turned out my 2013 summer bulls two weeks ago and they were offered 1kg/day of meal just to keep them settled. They weighed 280kg on 21 February.

Their comrade heifers weighed 246kg on the same day and are at grass since last week grazing on silage ground. I

turned my spring cows out on 5 April and, as ground conditions were soft, I decided to spread them out around the paddocks for a week to reduce damaging the swards. I fed them 1kg of barley with minerals to prevent grass Tetany.

With the good drying weather and improved ground conditions, I have now tightened them up into one group on the paddocks. They are allocated two days of grass to protect regrowth and subsequently help build grass covers as growth rates seem to be taking off.

My early lambing ewes get priority to the spring grass, which delays my cattle turnout date. I hope to start killing lambs next week and have them all gone by the end of May. I spread 2,500 gallons/acre of slurry in late February on my grazing ground and applied 30 units of urea 10 days later in early March. I will spread a bag of CAN/acre this week. I hope to close my silage ground in the next 10 days once I start offloading lambs.



Sean Power  
Kilkenny

Ground conditions have really improved on the farm since the weekend and it is really helping cattle to utilise grass better. We have been busy on the farm all spring as we have just finished lambing our 170 ewes and have 120 store lambs left to kill.

We killed close to 400 lambs since November, mostly from grass supplemented with fodder beet and 1kg of ration. We have killed 170 heifers out of the shed since 1 December on a diet of 10kg fodder beet, 6kg concentrates, grass silage and 1.5kg of straw. On average, they were killed at 24 months and weighed 308kg carcass weight.

The heifers were mainly R grading with fat scores between 3+ to 4-. There are currently 74 heifers left in the shed and most of these will be finished by early June. However, my beet supply is running tight and the quality is not as good as earlier loads, so I may let some out to grass and supplement

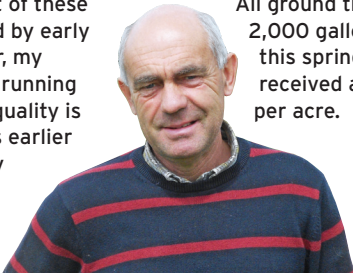
with meals to finish. I have another 85 forward store cattle weighing between 500kg to 550kg that will be finished off grass by mid to late June. They were turned out to grass last week and will be fed 3kg to 4kg of concentrates until finished.

We have 220 smaller store heifers (300kg to 400kg) that were bought either before housing or in the last few weeks that are now at grass and I have another 120 to 130 cattle to buy.

I will graze these heifers on good quality swards over the grazing season with the view to killing the most forward heifers in the autumn. The remaining heifers in this group will be killed out of the shed before Christmas.

Grass growth on the farm has really kicked off last week and the paddocks that were grazed with the lambs in early spring are doing really well.

All ground that received 2,000 gallons of slurry this spring has now received a bag of CAN per acre.



Farm walk

On Thursday 24 April, the BETTER Farm programme will hold a farm walk on Charlie Crawford's farm at Castlefinn, Co Donegal. The event is BTAP-approved and will focus on grassland management in a mixed cattle and sheep enterprise. The event runs from 11am to 12pm for Teagasc discussion groups and is open to private groups and the general public from 2pm onwards. The farm will be signposted from Castlefinn.



Photo 3: Bagged fertilizer required with 2,000 gallons/acre of slurry spread.



Photo 4: Bagged fertilizer required after spreading 3,000 gallons/acre of slurry.

suitable, the farms have been making efforts to improve silage quality through reseeding and tight grazing before closing up for cutting.

Fertilizer rates

Taking a silage sward at soil index three for both P and K, there is a fertilizer requirement of:  
➔ 100 units of N.  
➔ 16 units of P.

➔ 96 units of K.  
Photo 1 depicts the amount of bagged fertilizer that is required for the crop if no slurry is available on the farm. On out-farms, access to slurry may be limited if there is no housing facilities available. To meet the 100-16-96 units needed, the sward requires three bags of 0-7-30 to supply the right amount of P and K. The sward will then be

topped up with four bags of CAN to supply nitrogen. The CAN costs €66 and the 0-7-30 costs €60, bringing the total fertilizer cost to €122/acre. While this seems excessive, it is the amount required to match all N-P-K requirements by first-cut silage to maintain soil at index 3.  
Photo 2 depicts the amount of bagged fertilizer that is required if 1,000 gallons/acre has been applied to the sward at index 3. Again the crop requires 100-16-96 units of N-P-K and 1,000 gallons of slurry will supply 6-5-38 units. To balance the crop requirement, a further two bags of 0-7-30 are required plus 3.5 bags of CAN. The total fertilizer cost is €98 per acre.

Photo 3 depicts the amount of bagged fertilizer that is required if 2,000 gallons/acre of slurry has been applied to the sward at index 3. The slurry will supply 12-10-72 units of N-P-K. To balance the crop requirement, a further bag of 0-7-30 is required and three bags per acre of CAN. The total fertilizer cost is €70 per acre.  
Photo 4 depicts the amount of bagged fertilizer that is required if 3,000 gallons/acre has been applied to the sward at index 3. The slurry will supply 18-15-110 units of N-P-K. As the slurry supplies all of the P and K required, the sward can be topped up with three bags of nitrogen at a cost of €50 per acre.

Table 2: Factors influencing silage quality

Reason for drop in quality	DMD unit reduction
One week delay in harvest	3 DMD
Old pasture (low % ryegrass)	5 DMD
Lodging	9 DMD
Not grazed before closing	3DMD
Heating at feedout	3 DMD