

BETTERfarm Beef Programme

BUSINESS, ENVIRONMENT, TECHNOLOGY through TRAINING EXTENSION RESEARCH

Spring-calving comes to an end on BETTER farms



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Grass growth continues to increase on the programme farms with this week's figure averaging 24kg DM/ha.

All of the farms have now started grass measuring on a weekly basis, with

some of the farms having just recorded their base line measurement.

Grass budgeting is an important part of grassland management, especially on the farms that have sizeable numbers of cattle out at grass.

Walking paddocks allows the farmers to reassess fertilizer use and ground conditions.

As the farms enter April, they are coming close to "magic day" when grass growth meets stock demand. At a stocking rate of one 700kg cow and 100kg calf per acre, the farm will have a stocking rate of 1,976kg of

liveweight per hectare. Assuming that cow intake is 2% of their body weight, there is a grazing demand for 39kg DM/ha of grass.

On dry farms, early April is when the first grazing rotation is due to finish. On some dry farms, the grazing ground was grazed first and silage ground second. As the silage ground is almost

grazed off, there is sufficient re-growth coming on the grazing block to support the second rotation. Once grazed out, the silage ground will be fertilized and closed up for cutting in June.

Spring calving

Spring calving is coming to an end on a number of the farms where calving started

in late January to early February. Even with difficult conditions during last year's breeding period, most of the herds recorded 60% to 70% of cows calved inside six weeks.

A number of the herds are on target to finish their spring calving in a shorter time than last year.

With cows now starting to

go to grass to join weanling cattle, concentrates will be cut from the spring-calving cow's diet as grazed grass will provide more energy than meal.

The additional energy supplied from grass will have a positive effect on cow fertility. Minerals are being provided through lick buckets and boluses.

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

	Daily growth rate kg/DM/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 JAMES STRAIN

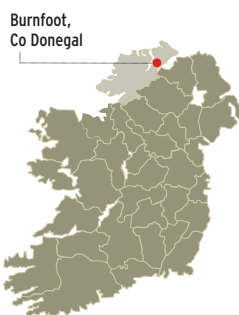
“Soil testing should be part and parcel of the fertilizer plan on every farm”

Fertilizer is one of the biggest expenses incurred on livestock farms. Like concentrates, fertilizer has seen an increase in price in recent years. The higher price is something that has led many farmers to reconsider their buying policy by using less fertilizer on grassland.

Alternatively, some farmers may have opted to buy straight nitrogen fertilizers, such as urea and CAN, as they are cheaper than compound NPK products. Either way, by applying less fertilizer annually grass growth will be reduced.

Fertilizer, when used on productive grassland, gives an excellent return on money spent. In 2013, the average grass yield from grazing ground on the BETTER farms that recorded grass growth from March to mid-October was 10.9t/ha of dry matter.

At five bags of CAN per acre and at an average price



of €330/tonne, the cost of grazing (based on fertilizer only) in 2013 was €203/ha. At the average growth rate, one tonne of CAN would have produced 16 tonnes of grass dry matter last year.

Soil testing should be part and parcel of the fertilizer plan on every farm. There is little point in buying the same fertilizer every year if it is not supplying enough nutrients, or oversupplying nutrients. You do not spread fertilizer without checking the weather first and, by the same principle, you should check to see what nutrients

are required by the crop before spreading fertilizer.

When buying fertilizer, the cost per tonne should be broken down on a per bag basis. Fertilizer is not applied per tonne. A product like CAN at €320/t works out at €16/bag, whereas 24-2.5-10 costing €370/t costs €18.50/bag. If ground is low in phosphorus (P) and potassium (K), higher yields of grass will be produced if the compound fertilizer is applied.

Farm details

James Strain farms 22.7ha of grassland near Burnfoot, Co Donegal. The farm carries 30 suckler cows calving from mid-December to mid-March. Cows are bred to a Charolais stock bull, although a Limousin bull has also been used in previous years.

Replacements are purchased annually to keep the system simple and all progeny is sold as strong weanlings and stores. In 2013, the farm produced almost 9t of grass dry matter, despite the



challenges of the weather.

Seven years ago, the farm changed its fertilizer policy from using straight nitrogen to 18-6-12 as soil fertility was low.

Since then, slurry has been targeted to silage ground and the lowest index fields to help build fertility. CAN is rarely used on grassland with the only exception being late in the grazing season when most of the growth has occurred.

Soil sampling is carried out regularly on farm and, this spring, James sampled 20ha of the farm to determine which fertilizer is required in 2014.

The results of the analysis will be used by his local B&T

adviser, Gary Fisher and BETTER farm adviser Catherine Egan to plan out fertilizer requirements for both silage and grazing ground.

Soil analysis

Figures 1 and 2 outline the different soil index for both P and K on the farm. While the use of compound fertilizer is more expensive than straight nitrogen, the investment has been paying off as soil fertility has improved.

The farm has eliminated index 1 soils for both P and K.

There are 40% of soils at index 2 for P, with 40% at the ideal index 3. The remaining 20% has a higher presence of P in soils. Phosphate

is important in plant root development and function, which helps grass to absorb nitrogen.

Soils are much higher in potash with 77% of the samples having the ideal index 3.

Having very high levels of potash present in soils can inhibit plant uptake of

“Yearling heifers have been turned out to graze silage ground in mid-March and slurry is being applied after grazing at a rate of 2,500 gallons per acre



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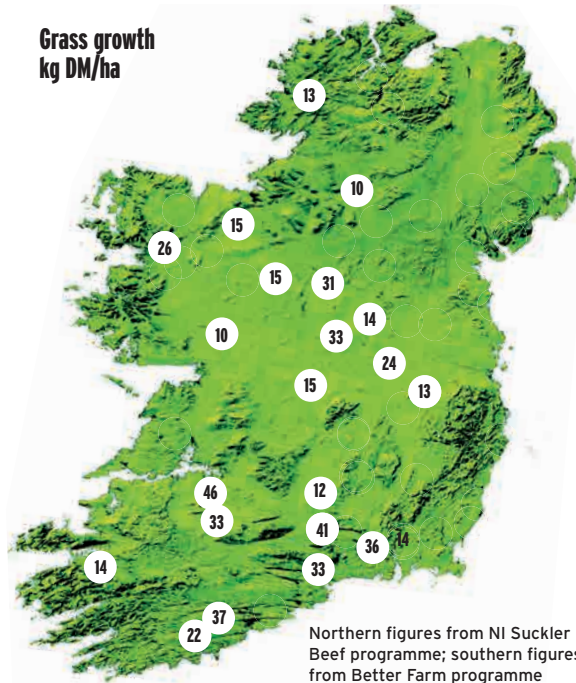


WEEK IN REVIEW

- ➔ Grass growth has increased to 24kg DM/ha this week as grazing swards responded to milder temperatures and recently applied fertilizer.
- ➔ On drier farms that have had cattle grazing since early March, the first rotation is coming to the end.
- ➔ Once silage ground has been grazed off, it will be closed up and fertilized for harvesting in late May/early June.
- ➔ Grass growth is still lower than grazing demand, but growth rates are increasing weekly.
- ➔ Spring calving is close to finishing for the majority of spring-calving herds.
- ➔ Spring-calving cows are gradually returning to grass. Concentrates are no longer being offered to cows once settled on good grass supplies.

TOP TIP

Using de-horning paste on calves shortly after birth reduces the need to herd calves in two to three week's time after turnout for de-horning using a heating iron.

Grass growth
kg DM/ha

FARMER FOCUS

Ger Dinneen
Co Cork

I currently have all of the stock out at grass. Due to the better weather in March helping to improve grass growth and soil conditions, I managed to get the cattle out to grass around two weeks ago which has helped to ease the workload.

Growth rates are reading at 37kg/ha this week but utilisation is poor as there has been more rainfall lately and I am moving stock on before paddocks are grazed out. According to my grass measurements, I have 31 days ahead of stock.

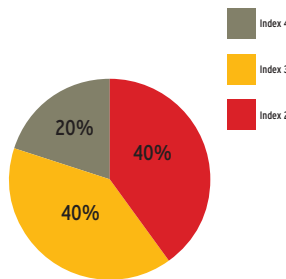
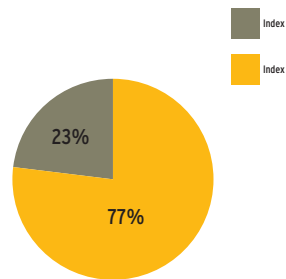
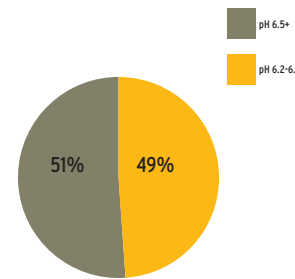
If weather improves, I will graze tighter to increase my rotation length and close up the silage ground. All of my ground has received 40 units of nitrogen so far, be it in the form of slurry plus urea, just straight urea or compound fertilizer. In an effort to maintain the rotation length and growth rates, I am spreading 23 units of nitrogen after each grazing and will continue to do so until I am happy with grass supply. As I am using 100% AI on my

breeding herd, I cannot afford to push my cows too hard at grass during the breeding season.

I have finished calving and managed to calve my entire herd of 49 cows in six weeks this year. From this, I have 51 live calves on the ground which I am pleased with. My bulls under 16 months are thriving well so far, with an average liveweight of 670kg at 13 to 14 months of age. They are eating 12kg of ration per day and have ad-lib access to straw. They are averaging 1.76kg/head/day of liveweight gain. I will pick off the heaviest of them soon for killing so as to avoid them going into heavy carcase weights and then being cut on price. The heaviest bulls weigh around 720kg to 740kg liveweight. My breeding heifers are all sold now and averaged €3/kg. I sell these privately out of the yard each year.



Spring-born yearling heifers were turned out to grass on James Strain's farm two weeks ago.

Figure 1
Soil P index on farmFigure 2
Soil K index on farmFigure 3
Soil pH range

ADVISER COMMENT

Getting soil P and K levels right is an essential part of improving grass growth on the farm. Any soils at P index 1 are producing approximately 1.5t/ha less grass dry matter compared with soils maintained at the target soil index 3. The investment James has made in compound fertilizer over the past number of years on the farm has paid off. As soil pH is above 6 on the farm, it allows for maximum utilisation of all N,P and K fertilizer spread.



The investment James has made in compound fertilizer has paid off

— Catherine Egan, Teagasc (pictured)

magnesium which leads to tetany issues if cows are not supplemented with a hi-mag lick bucket or bolus.

The farm has also invested in lime spreading in the past which is another investment that has paid off. Figure 3 highlights the range of soil pH on James's farm. With all soils have a pH greater than 6.0, soil fertility is excellent on the farm helping James to increase grain yields on a highly stocked farm.

Benefits

At the current pH levels, the soil is capable of utilising 100% of the nutrients applied in chemical fertilizer. At pH 5.7 which is common in permanent pasture, nitrogen

availability can be reduced to 75% availability which means that for every bag (27 units) of CAN applied, only 20 units are available.

At pH 6.3 for grassland, there will be additional 'free' nitrogen released by soil organic matter which can be as much as 70kg N per hectare, or the equivalent of two bags of CAN per acre.

When combined with P and K at index 3 compared with index 1, there is grass yield increase of 1.5 tonnes of dry matter per hectare, or four 750kg bales of silage per acre.

Fertilizer plan

This spring, the farm has received 23 units per acre

of nitrogen in the form of a half bag of urea in mid-March. Slurry is normally applied using a trailing shoe in February but wet ground conditions prevented ground from being slurried until late March.

Yearling heifers have been turned out to graze silage ground in mid-March and slurry is being applied after grazing at a rate of 2,500 gallons per acre.

As first cut silage on productive swards at index 3 require 100 units of N, 15 units of P and 100 units of K, 2,500 gallons per acre of slurry will supply around 80 to 90 units of potash if it is not heavily diluted from surface run-off water from the yard.

It will supply around 10 to 12 units of P and 15 units of N.

James has the option to top-up the nutrients with 18-6-12 and CAN. But as this will require two applications of fertilizer, there is an option to spread 3,000 gallons/acre of slurry and CAN or 2,000 gallons per acre and 3.5 bags 24-2.5-10 to balance out the nutrients required.

Grazing ground will also receive a compound fertilizer after the next grazing. In mid-April, James intends to spread one bag per acre of a compound NPK fertilizer but only after grass is grazed off. He will not apply fertilizer before this as he has found that there is a better growth response after grazing.

Adrian Kelly
Co Offaly

According to my grass growth figures, I have an average farm cover of 596kg DM/ha with a daily grass growth rate of 24kg/ha. This gives me around 30 days of grazing ahead at the current stocking rate which is adequate for the time of year.

I have spread slurry on my silage ground which I have now finished grazing. The slurry was spread this week at a rate of 3,000 gallons per acre. The silage ground will also get topped up with three bags of CAN per acre in a week to 10 days. Some of the fields that are at index 1 for P and K will get a bag of 0-7-30 on top of this to try and build up soil fertility.

All land has received some fertilizer at this stage of the season.

Any land that has got two bags of 18-6-12 in the first round of fertilizer is being topped up with one bag of CAN now and vice versa.

I currently have 28 yearling heifers out grazing, along with 13 autumn-born calves which are on reseeded ground. The heifers that were on forage rape over the winter and average

quality silage gained 0.45kg/head per day.

The heifers that were wintered indoors on good quality silage plus 2kg of ration gained 0.57kg/head per day. I had expected the heifers on rape to gain more weight but considering the weather in January and February, it is not overly surprising they gained less.

However, the weight gained on the rape was substantially cheaper than the weight gained indoors.

Calving has gone well for me this year. I have six of the spring cows left to calve and, so far, I have 24 calves from 23 cows. I hope to finish up calving in the next two weeks. The last of my finishing bulls will be killed in the next week and they average around 680kg liveweight.

