BETTER farm Beef Programme

BUSINESS, ENVIRONMENT, TECHNOLOGY through TRAINING EXTENSION RESEARCH

Regional differences dictate management

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Farming practices differ between regions with localised rainfall and big variances in volumes received continuing to have an influence on management practices. We got the views of each of the programme advisers to give a regional overview.

Catherine Egan – West, midlands and north

Catherine said that the strong grass growth early in the season and higher forage supplies saved has left most farmers in a favourable situation.

There has been less pressure to close ground for second-cut silage, she said, with positive grass growth allowing surpluses to develop and paddocks to be taken out of the rotation further boosting forage reserves.

Most farms have also received regular rainfall, which has helped to maintain strong growth rates. This has allowed reseeding to take place earlier and also afforded participants the option of skipping fertilizer or lowering application rates.

However, she cautions against becoming too complacent, explaining that grass demand will start to increase on many farms as autumn-calving cows calve and grass demand from spring-born weanlings continues to rise.

Farmers should be using the strong growth to their advantage to put themselves in a strong position to build sufficient grass supplies for autumn grazing.

Many paddocks that missed fertilizer will be targeted in the coming week with some swards grazed in recent weeks showing slower recovery and building a lighter cover of grass. Applying fertilizer will also help to maintain grass quality.

Peter Lawrence – East and southeast

Peter said that many farmers are still relatively tight on grass. Rainfall at the weekend was localised with big variances in volumes.

As such, he said some farmers are getting back on track with a recovery in soil moisture levels increasing grass growth rates to 50kg to 60kg DM/ha.

On the other hand, farms who missed out on the rain are seeing growth rates come under more pressure with those on light or free-draining soils recording growth rates of just 25kg to 30kg DM/ha over the last week.

The one positive for these farms is that excellent grass utilisation is, to some degree, allowing farmers to work through the current tightening in grass supplies.

Less pressure to save second-cut silage and surplus paddocks taken out of the rotation in previous weeks are also allowing farmers to graze a percentage of second-cut silage area if required and give longer recovery times to grazed paddocks.

The focus now is to apply fertilizer once soil moisture deficits improve to gain a quick response and boost grass growth rates.

Farms that have been less affected by the low rainfall volumes are also harvesting second-cut silage this week. This is earlier than envisaged for some, but with grass heading out quicker, the focus is to harvest while quality is good.

Alan Dillon – South and southeast

Alan said that the majority of participants in his

ON THE GROUND ANALYSIS: SLURRY

DELIVERING THE GOODS

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When applied under the correct conditions to a growing crop, slurry can be a valuable source of nitrogen (N), phosphorous (P) and potassium, or potash (K), as outlined in Table 1.

However, the nutrient content in slurry is highly variable and, in many cases, the amount of P and K present can be overestimated.

For instance, the availability of N, P and K nutrients in slurry will be affected by factors such as:

- The amount of meal fed to cattle during winter.
- The type of fertilizer applied to silage swards.
- The nutrient offtake in silage swards.
- The dilution rate.
- The time of application and weather conditions

Applying slurry in the correct conditions in spring will achieve the best response from available nutrients. As the season progresses, the nitrogen content of applied slurry can be reduced by as much as 50%.

The loss in nitrogen content is greatest if spreading slurry during bright, sunny periods with a splash plate (atmospheric loss). To get the most from slurry, the best practice is to apply during cloudy, cool or damp weather (similar to urea) or with a trailing shoe/injection system.

Table 1: Typical NPK values available for a range of organic manures (units/1000 gallons)

Manure type	N	P	K
Cattle slurry (7% DM)	6	5	38
Diluted slurry (3.5% DM)	5	3	15
Pig slurry (4% DM)	19	7	20
FYM (units per tonne)	3	2.4	12

Slurry value analysis

This spring, slurry samples were taken for laboratory analysis from some of the programme farms. The amount (units) of N, P and K per 1,000 gallons of slurry is outlined in Figure 1.

The results are based on 10 samples and represent samples taken from dry cows and weanlings fed a silage-based diet with low levels of concentrate (1kg to 2kg supplementation for weanlings) and finishing cattle with a higher concentrate allowance.

While the units of nitrogen and phosphorus are similar to the standard value given to slurry, the amount of potassium in slurry is being greatly overestimated on the programme farms.

The point has to be stressed that this analysis is for the programme farm samples and does not apply to all farms.

However, it shows that many other farmers could be applying slurry with lower than expected nutrient values.

The information shows how following the standard figures and relying solely on slurry to supply the 96 units of K required for first-cut silage could be resulting in soil fertility being depleted.

For example, farmers with slurry values of 22 units and 24 units K are only applying 55 units or 60 units K compared with 95 units if using standard values.

The variance in slurry samples show the merit of sampling and getting an accurate nutrient content.

In this scenario, the sward will require a top-up of K in the form of a compound or straight fertilizer to fill the shortfall in nutrients.

The programme advisers have been working closely with the programme farmers to develop nutrient plans to build soil fertility to ensure that crop requirements are being met.

This is the reason for the programme farms using greater quantities of 10:10:20, 18:6:12 and cut sward when closing off silage ground.

The higher usage of P and K fertilizer is increasing the fertilizer component of variable costs but will add long-term to improving fertility of the soil and increasing grass output/quality.

Compound fertilizer

Slurry will generally maintain P and K levels for soils at index 3. However, at lower indices, the programme farms are using a compound fertilizer to meet crop requirements and gradually lift soil fertility levels.

Compound fertilizers are more expensive than CAN on a per tonne basis. However, fertilizer prices should not be compared solely on a bag-by-bag or tonne basis.

In nutrient-deficient soils, applying a compound fertilizer rather than CAN will increase yield, which makes them competitively priced when compared with straight nitrogen.

For example, applying three bags of CAN per acre

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decisions

area are well fixed, having received regular rainfall in recent weeks or farming on heavier soil types. Grass growth rates, at 50kg to 70kg DM/ha, are exceeding stock demand.

A number of farmers have also reseeded in early summer or in the last few weeks. Performance on these swards is excellent with recent reseeds approaching their post-emergence weed spray. Grass supplies are adequate with farms on target to reach, and in most cases exceed, their fodder budget.

Like farms in Peter's region, Alan said that James Kenneally and Pat O'Reilly (free-draining soils) are tight on grass, while Donal Scully is particularly tight for grass.

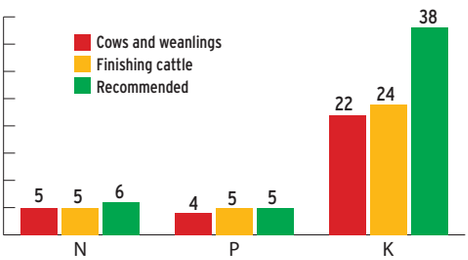
In Donal's case, there has been no rain for seven to eight weeks with growth rates falling to 30kg to 50kg DM/ha. Grass reserves have been depleted with stock demand of 70kg to 80kg DM/ha.

The shortfall is being overcome by restricting autumn-calving cows and supplementing freshly-calved cows with silage at grass to give greater recovery time to paddocks, while targeting the best quality grass to high priority stock.

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

Slurry analysis on 10 farms showed lower nitrogen, phosphorus and potassium levels in slurry sampled from cows and weanlings fed a silage-based diet with limited concentrate inclusion.

Figure 1
N, P & K values in slurry analysed on BETTER farms (units/1,000gallons)



costing €320/t has a fertilizer cost of €48/ac (€16/bag).

Assuming that the sward yields 6t/ac of grass silage, the CAN fertilizer costs €8/t of silage produced. Compare this with using three bags of cut sward (24:2.5:10) costing €380/t (€19/bag). This is a cost of €57/ac for the three bags applied. Assuming that the sward yields 7t of silage per acre, then the fertilizer is basically costing the same as €8/t of silage produced.

Importance of nutrients

Soil fertility will determine what type of fertilizer needs to be applied to a crop to maximise growth rates and, inevitably, crop yield.

Soils are ranked from index 0, where they are extremely deficient in P and K. In such soils, growth rates will be inhibited and unlikely to produce the type of yields the plant is capable of.

In grassland, soils with index 0 will experience delayed growth in spring and a faster reduction in growth in autumn, unless compound fertilizers are being applied.

Index 3 is the ideal soil fertility level for grassland. Slurry is normally capable of supplying the required amount of P and K for grazing ground to support high growth rates.

Improving soil fertility is part of every participant's grassland management plan and is a key component in increasing output through higher stocking rates.

While slurry has been applied on most farms, it is worth remembering the above analysis. Soil results are the starting point in identifying the soil fertility on farms and putting a nutrient management plan in place.

Given the variance in slurry analysis this year, further sampling will be carried out on slurry produced this winter.

Fertilizer plans are also being relooked at in some cases and decisions may be taken to apply P and K fertilizer in the coming weeks where shortfalls may have occurred.

The importance of each nutrient is summarised below:

➲ Nitrogen is needed by the plant to drive growth. Soils lacking in nitrogen will often appear yellow-green rather than dark, lush green. At this time of year, the variation in soil nitrogen can be seen in grazing fields where grass is usually darker around dung pats and is in huge contrast to the rest of the field.

➲ Phosphorus is important as it regulates root development and nutrient uptake. Soils with an index 1 for P will see yields drop by 1.5t DM/ha compared to soils at index 3. This is the equivalent of four to five round bales of silage per acre. Where swards have been damaged from poaching, applying a P-based fertilizer is needed to help repair plants roots. Applying P in the spring through slurry or bagged fertilizer will stimulate nutrient uptake at low soil temperatures and kickstart grass growth.

➲ Potash (K) is important for growth because it regulates the movement of water through the grass plant and, therefore, plant nutrients. High-potash swards can be more drought-resistant than low-potash swards. They will also be less open. Potash will also influence the protein content in grass swards. Swards that have K regularly applied will produce silage with a higher feed value, which increases animal performance during winter.

FARMER FOCUS

Niall Patterson
Co Leitrim

There are 15 acres of grass closed for second-cut and this will be round baled. I budget for a 200-day winter every year and I reckon that I will have my fodder target.

First-cut silage was harvested in mid-June during the hot spell and ensiled in excellent conditions. We kept some of the grass out of the pit and saved it as hay to feed ewes next spring. 10 acres of surplus paddocks were also taken out for bales and yielded five bales to the acre.

The Limousin stock bull was removed from the cows on 30 June. I sold the bull as there are a number of heifers sired by him being retained for breeding. I plan to purchase a replacement bull in the autumn or next spring, depending on quality and value for money.

I intend to get cows scanned in early August. Any empty cows will be sold before housing, which will reduce winter fodder demand.

I plan on separating the heifer and bull calves into two groups at the beginning of August and my December-born calves will be weaned at the end of August. The spring-born calves will hopefully be weaned late in September.

I will remove the cows from the paddocks to wean the calves rather than housing them. I tried this last year and it worked well with minimum stress on the weanlings.

I have been encouraging the calves to creep graze ahead of the cows by raising the electric fence and I intend to begin creep-feeding next week. Bull calves will be fed 2kg of concentrate and the heifers will be fed 1kg.

December-born calves will be sold in the weanling sales in October. All calves have been faecal sampled and will be dosed based on the results. I also plan on weighing the calves in mid-August.

I have been spreading one bag/acre of 18:6:12 after each grazing rotation this summer to boost grass growth and improve soil fertility. We are seeing the benefits of this with improved regrowths and density of the sward.

Des and Frank Beirne
Co Longford

Autumn calving has started on the farm. The heifers are on restricted grazing and housed every night to reduce intake and we can check them on the calving cameras if there are any problems.

The cows are strip grazing on poorer quality grass to keep them from getting fat. So far, two heifers and two cows have calved. One of the heifers is a Charolais cross Friesian that we purchased as a calf. She had twin bull calves on Sunday morning. She has plenty of milk and both calves are doing very well.

The spring heifer and bull calves are run as two separate grazing groups. By raising the electric fence wire, the calves are able to graze ahead. This will weaken the bond with the cow, which will reduce the stress of weaning.

There are a number of older cows in the herd and others that are not performing well that will be culled this year after weaning. As a result, I kept extra replacement heifers last year for breeding. We also purchased five quality heifers from a special breeding sale. These will ensure that we can maintain cow numbers, while being critical at culling time this year.

The spring-calving cows will be scanned in September and any empty cows will also be culled. They will either go for fattening or will be sold live depending on the market at the time.

I reseeded around three acres last week. It is coming on well and I am pleased with its performance so far. I took out a grazing paddock over a month ago and reseeded it. It will receive post-emergence spray this week.

Overall, this year has been a great year for growing grass. It has been great to get the chance to take out these paddocks. Growth rates were 61kg DM/ha/day this week.

I spread 15 units of CAN last week and recent rainfall has increased growth on the farm.

The remaining group of bulls was housed last week for finishing. They weighed 535kg at housing.