

TECHNICAL NEWS



March 2021 | NI Version

TMS Results: Small changes lead to big improvements for Tyrone family

In the valley below Drumlegagh, Newtownstewart, Co. Tyrone lies the McCrea family farm. Despite the challenging nature of the local terrain, the father and son team of Albert and David have established one of the highest performing dairy herds in the area.

The herd of 60 cows are currently on track to produce 9300 litres/cow, on a housed by night system, and grazing by day when weather and grass allows. Improving the way-of-life for both man and dairy cow as well as an ageing parlour, were some of the many reasons why McCrea's decided to go down the robotic dairy route two years ago. In what was an atypical move for the duo, they decided upon a GEA Monobox.

Although cows transitioned easily to the system, David felt that they were not reaching their full potential. Having spoken to his local **Lakeland Agri Technical Sales Representative, Gary Tubman**, the McCrea's joined the **Lakeland Dairies Transition Management Programme (TMS)** 12 months ago to gain a greater insight into cow performance and identify where there was room for improvement.

TMS Discoveries

As part of the programme, assessors Shannon Porter and Kim Carnegie, identified that the dry cows were under conditioned when approaching calving and were losing condition after calving, with many fresh cows only averaging a Body Condition Score of 2.5.



Pictured - Tyrone farmer, David McCrea

Having identified these issues within the herd, both the **Lakeland Agri Ultrabalance Dry Cow Nut** and a **McCrea bespoke Dairy Nut** were introduced. The dry cow nut is fed throughout the dry cow period through an out of parlour feeder. Feed levels are adjusted based on the cows condition at drying off and how close she is to calving, with cows progressing to near 4kg/day in the final 3 weeks pre-calving.

The McCrea Dairy Nut is used in both the GEA milking robot but also in an additional out of parlour feeder. The fresh cow diets were also adjusted in line with the introduction of the bespoke nut to maintain condition on the cows post calving.

TMS Results

It has been over 12 months since the McCrea's joined the TMS Programme and it is clear that the results have been extremely positive.

According to David, **"The condition of the cows is the biggest improvement that I have seen. Dry cows are in much better condition, and particularly after calving, cows are holding their condition well. Instances of transition issues continue to remain low also."**

"Butterfat and proteins in the milk are well up and steady, which I am happy with. Litres are up also, which is partly due to the robot, however both the Lakeland Agri TMS Programme and introduction of a correct feeding regime has definitely helped with that. The cows peaked at a 38 litre average this year, with 54 cows on the robot. Currently, the herd is doing 33 litres on average, with the fresh cows currently averaging over 38 litres."

"For the future, we plan to get to roughly 70 cows overall, with around 50 cows milking on the robot at all times, along with pushing up that milk output per cow figure!" David concluded.

Why get involved in the TMS Programme?

- Higher milk volume
- Improved milk composition
- Improved body condition
- Lower level of transition issues

Lakeland Agri NI milk suppliers interested in joining phase 2 of the highly successful TMS programme should contact their NI Milk advisor or one of the Lakeland Agri Team today on:

- Gary Tubman 07900 248 728
- Michael Mc Geeny 07831 176 584
- David Beacom 07503 110 242
- Christopher Cahill +353 (0) 87 1934 502
- Alan Hurst + 353 (0) 87 2901663

Alternatively, you can call our Customer Services Centre 028 302 62311.

Update on soil fertility status of Lakeland NI Farms

Niall Mc Carron, Dairy Development Advisor, Lakeland Dairies

The Lakeland Dairies Winter Soil Sampling Initiative has completed 2,283 individual soil samples on 205 milk supplier's farms over the last few months. As seen in Table 1, optimum results are those with a pH greater than 6.0, a Phosphorus (P) index of 2+ or higher and a Potassium (K) index of 2- or greater. In general, results are better than reported NI averages.

	Number of samples	% of overall
Optimum Fertility	851	37%
pH of 6.0 or greater	1632	71%
P index 2+ or greater	1563	68%
K index 2- or greater	1482	65%
Mg of 4 or greater (indicating excess)	1026	45%

Patterns to note:

- Almost 30% of soils analysed showed a pH of less than 6.0 which is detrimental to nutrient uptake and grass growth. This indicates a necessity to apply lime, which is the main cornerstone of soil health and fertility and subsequent grass production.
- If working to the ROI recommendation of a pH of 6.3 or greater, then 60% of soils show a requirement for lime. This higher target is in place particularly where clover is included in swards.

- Almost two thirds of soils are in a less than optimum fertility profile. Improvements can be made in either pH, P or K status. This means there is potential to grow more forage on farm.
- Potassium (K) – western counties (Derry, Fermanagh and Tyrone) are showing lower levels of K in soils when compared to the soils in Armagh and Down. This is important when choosing fertiliser for silage production, particularly where a 2-3 cut system is operated.

Armed with the knowledge garnered from the soil sample results, these 205 farmers can reduce their fertiliser bill this spring by making good use of soil and slurry nutrients. A calculation can be made into establishing how much chemical fertiliser to apply for first cut silage. Take account of the nutrient content (NPK) in any slurry applied in spring as this will contribute to the crop requirement.

The optimum index of 2+ for phosphorus and 2- for potassium will maximise crop yield from the most economic use of inputs. Further applications of P to soils with above optimum indices are not cost effective and will be in breach of the Nitrates and Phosphorus Regulations. An application of 33 cubic metres per hectare (3,000 gallons per acre) of cattle slurry in spring supplies all the phosphate and potash needed for first cut silage where soils are at optimum levels or above.

Sulphur is another nutrient that is often forgotten about, with AFBI researchers now recommending that all silage swards receive an application of 25-35kg SO₃ per hectare (20-28 units SO₃ per acre) in spring, regardless of slurry application.

Blended and straight fertilisers are available to meet the needs of the individual field and crop. In order to establish which product suits best, undertake a soil analysis and make a recommendation from this base.

For advice on fertiliser planning for the coming season, contact Niall McCarron on 07785469216. For fertiliser orders, contact your local Lakeland Agri Sales Representative.

AVAILABLE TO OUR MILK SUPPLIERS TO HELP MANAGE SPRING CASH FLOW

LAKELAND AGRICULTURAL MILK REPLACER AND FERTILISER DEFERRED PAYMENT SCHEME

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT
Milk Replacer & Fertiliser Purchases.				1/3	1/3	1/3			

Full pallet purchases of fertiliser and Lakeland Agri CalfSmart and SkimSmart Milk Replacer Ranges in January/February/March are charged to a "03 sub account" and milk deducted in three equal payments in the months of May/June/July.

To avail of the deferred payment scheme, please communicate when placing your order through your Lakeland Agri sales representative or the Customer Services Centre on 028 3026 2311

Nitrogen strategy for early grass

David Corbett, Product & Marketing Manager and Dr. John O'Loughlin, Sustainability and Technical Manager, Grassland Agro

Early grazing is critical for sward performance as it kickstarts swards out of dormancy and allows light to the base of the sward to increase tillering. Applying an adequate supply of chemical Nitrogen (N) will play a key role in achieving early grass yields, as the supply of N from the soil in the spring is limited due to low soil temperatures.

Soil temperature is important to maximise the efficiency of spring N applied. The opportunity to apply fertiliser will depend on ground conditions and the weather forecasted as the perennial ryegrass plant will become active at soil temperatures of 6 degrees celsius and rising. There are major economic and environmental risks associated with early N, therefore it is important that climatic conditions are favourable.

- **Urea** based products are most effective in spring as CAN based products are more vulnerable to leach from the soil. In cold soils, urea hydrolysis is slower but sufficient to supply N at a rate more suitable to grass growth.
- **N-Process** from Grassland Agro is a phase release N suitable for spring applications. It also contains a plant biostimulant to increase N uptake and use efficiency.
- **Protected Urea** is urea coated with a urease inhibitor which prevents ammonia losses under dry, warm conditions.

Two other nutrients to consider during the spring period are Phosphorus (P) and Sulphur (S). S is required in tandem with N and should be applied at required levels during the grass growing season. (Ideally determined by a grass mineral analysis.)

View the table below which outlines key advice on N application rates and timings for perennial ryegrass based on stocking rate.



Nitrogen applications for silage

Ensuring a sufficient supply of N to the plant is crucial to produce a high-quality crop of silage. N-Process supplies a phase release of N to the crop in conjunction with plant biostimulant to overcome the challenge of excess free nitrates in the leaf. The rule of thumb is that N is used at a rate of 2 units a day, therefore this must be taken into account when planning N applications for first cut silage.

Nitrogen application and LESS (Low Emissions Slurry Spreading)

Slurry applied with LESS (Low Emissions Slurry Spreading) reduces ammonia losses to the atmosphere and captures more N in the soil for plant uptake. The adoption of LESS technology increases spring N availability from 5 units N/ 1,000 gallons of slurry (splashplate) to 9 units N/ 1,000 gallons of slurry (dribblebar). Thick cattle slurry applied with LESS is the equivalent to 9-11-36 (N-P-K) per 1,000 gallons of slurry.

If it is impractical to draw slurry to silage ground or if ground conditions are unsuitable for slurry application, it is important to refer to your soil samples to prioritise low P and/or potassium (K) fields with an application of slurry. Additionally, if a field has had surplus bales removed or has been zero-grazed, prioritising these fields with slurry to replace P and K offtakes would be beneficial.

Nitrogen application rate per grazing rotation and approximate application date								
Indicative DM yield ^a	Jan/Feb	Mar	April	May	June	July	Aug ^c	Total N applied
t/ha	kg N/ha							
4-5		30						30
5-7		30		20				50
6-8		30		30		20		80
7-9		40		30	30	30		130
9-12		30	30	30	30	30	30	180
10-13	30 ^b	40	40	30	30	30	30	230
12-15+	30 ^b	40	50	50	40	30	30	270



Ready, Set, Graze!

**Christopher Cahill, Technical Sales Representative,
Lakeland Agri**

Making the most of high-quality grazed grass and efficiently converting it into milk solids has never been more important. Introducing spring grass where possible can provide a substantial boost in performance to all groups of stock. Teagasc estimate a value of £2.30/dairy cow for each extra day at grass in the springtime. This value, when factored across a herd of 100 cows that get to grass 7 days earlier than usual, could result in an extra £1600 gross profit.

Spring grass can provide a substantial boost in performance to all groups of stock, however the limitations of grass should always be accounted for when balancing the diet of the dairy cow, especially when we think of grass intakes during inclement weather and accounting for the production level of the animal.

With this in mind, we recommend phasing grazed grass into the diet of your herd. Lower producing animals in the herd should go to grass first, followed by freshly calved or higher producing animals as weather and grazing conditions allow.

‘It is estimated that spring grass has a value of £2.30/dairy cow for each extra day at grass in the springtime.’

Implementing a Spring Rotation Planner

A simple *Spring Rotation Planner* can be implemented to ensure ground is grazed off in a timely manner to facilitate regrowth for the beginning of the second round of grazing. The target would be to sustain an average farm cover above 2000 kg DM/ha, or 6cm in height throughout the first rotation, and to begin the second round with 2900 kg DM/ha on the strongest 2-3 paddocks in the second round, or 10-12cm in height/half the height of your wellington boot.

Due to colder weather conditions and in many cases, limited nitrogen applications, it is important to ensure that you maintain at least 7-8 weeks of a first rotation length. For example, if there is 90 grazing acres available for grazing over a 60-day period, you allocate the herd 1.5 acres per day, and no more than this.

Benefits of starting with low covers

Quite often, as stock numbers are lower when you first start to graze, and you are only grazing by day, it makes sense to start with some of your lighter covers of grass first. This approach has many benefits:

- It matches the demand of the cow initially as it takes her a number of weeks to adjust to grazed grass in the diet.
- As you are grazing a larger area, it reduces the risk of poaching ground as you do not need to confine cows to a smaller area to ensure adequate residuals (4cm) are achieved.
- It also helps to train the cows to graze well for the season ahead: If the cows are put onto a heavy cover of grass and are not made to clean it out well, then they will become accustomed to doing this throughout the season.
- Having consumed silage the previous night, cows often do not have the appetite to graze the heavier covers down to the correct residuals (4cm), whereas they will graze a lighter cover down better.

For further advice on maximising the value of spring grass in the diet of your stock, contact your local Lakeland Agri Sales Representative or contact Christopher Cahill on +353 (87) 1934502.

For more information, contact the Lakeland Agri Sales team or our Customer Services Centre on 028 3026 2311



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