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INTRODUCTION

Welcome to this year's issue of the Forage and Nutrition Guide

2025 was one of the best ever years for livestock farmers due to good weather, excellent grass growth and great prices for calves, cattle, milk and sheep. Input prices were also reduced. However, milk prices did decline in the autumn and remain depressed for the year-to-date.

One consequence of higher store cattle prices was that cattle finishers have lost a lot money over the winter and spring. Clearly, some forward contract system is required to ensure that finishers are guaranteed a decent income. As measured by PastureBase Ireland, grass production increased to an average of 13.2 tonnes dry matter (DM) per hectare in 2025, a considerable increase on 2024 and 2023.

Due to higher fuel, film and fertiliser prices, silage is much more expensive this year. However, if we can increase the DM of the forage and minimise storage losses significant savings can be made. A 10-tonne (fresh weight) grass silage crop at 25 per cent DM will typically yield between 14 and 17 bales, assuming average, well-packed bales. A standard, well-packed bale at 25 per cent DM usually weighs around 600 kg to 700 kg. Based on agri guidelines for silaging, tedding (spreading) and waiting an extra day (a 24-36-hour wilt) significantly reduces the number of bales (3 to 5/acre), which is beneficial for reducing ensiling costs and improving fodder quality.

Using the innovative Film & Film system, baled silage quality is improved and mould losses are minimised in higher DM silage. Indeed, trials undertaken by the ILVO (Institute for Research in Agriculture) in Belgium found that bales wrapped using this system on average contained 10 per cent more silage. So, farmers are saving on bale wrapping costs with 10 per cent less bales made/acre.

Statistics from the Department of Agriculture, Food and the Marine (DAFM) show fertiliser nitrogen sales (N) increased by 10.6 per cent in 2024 compared with 2023, followed by a further 12.5 per cent increase in 2025.

Unfortunately, N levels in rivers increased by 10 per cent in 2025 according to a new report published during March by the Environmental Protection Agency (EPA). So farmers, particularly in the south east, will be under pressure to reduce their usage of N.

While it is possible that the reduction in chemical N use could reduce grass production, Teagasc research suggests that a reduction in grass production could be avoided through better soil fertility, using more lime, increased use of clover, better grassland management and improved N management. A recent review of soils tested at Teagasc indicates that the majority of soils in Ireland are below the target levels for pH (pH 6.3), P and K. According to Teagasc there are numerous benefits to spreading lime. The economic value of spreading lime is high. For every €1 you spend on lime on a drystock farm, you get back €5. For every €1 you spend on lime on a dairy farm, you get back €7.

Many milk producers are overstocked so they could cull passenger cows for herd infertility, mastitis, high cell counts, lameness, low milk/solid yields etc. In the long-term, every dairy farmer should be using sexed semen, breeding for higher milk solids and using agri-contractors to minimise farm machinery overhead costs and to make better use of their time.

While farmers feel pressurised by the ever-increasing burden of environmental regulations and bureaucracy, there are some positives. Reducing the use of N fertiliser, better slurry storage and the use of the LESS slurry spreading system will actually save them a lot of money. Using modern relatively inexpensive software farmers can easily minimise the stress and time they spend on paperwork and compliance data inputs.

According to a CSO report total cattle numbers have fallen to an almost 12-year low, with provisional total cattle numbers recorded at 6,904,800 in June 2025.

With a reduced herd size there would be more grass available for grazing and for silage conservation. With more grass available per cow, milk yields would also increase and improve farm incomes. The cost of purchased feed would be reduced so overall herd profitability would improve.

New technology has many benefits for farmers who want to operate a profitable farm business and generate a good income for their families. And, of course, younger farmers have access to far more education, advice and research than their parents.

From a long-term global perspective, a growing world population needs more food. As the standard of living improves in Asia and Third World countries, there will be an increasing demand for our beverages, dairy products and meat.

We also have a competitive advantage worldwide in producing quality food with a green image and a low carbon footprint compared to countries such as Brazil etc. The image of dairy products is very positive with consumers – new research shows even more benefits from increasing consumption of dairy products by the elderly.

New income streams are also opening up for the future such as renewable energy – which can be produced from agri-crops, meat and bone meal, forestry residues etc – consistent with Ireland's low carbon standards, greenhouse gas and climate change policies. Already, many farmers are installing solar panels on the roofs of their sheds thereby minimising their electricity costs. New anaerobic digestion (AD) systems nationwide will give farmers the opportunity to profit from their slurry and to grow grass or maize silage on contract to fuel these AD systems.

I hope you enjoy this issue,
Liam de Paor,
Editor

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EASYCUT B 1250 FOLD – MOWING WITH MAXIMUM EFFICIENCY



With the EasyCut B 1250 Fold, Krone presents a new mower combination that is ideal for efficient use in CTF systems. The folding cutterbars are an innovation, allowing the machine to be transported easily and safely on roads. This butterfly combination works highly efficiently with a maximum working width of up to 12.50 metres and is thus optimally adapted to the sward-protecting CTF (Controlled Traffic Farming) concept via precise track guidance. Thanks to its technically impressive design, the mower combination can be easily transported on roads. The unique and patented folding mechanism allows mower units to be folded up very compactly. And, last but not least, the state-of-the-art comfort control unit provides drivers with a clear overview of the numerous settings and significantly eases their workload.

The EasyCut B 1250 Fold's innovative sliding gearbox allows for an adjustable working width, ranging from 11.30 to 12.50 m. The hydraulic side shift enables the working width of the mower units to be conveniently adjusted from the cabin, with each side telescoping outwards by 60 cm. As such, the EasyCut B 1250 Fold can be ideally combined with the EasyCut F 320, F 360 and F 400 front mounted mowers by setting the appropriate overlap. This ensures a clean cut at all times while utilising the maximum working width.

The EasyCut B 1250 Fold is ideal for use in CTF systems thanks to its enormous working width of over 12 m. This enables work processes to be organised with maximum efficiency and possible soil compaction to be reduced to a minimum thanks to precise guidance in the tracks created. Incidentally, the weight-optimised frame design and the absence of a conditioner also contribute to this. With a dead weight of just over 3,500 kg, the mower can be used with tractors upwards of approx. 200 hp and helps to sustainably protect the sward.

The technical basis is provided by the EasyCut cutterbar, which is fully welded, permanently lubricated and low maintenance.



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1. Independent trial performed at Reading University 2022 (unpublished). 2. Lactation Performance and Methane Intensity of Holstein Cows Fed Diets Containing Alfalfa Grass Silage Inoculated with a Multi Strain Inoculant, ADSA Abstract #: 1582, G.O. Omoruyi, C.S. Ballard, J.R. Green1, H.M. Dann, A. Barkley, R.A. Scuderi, and S.Y. Morrison, 2025.

MCHALE'S RAKE AND TEDDER RANGE – SHOWCASING EXCELLENCE



Building on their comprehensive range of grass machinery, McHale launched their R centre delivery rake range a number of years ago at Agrotechnica. Since then, the company has continued to refine and expand the range in line with its growth.

The range now consists of three models designed to suit a wide variety of farming operations, from smaller farms to large-scale contractors. The R62-72 can gather two 3-metre mower swaths and operates within a working width of 6.2m to 7.2m. The R68-78 is capable of gathering three 3-metre swaths, with a working width of 6.8m to 7.8m. The latest and largest model, the R80-90, launched at the National Ploughing Championships last year, offers a working width of 8m to 9m and can gather four 3-metre swaths.

Each model in the range is built to McHale's heavy duty build quality and comes equipped with a number of innovative features as standard ensuring the clean gathering of crop to the swath and optimum operator comfort while delivering an aerated, well-formed swath suitable for high output baling or harvesting.

All models offer a variety of easy-to-use adjustments to ensure a clean and ideal swath for the following baler or forager. The working width is adjusted hydraulically from the comfort of the tractor cab. Operators can also select from eight positions when setting the cam angle of the tine arms controlling the speed at which the crop is distributed to the row to cater for a variety of crops, conditions and harvesting machinery. Rotor height is adjusted using winding handles, with a clearly marked 1-5 scale indicator enabling precise and consistent setup across both rotors. Helping reduce soil contamination and improving overall forage quality.



To further minimise contamination risk, all tine arms are fitted with Tine End Savers, preventing broken tines from entering the crop. Tine Deflector Plates further ensure smooth operation in heavy crops by preventing tine overlap.

Exceptional ground-following capability is another defining characteristic across the range. Wide rotor bogies ensure excellent terrain adaptation and smooth operation. The R62-72 is fitted with 4-wheel rotor bogies, while the R68-78 and R80-90 feature 6-wheel bogies. On these larger models, the front wheels have independent steering, and the rear axle height can be adjusted to alter rotor inclination for varying ground conditions.

Rotor flotation further enhances performance, with large suspension springs allowing movement both front-to-back and side-to-side by up to 9 degrees. This ensures consistent ground contact, even on uneven terrain.

Individual rotor lift is included as standard across all models, providing added flexibility during operation.

The rotors themselves are driven by a smooth running, grease-filled cam track system. This sealed unit ensures long service life and uses two high quality bearings per tine arm, reducing wear. If necessary, rotor arms can be quickly replaced by removing just three bolts.

All McHale rakes are designed with transport and convenience in mind. For transport, the rotors fold upward and then lower into a secure locking position, ensuring a transport height of under 4 metres. All tine arms are fully detachable to allow for storage in a low shed or navigation under a low bridge. When removed each rake has the capacity to store 6 tine arms. And with an overall width of under 3 metres, all rakes are highly manoeuvrable, making them well-suited for operation down narrow lanes and gateways.

In addition, the machines offer excellent trailing of the tractor both in the field and on the road. A pivoting headstock allows up to 80° of movement, making tight turns and transport easier.

As with all McHale equipment, durability is central to the design. The rake range features a heavy-duty chassis, robust tines, and a wide-angle Y-shaped driveline with easy access greasing points all extensively tested ensure the machines are built to withstand years of demanding use.



ProPel Tedder Range

In 2024 McHale presented their new McHale ProPel range of tedders to the market. The range consists of three models: The mounted M6-770,a six rotor tedder with a working width of 7.7m (25'3") and two trailed tedders in the T8-1020,a trailed 8 rotor tedder with a working width of 10.2m (33' 6") and the T10-1260, a trailed 10 rotor tedder with a working width of 12.6m (41' 3"). A range created to suit a variety of businesses from smaller scale farms to large scale contractors.

Each model in the range is fitted with 1.54m (61") diameter rotors that are equipped with seven tine arms that all support a double hooked tine for the clean, even lift and distribution of the crop, no matter the crop density. Easy adjustment of both the rotor working angle

and tedder working height is a key feature of the ProPel range. The rotor ground wheels have five possible positions and depending on the selection the rotor angle can be altered between 10˚-17˚. Crop deflection plates on the wheels also ensures no crop becomes entangled around the wheels no matter the set working angle. Altering the height of the rotors differs between the mounted and trailed machines, however, both are very straightforward with the mounted machine adjusted via reducing or extending the top linkage and the trailed machine through a simple wind handle.

Exceptional trailing of the tractor both in the field and down the road is another defining characteristic of the compact McHale ProPel range. A robust steering system that focuses on a central pivoting point connects the headstock to the chassis which ensures an effective re-centring on slopes and reduces the machines overhang. Also, the pivoting of the machine behind the headstock, allows it to follow very closely behind the tractor which is beneficial in navigating difficult to access gateways.

Both the mounted and trailed versions are engineered to McHale's renowned rugged standards. The mounted models feature a Y-shaped central chassis, while the trailed machines use a robust carrier frame chassis, each designed to endure years of demanding use.

This durability extends to the heavy-duty driveline, which includes greaseable universal joints to deliver smooth, consistent power under all operating conditions. An overload clutch protects the driveline, and all pivot points are incorporated into a cast housing to ensure long-term reliability. Additionally, the driveline is fitted with flexible joints that are easily accessible, making routine greasing and maintenance a straightforward task.

All Tedders in the McHale ProPel Range have the optional extra of a folding Headland Management System avoiding crop being lost to field verges or obstacles in the field.

When engineering this product, it is clear McHale set out to produce tedders capable of lifting and aerating even the heaviest crops with ease. The result is a range of strong, robust machines that deliver high efficiency and dependable performance across all terrains, enabling operators to produce top-quality fodder in the shortest possible time.



‘MOWER’ ON OFFER FROM PÖTTINGER

An upgrade to Pottinger’s Novacat F 3100 Opticurve sees it now come with the Profiline comfort control system as an option, according to the company. The Profiline comfort control system facilitates steering left and right automatically depending on the turning angle of the tractor and the inclination of the slope. The information needed to do this is provided by an acceleration sensor installed directly on the mower. By including the tractor’s turning angle signal, the accuracy of the calculation increases even further. The mower is controlled either using the tractor’s Isobus terminal or a Select Control terminal. Hydraulic oil is supplied by a load-sensing or power beyond system.

According to Pottinger, the side shift technology that comes with this mower makes a big impact when cornering, and on slopes because it provides a perfect overlap with the rear mower and ensures the tractor drives along a clear track free of forage. The curved movement means that the entire working width of the cutter bar can be used and the effective width of the mower combination maximised. By contrast, systems with straight-line side shift leave several centimetres uncovered in this situation, according to Pottinger.

A special advantage of this technology is the ability to detect changing degrees of overlap between the front mower and the tractor or rear mower(s) and respond automatically. No grass is driven over, and no feathers are left standing, neither when cornering nor on steep ground. And, because there is no old crop left behind for the next cut, the follow-up harvesting machines can work undisturbed. Thanks to automatic mode, the operator can focus on driving the tractor while keeping an eye on the surroundings.

The Aerosem F pneumatic front hopper seed drill and the Amico F hopper from Pöttinger are a well-rehearsed team, Pottinger says. To provide even more flexibility, Aerosem F coulter rails are now available individually. As well as that, the Aerosem F is also available as a rigid three-metre version to complement the folding four-, five- and-six metre seed drills. The new



Aerosem F is ideally suited to the requirements of small- to medium-sized farms. An innovation has also been added to the Amico F hopper. An external control terminal will make it easier to operate during calibration. In addition, GPS tramlines can now be selected visually.

NEW DISC MOWER FROM ROZMITAL

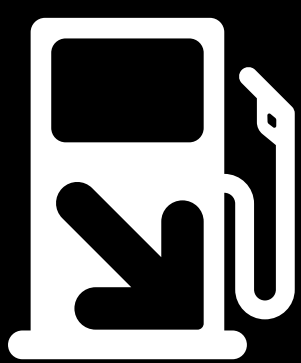
Czech agricultural machinery manufacturer, Strojírny Rožmitál has launched a new model of front-mounted disc mower, the SD-28L, a seven-disc front mower with a working width of 2.8m. The new model expands the range of lightweight mowing machines under the Rozmital brand and complements the existing SD-20L model with a 2m working width and the SD-24L model with a 2.4m working width. It is designed for mowing standard forage crops. Despite its low weight, the construction maintains high strength and durability. Each disc is fitted with two quick-release blades and driven by a gearbox housed in an oil bath, ensuring smooth operation and long service life. The outer discs are designed in a drum configuration, with swath-forming plates located behind them to create a swath width of 1.6m. The cutter bar forms a rigid unit together with the frame. Machine flotation is provided by a spring system, and the mower is equipped with an impact protection system that swings the mowing unit backwards in the event of hitting an obstacle. For transport, the machine folds hydraulically by lifting the cutter bar vertically relative to the ground.



The SD-28L disc mower is a seven-disc front mower with a working width of 2.8m.

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*Comparison with tractors in the same category, calculated using DLG PowerMix average results from the 12 test cycles conducted with the MF 8S.265 Xtra Dyna E-Power (DLG Test Report 7581). Price fuel: 1.6€/l, Fuel density: 833 g/L; ISO power: 195 kW

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SIP UNVEILS ENHANCED MOWER LINEUP FEATURING ADVANCED PROTECTION AND 3-YEAR WARRANTY



SIP, a global leader in grassland harvesting technology, has announced the expansion of its AS and SILVERCUT mower ranges, bringing high-performance "clean cut" technology to farms of all sizes The AS range is optimized for maximum maneuverability with small to medium tractors, offering a low center of gravity and working widths from 2.16 up to 3.40m. The range includes front and rear mounted options and feature a welded cutter bar with quick change, fast fit blades. High performance, wear resistant Hardox steel
cutting disc and skids ensure exceptional mowing performance and a long service life. The unique DDSS Disc Drive Safety System with 4 brass pins ensure that work continues unimpeded in the event of a disc overload. The Dual Spring suspension system provides constant ground adaption to ensure exceptional mowing performance. The front mounted options has the centre of gravity close to the tractor and working widths of 2.20, 2.60 and 3.00 meters.

For large-scale farmers and contractors, the SILVERCUT series introduces advanced hydro-pneumatic suspension, ensuring consistent ground pressure even at high speeds. "Our goal is to combine longevity with field-fixable reliability," says the company. This is achieved through the DDSS safety system, which uses sacrificial brass pins to absorb impact forces without damaging the cutter bar. SIP SPIDER tedder range extends from four and six rotor models with working widths from 4.50 meters up to 14 rotor, large capacity, models with working widths up to 14.80 meters. Small diameter rotors and spring tines of different lengths, with tine loss protection in case of breakage, prevents ground scratching and crop contamination. Optional hooked tines allows the lifting of forage in two layers increasing the spreading efficiency of models with a larger rotor diameter.

The SIP STAR Rotary Rake range includes single rotor tractor mounted models with working widths from 3.00 meters to trailed models with working widths up to 12.50 meters. The robust design and construction together with the walking tandem axle with parallelogram mounting ensures even, clean raking and fast road transport speeds,. To further demonstrate their commitment to quality, SIP now offers a comprehensive 3-year warranty across their entire grass harvesting range.

Full details available from Farmec Ireland Ltd., Clonross, Drumree, Co. Meath www.farmec.ie



KVERNELAND BUTTERFLY MOWERS MAKE THE CUT AT LEESON STANLEY AGRI CONTRACTING

Mark Stanley has been working with his uncle, Leeson Stanley, at Leeson Stanley Agricultural Contracting in Johnstown, Co. Kilkenny, for over 22 years. Between Leeson's tillage work and Mark's own nearby farm, the pair know what they want from a mower — and they've found it in the Kverneland 5387MT BX butterfly mower.

"We've been using Kverneland since day one," says Mark. "When we heard the 5387 was about a ton and a half lighter than the older model, we said we'd give it a go. We were very impressed — they're well balanced, not hard on the tractor, and the performance is unreal."

With a 250hp tractor up front, the 5387 mowers can easily cover up to 240 acres a day on the Stanley's ground. Even with 200–220hp, Mark says it runs no problem. "Before, we were using two sets of doubles. It worked, but one mower was always sitting idle when trying to split nine headland runs. With the 5387, every mower is working full-time — it's more efficient, and it pairs perfectly with our swarter."

Mark highlights the QuattroLink suspension system as one of the standout features. The QuattroLink concept, inspired by racing suspension design, features four suspension arms connected to a fixed carrying arm. This allows the mower to float and respond independently to ground undulations while maintaining precise pressure. "That's what I love about the suspension," says Mark. "You can control how much pressure is on the ground from the cab. And more importantly, when it lifts over a bump, it comes back down fast — no missed strips or green patches."

For second-cut silage, the 5387's are fitted with BX belts, which can be easily adjusted or removed. "You can speed them up or slow them down from the cab using hydraulic pressure. We run them at around 25% and the tractor barely knows they're on. The swart is lovely and uniform, or you can lay it flat — you've full control."





RED CLOVER: DOES IT WORK ACROSS NORTHERN IRELAND?



John Morrow, Agriculture Manager at Agrisearch, explains how the ZeroNsile project is exploring whether red clover and lucerne swards can deliver productive, sustainable alternatives on commercial Northern Ireland farms.

With fertiliser prices rising sharply and a growing need to reduce carbon emissions, AgriSearch in partnership with AFBI launched the ZeroNsile project in 2022. The objective is to determine whether farmers can reliably produce high-quality silage without manufactured nitrogen (N), using long-term red clover/grass or lucerne swards.

Historically, AgriSearch's forage work has focused on grazing systems such as GrassCheck and multispecies swards. However, more Northern Ireland (NI) dairy farms are shifting towards housed and autumn-calving systems — making silage quality and home-grown protein increasingly important for profitability.

Research by AFBI and Teagasc previously showed that red clover/grass silage can match the yields of high-input grass systems with slurry as the sole N source. What remained unclear was how the crop performs across commercial NI farms.

Twelve farms joined the project (six dairy, six beef/sheep), with three additional lucerne farms in Co. Down. Eleven of the red clover farms continue in 2025, while lucerne performance has been more challenging, with only one site continuing due to establishment and persistency issues. The ZeroNsile project aims to determine how this translates on commercial farms across NI.

Establishment: Findings from Year One

Swards were established in autumn 2023 or spring/summer 2024, both in challenging conditions. While most farms relied solely on slurry or farmyard manure (FYM), a small number used low-N compounds where zero-N products were unavailable.

Typical seed mixture/acre:

- 8–9 kg grass seed
- 4 kg red clover
- 1 kg white clover

Key establishment recommendation

- Control docks/weeds in the year before sowing
- Avoid overseeding: it is less suitable for stitching in than white clover
- Create a fine, firm seedbed — roll before drilling
- Drill very shallow (5–10 mm)
- Ensure soil temperature ≥8°C (late April–June is ideal)
- Maintain soil pH at 6.5–7.0
- Apply P & K only — avoid chemical N

Harvest Management: Protect the Crown and the Leaf

Red clover requires a slightly different approach to management particularly at harvest. The crown sits close to the soil surface — scalp it with a mower and persistency suffers. The leaf is where the protein and energy are, but it can be easily shattered and lost through aggressive tedding or raking. Farmers within the project have already noticed lines in their fields where clover has been significantly impacted by machinery particularly in poor weather conditions.

Best Practice for Cutting and Conservation:

- Aim for 3–5 cuts at 6–8-week intervals
- Mow at 5–7 cm to protect the crown
- Leave in swath, minimize raking and tedding.
- Expect a longer wilt to achieve 35% DM
- Consider additives in poor weather to reduce fermentation risk

Nutrient Management

Red clover can fix up to 200 kg N/ha each year from the atmosphere. When combined with N supplied in slurry, this typically removes the need for chemical N. Teagasc research has shown that red clover/grass silage can even produce higher yields without chemical N, achieving 15 t DM/ha at 0 kg N/ha compared with 14.8 t DM/ha where 50 kg N/ha was applied.

However, as with any high-output silage system, nutrient offtakes must be replaced. Potassium (K) demand is particularly high — approximately 25 kg K per tonne DM removed. For example, a three-cut system yielding 12 t DM/ha (around 24 bales/acre) requires 240 units of potash/acre. Slurry alone often cannot meet this requirement after heavy first cuts, so many farmers in the project supplemented with MOP to maintain soil K levels.

Sulphur (S) is another key nutrient that is often overlooked. Slurry contains relatively little plant-available S, yet sulphur is essential for nodule formation and effective biological N fixation. Without enough sulphur, both yield and protein suffer. Where zero-N fertiliser blends were unavailable, several ZeroNsile farms applied calcium, potassium and sulphur fertilisers ahead of first cut. Recommended sulphur (SO_3) rates are 40 units/acre for first cut and 20 units/acre for second cut, with later cuts usually supplied through mineralisation.

Finally, red clover performs best at pH 6.5-7.0, higher than grass-only systems. Maintaining this pH ensures full nutrient availability and supports strong N-fixation. Lime offers one of the best returns on investment on farm — £1 spent can return around £7 through improved yield and reduced fertiliser costs.

2024: A Challenging Year for Clover

The red clover swards established the previous year faced difficult growing conditions in 2024. A cold, wet spring delayed growth and created strong temptation for farmers to apply chemical N to help crops get moving.

Despite the slow start the red clover/grass crops delivered comparable yields and forage quality to the grass-only control fields — but without the need for chemical N. Instead, slurry alone supplied the necessary nutrients. As a result, these crops received approximately 97 units/acre less N, equivalent to 3.6 bags of CAN. With CAN priced around £300 per tonne, this represents a saving of roughly £53 per acre.

2025: Clover Shows What It's Capable Of

This year farmers saw what red clover can do in much more favourable conditions both for growing and harvesting. On William and Andrew Crawford's dairy farm, one of our Dale Farm farmers within the project, the red clover/grass silage area produced around 20% more dry matter (DM) per hectare than the conventional grass silage (13.8 vs 11.5 t DM/ha).

Despite this higher yield, gross energy concentration was very similar between the two swards (around 18.3 vs 18.4 MJ/kg DM), meaning the red clover system delivered more total energy per hectare as well as more dry matter.

Across the three cuts, the red clover silage averaged slightly higher crude protein than the grass (15.2 vs 13.5% CP). Fibre profiles differed slightly, with higher ADF but lower NDF in the red clover, suggesting a small trade-off in digestibility but potential benefits for intake.

However, the red clover silages were generally wetter, with higher ash and lower sugar concentrations than the grass, particularly in later cuts.

William & Andrew achieved this performance with the red clover swards receiving only a small amount of chemical N — 12 units/acre in total. Across the three cuts, this amounted to 144 units/acre less N than the grass only system, equivalent to 5.33 bags of CAN per acre. At a CAN price of £300/t, that represents a saving of approximately £80 per acre.

What's Next?

A beef feeding trial is currently underway within the project to compare animal performance from red clover silage versus grass-only silage. The next key focus will be persistency — assessing how well red clover maintains yield, quality and clover content over multiple years. This will provide the true test of its long-term value on Northern Ireland farms.



AFBI STUDY SHOWS BOOST IN MILK YIELD RELATED TO SUSTAINABLE DIETS

Aidan Cushnahan and Conrad Ferris at AFBI, Hillsborough, highlight the findings of an AFBI study, which reveals a surprising boost in milk yield with early lactation cows from sustainable cow diets.

A unique study carried out at AFBI, Hillsborough, has uncovered that dairy cows offered concentrates based on by-product feedstuffs (low human-edible ingredients) produced more energy-corrected milk over the first 150 days of their lactation than those on conventional concentrates that included cereals and soyabean meal (high human-edible ingredients). The use of these alternative feeds reduced the carbon footprint, when soyabean meal was excluded, but removing human-edible ingredients did raise challenges due to their higher phosphorus concentration. This article delves into the findings and their implications for sustainable dairy farming.

Background

Dairy cows have the unique ability to convert fibrous human inedible forages (grass and grass silage) into high-value, nutrient dense milk suitable for human consumption. However, higher yielding cows are normally fed significant quantities of concentrates to support milk production and these concentrates often contain ingredients, such as wheat and maize, which could also be consumed by humans. The use of these 'human-edible' ingredients in livestock diets is being increasingly challenged as we seek to feed a growing global population. Furthermore, there are growing concerns about the sustainability of some feed ingredients used in dairy rations, for example, soyabean meal.

Given these challenges it makes sense to consider using ingredients in dairy rations which have a low human-edible content such as rapeseed meal and distillers grains and to reduce the use of cereals and soyabean meal. Results from a series of short-term feeding studies indicated that reducing the inclusion of human-edible ingredients in dairy cow concentrates had little impact on the performance of mid-late lactation dairy cows. However, it might be expected that there could be a negative impact associated with using more by-product ingredients in the diet of cows over a longer feeding period especially during the early stages of lactation. This was examined in a recent study within the DAERA funded SusMilk project which examined the effects of reducing the levels of human-edible feedstuffs (cereals and soyabean meal) in the diets of early lactation dairy cows. Specifically, the study sought to examine if the effects were influenced more by the removal of cereals grains or soyabean meal.

Research study

The experiment involved 88 autumn calving cows with performance examined from calving through to 150 days-in-milk. Cows were offered a mixture of grass silage and concentrates (50:50 mix on a dry matter (DM) basis) with four types of concentrate being offered. The treatments included:

» High human-edible concentrate (included cereals and soyabean meal)



Aidan Cushnahan discusses the experiment with Robert Neill and Laura Millar

Table 1. Impact of reducing the human-edible fraction of concentrates on the performance of early lactation dairy cows

	High human-edible concentrate (cereals and soyabean)	Concentrate containing No soyabean	Concentrate containing No cereals	Concentrate containing No cereals and No soyabean
Human-edible fraction (%)	51	42	25	18
Feed intake (kgDM per cow per day)	19.4	20.2	20.1	20.1
Energy corrected milk yield (kg per cow per day)	33.4	36.0	35.5	35.7
Milk fat %	4.60	4.65	4.51	4.60
Milk protein %	3.35	3.40	3.19	3.25
Fat plus protein yield (kg per cow per day)	2.43	2.64	2.54	2.59
eFCR1	1.17	1.46	2.43	3.19
Margin Over Concentrate (£ per cow per day)2	6.33	6.87	6.70	6.70
Carbon footprint of concentrate (kgCO2e/ton)3	1,304	594	1,354	734
Phosphorus concentration of concentrate (g per kgDM)	3.8	5.4	4.5	6.7

1 eFCR = edible food conversion rate; 2 Figures based on milk price of 29 ppl +/- changes in milk quality. Concentrates costs based on feed prices for March 2026; 3 Values taken from Global Feedstuff Lifetime Assessment Institute Database

- Concentrate with no soyabean meal
- Concentrate with no cereals
- Concentrate with no cereals or soyabean meal

The cereal component of the concentrate was replaced with by-product ingredients which included sugar beet pulp and wheat feed, while soyabean meal was replaced with feed ingredients like rapeseed meal, distillers grains and maize gluten. All four concentrates were formulated to have similar metabolizable energy (12.4 MJ/kg DM) and crude protein (155 g/kg DM) concentrations. Daily dry matter (DM) intake, milk yields, milk composition and edible feed conversion rate (eFCR) were measured during the experiment. eFCR was defined as the quantity of human-edible output in milk divided by the amount of human-edible feed used to generate it. The carbon footprint and phosphorus concentration of the treatment concentrates were also assessed to determine the potential environment impact of offering these feeds.

Key results from the study are summarised in Table 1. Replacing the cereal and soyabean meal component of concentrates with by-product ingredients led to a decrease in the human-edible fraction of the concentrate. For example, the concentrate based on cereal grains and soyabean meal had a human-edible fraction of 51 per cent, while removing both cereals and soyabean meal produced a concentrate with a human-edible fraction of 18 per cent. Removing cereals from the concentrate had a greater impact on human-edible fraction (25 per cent) than removing soyabean meal (42 per cent). Cows offered concentrates with a reduced human-edible fraction (i.e. diets with low cereals and soyabean meal and high level of by-products) had a higher total feed intake, energy corrected milk yield and fat plus protein yield. Removing the cereal component from the concentrate led to a reduction in milk protein concentration but had no effect on milk fat content. Reducing the human-edible fraction of the concentrate led to an increase in eFCR, where cows offered the concentrate with no cereals and soyabean meal produced three times more human-edible product (milk) than the amount of human-edible feed they consumed to produce it. It is also worth noting that the eFCR values recorded across all the treatments were greater than 1.0, which highlighted the ability of the dairy cow to convert human inedible or low human-edible feedstuffs into a nutritious human food. Cows offered the low human-edible concentrate treatments also tended to have a higher Margin Over Concentrate (MOC) value than cows offered the high human-edible concentrate. Reducing the human-edible fraction of the concentrate also reduced the carbon footprint, particularly when the soyabean meal portion was replaced with by-product ingredients. For example, removing the soyabean meal component from the current formulations reduced carbon footprint by up to 55 %. However, it should be noted that the figures were generated on the assumption that the soyabean meal used was sourced from a deforested region. If the soybean meal were sourced from a non-deforested area then this would have a significant impact on the carbon footprint of the final concentrate. For example, if soyabean meal from a non-deforested area were included in the high human-edible concentrate formulation, then the resulting carbon footprint would change from 1,304 to 667 kgCO_2e/ton.

It is also important to note that reductions in concentrate human-edible fraction with the current formulations also led to an increase in phosphorus concentration of the concentrate by up to 75% and this has the potential to lead to an increase in farm phosphorus balance, which could have a negative effect on water quality if not managed. The results of this study highlights the need to carry out additional work to investigate the effects of feeding low human-edible concentrates to dairy cows on phosphorus utilisation and indeed determine how cows utilise these feeds to produce more milk than that observed by feeding conventional based concentrates.

Summary

This study provides clear evidence that the performance of early lactation cows can be enhanced through the use of concentrates formulated with low levels of human-edible ingredients. Notably, removing soyabean meal from these diets not only improved milk yield but also significantly reduced the carbon footprint – highlighting a promising pathway toward more sustainable dairy production. However, the elevated phosphorus content in these alternative rations raises important questions about the need to consider the wider impacts of changing diets on the potential environmental impact. As global pressure mounts to reduce reliance on human-edible feed sources, this research lays a critical foundation. Further studies are essential to understand the implications for phosphorus utilisation and to ensure that future feeding strategies are profitable, environmentally responsible and scientifically sound.

FUTURE-PROOFING DAIRYING



Adam Jones, CAFRE dairying adviser, offers a profile on Caryn Webster's farm

Caryn Webster farms in partnership with her father, Jack Smith, at Browns Bay, Islandmagee in Co. Antrim. They currently milk 80 autumn calving Holstein Friesian cows averaging 8,100 litres. This calving policy allows Caryn to take full advantage of the winter bonuses available through her Dale Farm contract. The herds current constituents are averaging 3.5 per cent for milk protein and 4.44 per cent for butter fat.

Farm upgrade

After returning from her dairy student placement in New Zealand 20 years ago, Caryn has been looking to push the farm on with an eye on continual renewal, investment and future proofing. In 2014, a new 10:20 Fullwood milking parlour and a cubicle house were built to modernise the facilities on the farm and make better use of the technology available at the time, including 'feed to yield' and 'Auto ID'.
Then in 2021, a new heifer and dry cow shed was constructed, utilising a central feed passage, clear roofing and bespoke calving pens. This made calving a simpler and more streamlined job especially with the pressures of a tight autumn block. Caryn is now looking to modernise the farm's current calf rearing facilities.
"The calf rearing facilities are fit for purpose but it's all about looking ahead and continually investing in new facilities" Caryn says. By continually upgrading facilities she has the latest technology and innovations as part of her farming system.

Grassland management

The farm covers 47 Ha (116 acres) of coastal ground. Soils vary across the farm from sand to peat. This mix creates both management issues and opportunities. The whole herd grazes out between March and October. With Caryn always looking to improve farm efficiency, six years ago she began measuring grass on the farm. This involves walking the entire farm measuring the grass in each field using a rising plate sward meter once a week while the cows are at grass.
These measurements are then uploaded to a computer



Caryn Webster farms 80 Holstein Friesian cows at Browns Bay, Islandmagee.



Mixed swards are important in creating drought tolerant pasture.

software programme where individual fields and the whole farm can be viewed. From this data, Caryn can select the most appropriate field for the cows to enter next for strip grazing. She is also able to see how much grass the farm is producing, and which fields are underperforming. This is useful when deciding which fields need reseeding.

After seeing the advantages of grass measuring three years ago Caryn joined GrassCheck as a monitor farm. This involves her grass measurements being sent to AgriSearch to form part of the GrassCheck forecast for Northern Ireland. She also submits grass samples for analysis at AFBI.

Grass growth on the farm for 2025 was 9.35 t DM/ha, this was a marginal increase from 9.15 t DM/ha in 2024. The 2025 year was slightly better in terms of weather with a less severe drought than what was seen in 2024. However, even with good grass and clover swards Caryn struggled to keep grass in front of the cows especially with most of the sandy areas of the farm producing little grass from the summer onwards. Grass quality was also low as was shown by the results coming back from her fresh grass samples.

Caryn is now looking at other options to ensure there isn't as much pressure next year. She is looking into how to incorporate multi-species swards into the grazing platform. The deeper tap root of herbs such as chicory and plantain and continuing to maintain clover levels will allow for a more drought tolerant pasture. Caryn hopes that by changing the sward composition grazing pressures can be reduced. This year grazing started on March 20, but housing came early on the October 3 because of 'Storm Amy'. Grazing can normally continue until at least the end of November.

UK Dairy Carbon Network

Caryn recently became part of the UK Dairy Carbon Network. Led by AFBI, and funded by DEFRA, the network has over 50 dairy farmers across Britain and Northern Ireland. They aim to implement and assess solutions for reducing greenhouse gas emissions (GHG). The scheme also includes several leading research partners and industry bodies that will help with research and innovation.

Caryn has selected breeding to reduce methane emissions this year. She will carry out genetic testing this winter to allow breeding from the most efficient animals for long-term GHG reductions. Using these targeted breeding strategies, she will be able to produce cows with better productivity, fertility and longevity.

Business sustainability groups

Caryn has also joined her local CAFRE dairy business sustainability group (BSG). It is facilitated by Adam Jones, CAFRE dairying adviser in the area. The group meets five times a year and discusses a wide variety of topics with the aim of improving efficiency on farm. She is also able to take advantage of the CAFRE benchmarking to better understand the farms physical and financial performance. Caryn will also be able to compare herself against farms in her own BSG and across NI.

Conclusion

Caryn's approach to dairy farming demonstrates how innovation, sustainability, and data-driven decisions can future-proof a business in an increasingly challenging industry. By investing in modern infrastructure, embracing advanced grassland management techniques, and committing to environmental initiatives Caryn is not only improving efficiency but also reducing her farm's carbon footprint. Her involvement in CAFRE dairy business sustainability groups further reinforces her commitment to continuous learning and benchmarking.

Through these proactive strategies, Caryn is setting a clear example of how Northern Ireland's dairy farms can remain competitive, resilient, and environmentally responsible for generations to come.

FILM-ON-FILM BALE COVER TECHNOLOGY



Irish farmers and contractors have been increasingly adopting film-on-film (F&F) baled silage cover technology, says Lloyd Dawson, Amcor Sales Director.



In the last two years we've seen the rate of usage in Ireland going from 20 per cent, to where it's now just beyond 50 per cent of the total round silage bales sealed with the F&F system. It's a huge step forward and in that period too we've seen the machinery developing, becoming more efficient, more computer controlled, much easier for the operator. In an environment where you're spending maybe a quarter of a million euros on a tractor and a baler wrapper and it's increasingly difficult to find skilled operators, it's important that you've got equipment that largely operates autonomously.

Staying in Shape Longer

It's the next evolution, in terms of efficiency and effectiveness. You reduce wastage, you reduce the likelihood of corrupting the bale, in terms of sagging or losing shape. Six months after baling with F&F technology, bales largely keep their shape, compared to bales with the older net wrapping and film system. It's a technologically smarter way of wrapping bales. The biggest surface is around the barrel of the bale. If you're putting a full width film around that, you're covering two thirds of the bale. In comparison, the wrapping system traditionally has been around the ends of the bales, using far too much plastic. The next generation of films can go thinner and longer and that makes it more efficient for the operator.

Recycling Improved

You've got longer length rolls. They're coming off the next generation of extruders, so the strength and physical properties are equivalent to the films that we had in the previous generation but with the advantage of added length. In addition, storage and handling have improved making the operation more efficient, less labour intensive and better for the environment. The storage box has been replaced with a sleeve because that's a single use packaging item that's ten times lighter and much quicker to remove. There's no net wrap, so no segregation for recycling. The contractor can wrap it in with the bale wrap going on in the first turn when they

change and that can be recycled by the farmer with the bale wrap. Irish farmers have a very impressive record of recycling silage film, and this process makes recycling even easier for the farmer.

Industry Collaboration to Improve Efficiency

In turn, bale handling and feeding have become more efficient. Shear grab technology has advanced to minimise manual film handling, lowering labour and time inputs.
It's an industry-wide collaboration. Alongside the new wrapping process, baler and bale handler manufacturers have developed their machines in tandem to facilitate the new wrapping technology. We are interdependent. We invest in new extruders which give us greater production efficiency, higher output, less downtime, reduced labour required to operate, and reduced energy to run the extruders, giving us the ability to produce the next generation of films. We use less polymers to make film the same strength and that's an environmental impact reduction.
This technology, which started in Ireland, is spreading all over the world, with increasing demand everywhere grass bales are made. It started here ten years ago. For the first five years adoption was relatively slow. In the last five years we've seen it take hold as contractors selling their used machines buying into the new technology, so farmers have increasing access to machines with the ability to apply F&F.

Sealing the Pit

A major new development for covering pit silage, not available in Ireland yet, is at commercial stage development. What we're launching this year in the UK is a 2-in-1 sheet called the Visqueen Synergy, where we have integrated the cling seal underlay sheet and the top silage sheet, speeding up the pit covering process, halving labour and time input for the farmer and making it much easier to handle and roll out in windy conditions. Up to now you had to have people to hold the cling film down while the top sheet was rolled out. We're upping the quality of the top sheet as well, and we're targeting this to the people who really value their silage. Pitted silage can have wastage and deteriorated product of to 20-25 per cent, if you don't cover and seal properly, making is very expensive by any standard. The forage in the pit is valuable and a lot of it is going to waste because it's not well sealed, not well preserved. We haven't seen a lot of development in pit silage covers until recently and this is a significant step forward.

The Global Picture

Worldwide, there are huge variations in the technologies and methods used to preserve forage. If you go to somewhere like India, they're in the infancy of wrapped silage. Labour is more plentiful and the technology is at a more basic stage. But it's interesting to see the contrasts with the likes of New Zealand, Australia, Norway, the United States and Canada, where they're making huge clamps of maize or corn forage as they call it, where bales silage is less popular.
We see rice straw being baled in Japan and Korea, it's a by-product and they're using it as a fodder roughage, putting it into mixer wagons. There are lots of different grasses we couldn't grow in this country that are being used for biofuels as well as for animal feed. In India they're growing grasses that are being baled for biofuel. Round bales are very popular



in Ireland, the UK, and Europe in general. In the Scandinavian countries, there would be more round bales than pit silage.

War Driving up Costs

Silage film and most agricultural crop packaging is manufactured from polymers that are derived from oil byproducts, so the sector is unavoidably exposed to geopolitical instability in major oilproducing regions. The Middle-Eastern conflict has already had a significant impact on oil markets. Since the end of February, we have seen oil prices rise sharply, and polymer prices have increased by more than €800 per tonne, which equates to roughly €20 per roll of silage wrap. If the situation does not stabilise, further increases are likely. These impacts tend to have a long tail, and it could take many months, or even years, before supply chains and pricing return to prewar levels.
From a supply perspective, the industry plans well in advance for the silage season. We manufacture 24 hours a day, seven days a week, for 12 months of the year to build stock for a harvesting window that typically runs from May through to September. By the beginning of March, approximately 60-65 per cent of the anticipated season's volume has already been produced, with the remaining 35-40 per cent manufactured between March and July. While current supply remains adequate, continued disruption or prolonged escalation would inevitably increase pressure on both availability and cost as the season progresses.
As with all such situations, much depends on how events unfold over the coming weeks, but farmers should be aware that the cost pressures we are seeing today are very real and could intensify if instability persists.

YOUNG FARMER SPOTLIGHT: JOSHUA MOORE

A profile of Down YFCU Member and Overall Winner of the Young Farmers Ulster Grassland Competition, Joshua Moore.



Joshua Moore, is a young farmer, Hereford breeder and active member of the Artana Young Farmers Club of Ulster (YFCU), which has 27 members, split 50/50 between male and female. He is currently the club's Treasurer and was previously club Leader and Secretary.

The YFCU has over 3,600 members and, with 50 clubs active throughout the province, the clubs meet on a fortnightly basis and provide a programme of activities that the young people are responsible for delivering and developing.

Joshua is active on social media with Facebook and Twitter accounts. He received his agricultural education at Greenmount College in Antrim. He was awarded the title of overall winner of the Young Farmers Grassland competition and he received his award from Ivor Lowry, Incoming President at the Ulster Grassland Society, at their annual conference in January 2026. The Ulster Grassland Society was founded in 1959 and is the biggest grassland society in the UK with around 500 members. Joshua also won the Co. Down silage assessment when he was 16 years of age.

Joshua farms around 50 acres of land on heavy soils on high ground (800-1200 feet above sea level) on a north facing farm near Dromara in Co. Down. He has a herd of 25 Hereford x Angus cows, which include seven pedigree Hereford cows. All the commercial calves are sold as one year old as weanlings. Joshua also sells two bulls for breeding privately each year. All livestock are reared on grass and silage and no meal is fed. This is only made possible due to the high quality of the grass swards, great silage quality and excellent crop yields.

Joshua also has a flock of 35 Lleyn ewes that are crossed to a Charollais tup for selling finished lambs off grass in August. Lleyn ewes are a medium-sized, highly prolific and maternal breed of sheep originating from the Llŷn Peninsula in North Wales. They have grown in popularity to become one of the fastest-growing breeds in the UK due to their adaptability to both lowland and upland areas, good milking ability, and, ease of management.

Machinery on the farm includes a John Deere 6830 and a Class 446 tractor, a Fransgard mower and haybob, Kuhn baler, Kverneland wrapper, Kverneland plough and an Abbey slurry tanker. Joshua also has a Vicon fertiliser spreader which he also uses to sow any grass seed mixtures. Joshua also does some ploughing for his neighbours.

A low input fertiliser programme is used on this farm with most of the Nitrogen used for silage crops. 20kg/ha on grazing in April and 67kg/ha applied at both 1st and 2nd cut silage. However, he imports slurry from in-laws who are dairy farmers. Joshua makes all his own silage bales and he also makes baled silage for in-laws and some friends.

The first cut of silage is made during the first week of June and made as haylage for feeding to cows. The second cut of silage is made during the first week of August and is high in dry matter for feeding young stock once they are housed.

Last year the Fane Valley lab results for his second cut baled silage was top class with DM at 42.6 per cent, protein at 15.1 per cent, D value at 66.6, M.E at 10.7 and pH was 5.6.Joshua also make around 30 large bales hay for feeding alongside grass in the shoulders of the year and to youngstock when they go onto three acres of forage rape in the autumn. He re-seeds around 10 per cent of his land every year; this currently includes four acres of multi species and white clover swards to eliminate all inputs on some areas of the farm.

The grass seed mixture (Barenbrug/Germinal) includes Timothy, Cocksfoot, Tall Fescue, Perennial Ryegrass, Red and White Clover. Joshua is using Cocksfoot and Timothy as larger percentage in his mixes to get deeper rooting and better growth at the shoulders and during dry times.

Joshua is also a self-employed livestock contractor and is busy working with local farmers to help them during peak periods with calving Limousin and Simmental X cows, and lambing in the spring; as well as shearing 700 ewes (Cheviot, Easycare and Suffolk) and weaning lambs later in the year. He also helps a local contractor with farm fencing and does harvest help on a local tillage farm. This farm grows 200 acres of winter barley, 200 acres of winter wheat and 200 acres of forage maize with stubble turnips as a break between the barley and maize crops.

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LIVE WEIGHT PERFORMANCE DATA UPDATE

Paul Smith, Mark McGee and Paul Crosson at Teagasc Grange, provide latest data on live weight performance for Irish beef cattle production.



Paul Smith



Mark McGee



Paul Crosson

Profitability on Irish beef farms is underpinned by achieving lifetime live weight gain targets from a predominantly grass-based diet. Furthermore, research conducted by Teagasc, now embodied in the national Climate Action Plan, has shown that reducing the average finishing age from 26 months to 22-23 months by 2030 can contribute up to 15 per cent of the agricultural sector's 2030 greenhouse gas (GHG) reduction target.

Reduction in Average Finishing Age

Live weight performance gains in the national beef herd over recent years have resulted in a notable reduction in the national average finishing age of prime (steers, heifers and young bulls) cattle. In 2025, the average finishing age was 26.5 months, which is approximately 45 days younger compared to 2010 levels, reflecting sustained increases in lifetime live weight gain. Progress has been most pronounced in steers, where finishing age has fallen by an average of 5.4 days per year. In comparison, reductions for young bulls and heifers have been more moderate, at 1.2 and 0.8 days per year, respectively. While these performance gains are due to many factors, a greater focus on market specifications is likely to have been a main driver. In particular, upper limits on carcass weight and age will have a bigger impact on steer production systems, thereby accelerating the shift toward earlier finishing relative to heifers and young bulls.

Within the national Climate Action Plan, 2018 was selected as the base year for calculating GHG reduction targets for each sector in Ireland and is therefore the year against which climate targets are measured. Approximately 1.27 million prime beef cattle were finished in 2018, with an average finishing age and carcass weight of 26.0 months and 338 kg, respectively. By 2022, average finishing age was reduced to 25.6 months, with minimal impact on carcass weight (see Table 1). However, mean finishing age increased by about two weeks in 2023 and by a further two weeks in 2024 combined with 5 kg reductions in carcass weights. This reduction in performance has been attributed to the negative impact of adverse weather conditions on cattle growth in those years. In 2025, there was no change in average finishing age compared with 2024 and carcass weight increased slightly (+5 kg). It is also noteworthy that there has been a reduction in the number of animals finished as the total population of breeding cows (suckler + dairy) in the country declines. In 2025, 1.16 million prime beef cattle were finished, which is a reduction of approximately 105,000 animals compared to 2018.



Delivering on Climate and Profitability Objectives

Beyond the impact of poor weather conditions, a continued downward trend in the proportion of male cattle being finished as young bulls has also hindered progress in reducing finishing age during this period. On average, in comparison to steers, young bulls in 2025 were finished 238 days earlier and produced a heavier carcass. If the same proportion of the prime beef cattle population were finished as young bulls in 2025 as in 2018, the national average finishing age would have been 14 days lower, at 26.0 months, thus highlighting the benefits of young bull beef production in reducing finishing age. It is also worth noting that well-managed bull beef production systems producing carcasses to market specifications are also more profitable than steer beef systems. This again highlights that strategies to reduce finishing age, in this case finishing males as bulls rather than steers, can deliver on climate and farm profitability objectives.

Reduction in Population

The reduction in the breeding cow population between 2018

Table 1. Recent trends in finishing age and carcass weight of Irish beef cattle

	Finishing age (months)					Carcass weight (kg)				
	2018	2022	2023	2024	2025	2018	2022	2023	2024	2025
Steers										
Dairy	27.8	26.5	27.2	27.6	27.6	316	310	306	302	307
Dairy-Beef	27.3	26.4	27.0	27.1	27.0	334	333	330	323	329
Suckler	28.4	27.3	27.8	28.3	28.5	387	392	388	385	391
Heifers										
Dairy-Beef	25.0	24.7	25.3	25.5	25.6	277	282	280	276	281
Suckler	26.2	26.0	26.4	27.0	27.3	333	340	336	335	341
Young Bulls										
Dairy	21.0	20.7	20.8	21.0	20.8	312	309	303	301	306
Dairy-Beef	20.2	20.3	20.1	20.2	20.3	342	345	336	330	338
Suckler	18.5	18.0	18.0	18.5	18.6	403	404	402	401	408
Average	26.0	25.6	26.1	26.5	26.5	338	336	331	326	331

Data assembled from DAFM approved abattoirs and provided by ICBF

and 2025 was alluded to previously. More specifically, the dairy herd has increased by just over 100,000 in this period but this has been more than offset by a reduction of approximately 270,000 suckler cows. This has created a marked shift in the proportion of beef originating from suckler and dairy cows. In 2018, suckler-bred animals accounted for 49 per cent of the national prime beef kill, whereas by 2025 this share had declined to 38 per cent. There has also been a renewed focus on improving the beef merit of progeny from the dairy herd with greater use of sexed semen to reduce the number of dairy-sired beef progeny. Consequently, the proportion of the beef kill originating from dairy cows bred to beef sires increased from 60 per cent to 75 per cent. This has also coincided with greater understanding and use of the Dairy Beef Index (DBI), which helps dairy farmers to select beef sires that are 'balanced' on calving and beef traits, and the Commercial Beef Value (CBV) which helps both dairy and beef farmers to identify calves after birth with the highest beef merit. Another positive development is that, since 2018, the total proportion of steers and heifers meeting the desired carcass specifications (i.e. 30 months of age, carcass fat score of 2+ to 4= and carcass conformation score greater than O−) has increased from 54 to 61 per cent. There has been a particularly notable shift in the number of suckler-bred and beef crossbreds from the dairy herd meeting the target carcass specifications.

Beef-Quest Project

While year-to-year variation in finishing age is inevitable, understanding the key on-farm factors impacting the growth performance of the national prime beef cattle population will help develop practical and targeted measures capable of improving lifetime live weight gain. Through the Teagasc-led Beef-Quest project, funded by the Department of Agriculture, Food and the Marine, research is underway to identify the predominant nutrition, health and on-farm environmental factors currently constraining growth performance of cattle and contributing to older finishing ages on commercial beef farms. In collaboration with ICBF and UCD, the Beef-Quest project is undertaking a multifaceted approach to



identify the key factors impeding animal lifetime live weight performance across a variety of production systems, and to assess the barriers to technology adoption on farm.
To date, live weight data at key stages throughout the production cycle have been collected on approximately 10,000 beef cattle across nearly 200 commercial beef systems. Furthermore, detailed characterisation of winter forage nutritive value, concentrate feeding regimes, grassland management, and surveys of animal health protocols and on-farm environments has been conducted across all participating farms. As the large-scale commercial trial comes to an end, focus groups and interviews with participating farmers are planned to better understand the obstacles impeding technology uptake on farm. In addition, a research experiment will commence this April in Grange to assess the growth and environmental efficiency of both dairy-beef and suckler-bred steers finished off grass at 26, 28 and 30 months of age. With nearly 40 per cent of steers estimated to be finished during a 'third' grazing season nationally, this experiment will provide data directly applicable to a large proportion of commercial beef producers. Data assembled from the on-farm study, as well as other project components, will be used to quantify the environmental and economic benefits associated with optimising animal nutrition, health and on-farm management, and to identify the most effective measures for improving animal daily live weight gain and reducing finishing age in Irish beef systems.

BEST IN CLASS

Sean Kelly, from Nenagh, Co. Tipperary, has a host of awards to his name. Here, we profile this dairy farmer, who offers a great example of excellence in the sector.



Previously named the Dairy Category winner at the FBD Young Farmer of the Year Awards (2023), Sean is has been recognised for his excellence in dairy farming, farm safety and environmental awareness.

Sean joined Macra while studying at Gurteen Ag College and is a member of the Nenagh Macra na Feirme club. He was crowned the 2025 winner of Macra's Mr. Personality competition and has risen up the ranks in Macra to Club Chair, County Treasurer, National Council representative (North Tipperary), Sports Officer, Young Farmer Development Group Chair, Macra board of directors (2023-2024), Vice-chair of the Agri Affairs Committee 2023-2024 and the current Chair.

Sean was also the 2025 Munster and All Ireland winner in the MSD Technology for Profit competition.

Sean says: "The great thing about Macra is that it can push you out of your comfort zone because when you take on those roles, you have a responsibility to deliver, so there is huge room for personal growth within the organisation."

Generational Farming

Sean farms alongside his parents, Margaret and Patrick, managing a 110-Holstein Friesian cow herd on the family dairy farm. Cows are milked in a 12-unit Dairymaster parlour. His four key farm targets are Animal Health, Genetics, Management and Nutrition. The emphasis on this dairy farm is on sustainability, cow performance and long-term planning. Sean plans to improve milk protein, butterfat and fertility. With milk protein at 3.77 per cent and butterfat at 4.8 per cent, he is happy with the progress he is making.

Data and Statistics

Commenting, he says: "The cow monitor collars and milk recording give him so much knowledge and information. I can turn this data into useful information and herd actions". Sean has practiced selective dry cow therapy for over seven years. Now less than 30 per cent of his cows receive antibiotics at drying off. The cows are on 8-900 kgs of compound feed fed, which is supplied by the Dan O'Connor feed mill in Limerick. The farm has lots of cubicles and plenty of feeding space, which is good for animal health. Cows average weight is 563kgs and yield is 550kgs of milk solids/cow, so this is an excellent benchmark with one kg of milk solids from each kg of bodyweight. Milk from this spring calving herd is supplied to Arrabawn Tipperary Co-Op.

Herd EBI is €178 and 90 per cent of the cows are calved in six weeks. The whole herd was genotyped over 10 years ago. The benefits of genotyping include increased accuracy and reliability of the Economic Breeding Index (EBI), Dairy Beef

Index (DBI) and the Commercial Beef Value (CBV) of calves. Genetics from Dovea AI are used on this farm and they also supply some bulls to Dovea AI.

Herd health

Having good animal heath works well for Sean as his heifers have a conception rate of 65 per cent. Heifers are synchronised and sexed semen is used on the top 20% of the cows. The bottom 20 per cent are put in calf to an Angus bull. According to Sean and his local vet, Eamonn O'Connell of Summerhill Vets: "Vaccinating cows against IBR, BVD, Lepto, Rotavirus, and Salmonella is a critical component of herd health management, specifically for maintaining fertility, preventing abortion, and protecting calves via colostrum." These vaccines are typically administered to pregnant cows 3-4 weeks prior to calving to ensure high antibody levels in the colostrum.

Sustainable moves

A true advocate for data and detail, Sean has focused on expanding the family farm with sustainability at its core. From milk recording and behaviour monitoring collars to a solar water pump to supply the drinking troughs. Sean and his family are showcasing how data-driven decisions can optimise herd performance while ensuring long-term farm sustainability.

Sean grows around 15 tonnes of grass DM/ha and his cows are stocked at 3.6/ha. Silage quality is excellent at 71 per cent DMD. However, silage tests showed that it was low in salt so all cows now have access to mineral licks. Sean uses Pasture Base to good effect to help him with his grassland management. The out farm and low yielding paddocks are reseeded on regular basis with Red and white clover along with Aberchoice and Abergain grass seed mixtures.

These deliver excellent growth and high-quality grass in the shoulders of the year facilitating extended grazing in free draining soils. Last year, Sean grew 10 acres of forage maize to make some extra silage. This year he will grow 22 acres of winter barley as the straw will come in useful for bedding the calves and other livestock.

Sean milks early in morning at 5.30am and 14.30pm. "This is done to achieve a better work/life balance and to make the farm attractive for those doing relief milking. I want to be able to be able to close the gates at 16.30 and have time for other interests outside of farming. Also, for relief milkers they know that they will still have lots of time in the evening that they'll also have time off. We all live busy lives and I wasn't keen on either me or relief workers having to work late into the evening."

Off the farm

Sean is active on social media with accounts on Facebook, Instagram and Twitter. Despite his busy farming career, Sean has found the time to do a lot of fundraising for mental health charities. Along with his friends he cycled from Mizen head in West Cork to Malin Head in Co. Donegal and helped to raise €42,000 for 'Make the Moove' mental health charity.



TRANSITION TO DAIRYING

Michael A. O'Grady – General Manager, Lely Kilkenny – reviews the transition to dairying on a long established drystock farm.

Jack Hennessy's family has been operating the family farm for generations, traditionally running drystock, sucklers and sheep. In recent years, concerns grew about the longterm viability of both sucklers and sheep, particularly in relation to profitability and cashflow. Dairying consistently demonstrated stronger financial performance, providing the level of income required to support a fulltime return to the home farm. At the time, Jack Hennessy was working full time with Farm Relief Services (FRS) in Kilkenny, and for him to come home, the farm needed to adopt a more profitable and sustainable enterprise.

Decision making and research

Before committing to dairy, extensive research was carried out. This included discussions with established dairy farmers, ongoing consultation and detailed planning with Patrick Gowing his local Teagasc advisor. With no prior experience working with dairy cows, automation was an important factor. Robotic milking offered a way to remove the fixed routine of twice-daily milking, while delivering reliable cowspecific data to support management decisions. Experience from FRS, highlighted to Jack the increasing challenge of securing skilled labour, reinforcing the value of an automated milking system.



Jack and Seamus Hennessy

Choosing Lely milking robots

The strong presence of Lely service vehicles regionally provided reassurance that backup and technical assistance would be readily available. The Lely Astronaut's free cow traffic system suited the farm's objectives, allowing cows to choose their own milking times and supporting natural cow flow. The robot's ability to provide protein, butterfat, and lactose readings at every milking was a further advantage, enabling effective monitoring of cow performance, profitability, and breeding decisions.

Yard design and startup

Several design options for incorporating a milking robot into the existing yard were considered. The final layout, prepared by Lely yard designer William Conlon, delivered the best integration with current infrastructure. The build was completed by Christopher Roche a local builder, who worked closely with the Lely Project Co-ordinator throughout construction, ensuring a smooth process with no unnecessary costs and delays.

At startup, 26 heifers had calved, and a full Lely support team was present to assist with cow training and to provide hand son guidance in operating the Lely system. The first-year herd consisted of 86 heifers, approximately 70 per cent Holstein crossed with 35 per cent British Friesian. Male calves are brought through to forward stores. It was a year where the family was getting used to their new enterprise. Lely Farm Management Support was important to help train Jack on the best running of the Astronauts, grassland management, breeding and many other decisions.

Ongoing system operation

The farm extends 1.6 km in length, with the yard located at one end. Initial concerns about distance were addressed following an on-farm assessment from Lely, confirming suitability for robotic milking. Grazing is managed on an ABC rotation system. B and C wires are moved each morning before 10am, along with routine cleaning around the robot and changing filter socks. The A wire is moved each evening. The two Lely Astronaut robots are installed in a checkout style layout, chosen for its suitability for future expansion. Each robot undergoes servicing every 20,000 milkings to maintain performance reliability.

Lely Collector C2 Investment

Last autumn, the farm invested in a Lely C2 Collector cleaning robot. It cleans all cubicle passages and slatted areas, travels across the feed passage, and also cleans the slats in front of the milking robots. Additional routes can be added if expansion occurs. The investment has improved hygiene across sheds, resulting in cleaner cubicles and cows. Also reducing workload.

Performance and future plans

Heifers produced 360kg of milk solids in year one, increasing to 417kg last year, with a target of 460kg this year. The long term aim is to lift performance to 550kg from the existing herd. SCC was 57,000 last year and six-week calving rate was 86 per cent. Expansion of cow numbers remains an option. The core goals are to maintain optimum cow health, high performing cows, achieve strong profitability, and ensure a sustainable worklife balance.

TIPPERARY FARMER CHAMPIONS PEDIGREE FRIESIAN COWS

Rachael Delahunty farms in partnership with her parents Tom and Antoinette at Market Hill, in Fethard, Co. Tipperary.

They have a spring calving pedigree herd of 100 British Friesian cows and milk is supplied to Tirlán Coop. Average yields are very respectable at 6,500-7,000 litres /cow pa when compared to the national average of only 6,000 litres. Cows are milked in a 14-unit Dairymaster herringbone parlour.

Butterfat is around 4.2 per cent and milk protein is about 3.4 per cent. The long-term plan is to increase milk solids/cow. Herd genetics have been sourced from Dovea AI for over 20 years.



IHFA Cert

To begin the upgrading process, Rachael sought the advice of the Irish Pure Friesian club chairman, Paddy Queally. Paddy explained the requirements and then put Rachael in contact with Donal Carey the IHFA Grade Up Officer. The main requirements of the grade up process are as follows:

- Milk recording and Membership of IHFA
- Registered herd prefix with IHFA
- Herd free of any restrictions under disease eradication schemes

Rachael explains: "Donal then arranged a visit to the farm and we went through the cow families and records of the sires used over the years. Accurate records are vital. Any animals selected for culling were not graded up. Upon completion of this process IHFA issued the herd certificates."

Before upgrading to pedigree status her dad, Tom, always preferred British Friesian cows. There were number of factors in upgrading the herd. Firstly, Rachael wanted to build on the breeding her father has done since he began his own herd in 1987 -having taken over from his mother, Eleanor Delahunty. Secondly, as Rachael will one day farm on her own, the pedigree cows will provide an additional revenue stream from selling surplus maiden heifers or breeding bulls to cover the additional costs of a pedigree herd. Also, in the unfortunate event of a TB breakdown the herd will also have increased compensation for pedigree status.

Benefits of British Friesian

The main reasons for the British Friesian on the farm are for its easy care, health, fertility, longevity and carcass confirmation. Carcass confirmation is very important as all non-breeding calves are reared to beef as well as the value of the cull cow. Easy care, health, fertility and longevity are vital traits that we value and see clearly on our own farm. 2025 was a good year with 81% of the herd calved in six weeks and the average calving interval was 361 days: the national average is 385 days. Average somatic cell count for the year was very good at 82,000. As the average SCC for Irish dairy herds was around 179,000 cells/mL in 2023,

Grass, silage and compound feed

Aside from grass and silage cows are also fed around 1,100kgs of compound feed manufactured by Bretts Bros. in Callan, Co. Kilkenny. Around 10 per cent of their land is reseeded every year with a grass seed mixture also supplied by Brett Bros. Her husband, Michael Staunton, who has a full-time position also helps on the farm on a daily basis with milking, calf rearing etc.

They use Agriking's Silo-king silage additive on all the 1,500 bales they make themselves which is of excellent quality at 70-75 DMD. Silo-King® is a silage additive designed to enhance the fermentation, stability, and nutritional quality of the forage. It combines antioxidants, enzymes, and lactic acid bacteria to reduce DM loss, minimise heating, and improve the palatability and digestibility of the silage.

Machinery

Their own farm machinery includes one Claas and three Masey Ferguson tractors, a Claas mower, tedder and baler



and a Tanco wrapper, Abbey slurry spreader with dribble bar, agitator and an Abbey tub diet feeder.

Slurry spreading is done by Tom using the Abbey tanker fitted with a dribble bar. Dribble bar is used to comply with LESS system under derogation rules. Dribble bar spreading means that we are back to paddock grazing faster than with traditional splash plate spreading as grass pollution is minimal.

On and off the farm

"We have been diet feeding since the late 1990s as it has allowed us to better manage the cows diet when feeding all bale silage. For example, we can mix wetter silage of lower quality with higher quality to maintain consistency. A typical winter mix for the cows is silage, chopped fodder beet (sourced from local contractor), soya bean and maize meal. Minerals are provided by Agriking which are formulated based on the silage tests also done by Agriking. We also mix hay and straw in the feeder and have this available to cows in the yard at all times when out at grass to maintain fibre intake."

Her uncle, Simon Delahunty, farms beside the dairy herd and all surplus calves are reared on his farm for beef and sold at 22-23 months of age to Dawn Meats in Grannagh, Co. Waterford. They also have a small pedigree flock of Bluefaced Leicester sheep. Michael's father, Tom Staunton, has been breeding Blues since 1987 and Michael and Rachael have used some of this breeding as their flock foundation.

Beyond the farm gate, Rachael is active on social media with accounts on Facebook and Instagram. She is also a member of Fethard Macra club and the Irish British Friesian Club. Rachael is a qualified accountant who previously worked in Limerick and Kilkenny.

WINTER GRAZING FORAGE BRASSICA CROPS FOR LAMBS



Dr Frank Campion – Teagasc Animal and Grassland Research and Innovation Centre, Mellows Campus, Athenry – offers some insight into recent studies which focus on how hill-bred lambs grazing forage brassica crops perform.

The use of brassica crops such as forage rape and hybrid brassicas to bring lambs to factory weights or to out winter ewes can offer a comparatively sustainable system for winter grazing. Studies undertaken in Teagasc Athenry in recent years have been investigating how hill-bred lambs grazing forage brassica crops during the late autumn and winter months perform. A key part of this study has been looking at the performance of three commonly used forage brassica crops and their management during grazing to get the best utilisation out of them. As with any forage be it grass or brassicas there are costs associated and poor management of either the forage or the grazing stock will have a negative impact on the performance of the finishing system.

Lamb performance

Our studies have shown no significant difference in lamb growth rates between lambs grazing Forage Rape, Hybrid Brassica or Kale during the autumn/winter months. When Scottish Blackface X Texel cross entire male lambs were grazed on these crops from October to January lambs achieved an average daily gain (ADG) of 151g/day across the three forages (range 144 – 158g/day). The purebred Scottish Blackface entire male lambs achieved a growth rate of 127g/day (range 122 - 131 g/day) across the same forages. There was also no difference in carcass weight or kill out percentage between lambs from each of the forage brassica treatments with an average kill out percentage of 44.7 per cent across the three diets. While these growth rates are lower than those that would be achieved indoors on ad-libitum concentrates (average ADG ~ 250g/day for hill lambs) they are still sustainable levels of performance allowing lambs to grow and achieve slaughter weight and confirmation characteristics while grazing outdoors. The level of performance recorded was also very stable and consistent once the initial adaptation to the crop was complete which took 3-4 weeks for gut fill changes to take place fully.

Crop Performance

In terms of performance for the crops all three crops grew similar levels of dry matter per Ha (Figure 1). However, there were differences in utilisation levels and particularly in the level of leaf and stem in the different crops. Lambs grazing Forage Rape and Hybrid Brassica utilised 57 per cent and 62 per cent of the crop respectively while the Kale was more

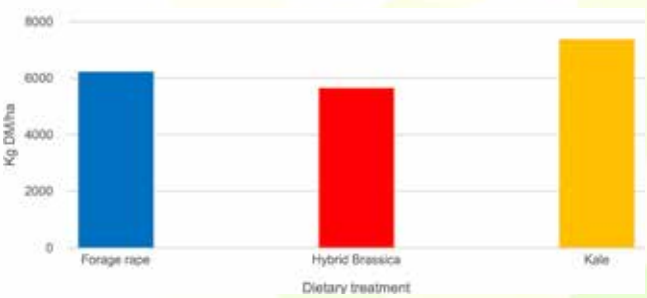


Figure 1. Effect of forage type on pre-grazing yield (kg DM/Ha)



difficult to utilise (54 per cent) due to its thicker stem. In our studies lambs achieved an average of 2918 lamb grazing days per Ha across the three forages over three grazing seasons. During this period 75 lambs were allocated to each forage meaning the lambs were getting an average of 39 days per Ha in our study.

As shown in Table 1, there is a higher level of stem in the Kale compared to forage rape and hybrid brassica which makes it more difficult for the lambs to graze. Overall, this meant that while the lambs grazing Kale had similar performance levels to the lambs grazing the other two crops the reduced forage utilisation meant that the potential grazing days for finishing lambs on Kale is lower meaning less lambs could be put on the crop or more lambs would be unfinished before the crop expired. The fact Kale also needs to be sown earlier and is not suitable to be sown later in the year after a winter cereal crop further reduces the viability of Kale for lamb finishing systems.

Grazing Management

In the studies carried out by Teagasc lambs receive two-day allocations of forage brassica, to try to maximise the utilisation of the crop and the performance of the lambs. Further studies are ongoing looking at different grazing lengths and post-grazing utilisations to assess how these impact on lamb performance. In commercial practice the length of time lambs spend grazing a particular area will vary between farms, but it is important that lambs are not left grazing the one area for too long. Lambs will selectively graze the leaves of the crops first followed by the soft stem and eventually the harder stem with the highest nutritional benefit to the lamb coming from the leaf. By moving the lambs regularly, they are getting regular access to the leaf of the plant spending less time grazing the harder to graze and lower nutritional value parts of the forage.

It is still important that lambs be allowed to graze some of the stem, which will improve utilisation and increase grazing days on the crop but also ensures they are getting a balance of fibre from the plant. However, care is needed when allocating the crop area that they are not left too long grazing a certain area and are short on forage. When deciding on grazing strategies for these crops measuring the yield of the crop and calculating the available DM yield is essential. The area of crop offered should be based on the number of lambs grazing, the yield of the crop and the approximate DM (to calculate DM yield). Lamb intake for this calculation should be calculated based on 3-4 per cent of body weight.

Table 1. Effect of forage type on pre-grazing leaf and stem content.

	Total Utilisation (%)	Leaf (%)	Stem (%)
Forage Rape	57	46	54
Hybrid Brassica	62	47	53
Kale	54	36	64

Acclimatising to the Forage Brassicas

Lambs need to be introduced to forage brassicas gradually as forage brassicas are highly digestible and can cause digestive issues if introduced to the diet too quickly. A key component of dietary management when grazing these crops is that lambs always have access to clean water and an additional forage source i.e. a grass run back. Careful attention also needs to be paid to the DAFM guidelines for grazing forage crops to ensure sufficient run back spaces and buffer margins are followed to ensure compliance.

Conclusion

Results from our studies have shown that using forage brassicas to finish lambs in the autumn/winter is effective but good management of the crop is required to maximise the utilisation and the performance of the grazing lambs. It is important that grazing decisions are made on actual crop yields and estimated grazing times for the lambs being grazed on the crops.



EARLY-LIFE NUTRITIONAL PROGRAMMING AND LIFETIME PERFORMANCE IN DAIRY-ORIGIN BEEF CATTLE



Dr. Alan Kelly – at UCD School of Agriculture and Food Science, Belfield and UCD Dairy Calf Research and Education Facility, Lyons Estate – offers some insights into early-life nutrition related to lifetime performance.

The increasing reliance on dairy-origin animals for beef production in Europe, now accounting for approximately 60-65 per cent of total output, has intensified the need for biologically efficient production systems capable of delivering carcass specifications at reduced slaughter ages. In Irish pasture-based systems, the strategic objective of reducing slaughter age from approximately 25.8 to 22 months is closely aligned with improving feed efficiency and reducing greenhouse gas emissions per unit of output. Within this context, early-life nutrition represents a primary determinant of lifetime animal performance, with disproportionate effects on growth trajectory, carcass composition, and system-level efficiency.

A substantial body of evidence demonstrates that growth performance during the first 4 months of life accounts for up to 40 per cent of the variation in final carcass weight. This reflects both the high biological priority for nutrient partitioning towards growth during early life and the limited capacity for compensatory gain in calves under six months of age. Consequently, suboptimal growth during this period results in persistent deficits in live weight, delayed finishing, and reduced carcass value, which cannot be fully recovered through increased nutritional inputs later in life.

The biological basis underpinning these responses lies in nutritional programming, whereby nutrient supply during key developmental windows exerts lasting effects on tissue





growth and metabolic function. Skeletal muscle fibre number is largely established prenatally; thus, postnatal growth depends on fibre hypertrophy and satellite cell proliferation, both of which are sensitive to nutrient supply. Adequate energy and amino acid intake in early life enhances protein accretion and supports lean tissue development. Adipose tissue development is similarly responsive, with early calfhood representing the primary phase of adipocyte hyperplasia, determining the animal's capacity for subsequent fat deposition. Enhanced nutrition during this period promotes both adipocyte number and size, particularly in subcutaneous depots. This is of practical importance in Irish pasture-based dairy-beef systems, where achieving a carcass fat score >6 at ≤22 months is challenging. Strategic early-life nutrition that supports adipogenesis may therefore improve the likelihood of meeting carcass fat specifications without reliance on high-input finishing systems.

Pre-Weaning Nutrition: Optimising Growth Without Compromise

The pre-weaning period is a critical control point for establishing growth trajectories. Target performance during this phase is an average daily gain (ADG) of approximately 700 g/day, facilitating attainment of ~100 kg body weight by 12 weeks of age. Conventional milk replacer (MR) feeding systems, providing 750 g dry matter per day (typically 6 L at 125 g/L; or 15.3 g/kg bw), are sufficient to achieve this level of performance when formulations contain 20-23 per cent crude protein and 17-23 per cent lipid. Increasing crude protein concentration beyond 23 per cent or lipid beyond 17-23 per cent has not been shown to improve growth rates, provided that high-quality, milk-derived protein sources are used. Intensified MR feeding strategies, delivering >1000 g/day of powder and targeting ADG in excess of 800 g/day, have been extensively evaluated. While these systems increase pre-weaning growth rates, the magnitude of the response in terms of weaning weight is typically modest (<10 kg), and importantly, these advantages are often not retained through subsequent production phases. Indeed, Importantly, when concentrates are offered ad libitum, calves receiving lower MR allowances compensate through increased solid feed intake, often consuming an additional 20-25 kg of concentrate during the pre-weaning phase. A key limitation of intensified MR feeding is the inverse relationship between milk intake and solid feed consumption. Elevated milk allowances suppress concentrate intake, delaying rumen development and reducing the calf's capacity to transition efficiently to post-weaning diets.

Weaning and the Role of Solid Feed

The development of a functional rumen is central to sustaining growth beyond the pre-weaning phase. Rumen maturation is driven by the fermentation of solid feed, particularly starch, which produces volatile fatty acids (VFAs). Butyrate plays a critical role by stimulating the proliferation and elongation of rumen epithelial papillae, thereby increasing absorptive surface area. Approximately 3-4 weeks of consistent concentrate intake are required to achieve meaningful rumen development. Consequently, early introduction of calf starter within the first 4-7 days of life is

essential.
Starter intake should reach approximately 300 g/day by two weeks of age and exceed 1.3 kg/day prior to weaning. These thresholds are strongly correlated with rumen fermentative capacity and epithelial development.
Weaning represents a critical transition, during which the calf must shift from a liquid-based to a solid-based nutrient supply. Success is determined by the calf's ability to sustain nutrient intake post-weaning. Calves should be consuming at least 1.3 kg of concentrate daily for three consecutive days prior to weaning, equivalent to 1.5-1.7 per cent of body weight. A gradual weaning step-down over 10-14 days is required to prevent reductions in dry matter intake, energy intake, and ADG, particularly in calves previously receiving ≥750 g/day of MR. In manual high-milk feeding programs, providing at least two weekly step-downs (≈25 per cent reduction per step) will smooth the transition. Abrupt or overly rapid weaning (≤7 days) under these conditions can cause significant growth checks, reduced intake, and increased disease susceptibility. For calves fed higher planes of milk (>750 g/day MR), weaning should be delayed until after 8 weeks of age to avoid growth depression. Additionally, stressors such as dehorning or vaccination should be avoided during weaning period and for a two weeks' period post weaning as they can weaken the immune system and thus increase the risk of morbidity and mortality.

Post-Weaning Nutrition: Exploiting Biological and Production Efficiency

The integration of pre- and post-weaning nutrition is fundamental to maximising lifetime performance. Pre-weaning strategies that promote early concentrate intake and rumen development directly underpin post-weaning intake capacity and growth potential. As such, the post-weaning phase represents the most critical and biologically efficient period within the production cycle.
Feed efficiency during this phase is exceptionally high. Feed conversion ratios (FCR) are approximately 3 kg dry matter intake per kg live weight gain between 8 and 12 weeks of age, increasing to ~5:1 by 30 weeks. This is two- to three-fold more efficient than the finishing phase, emphasising the biological advantage of nutrient utilisation during early growth. When coupled with high-energy concentrate-based diets, average daily gains (ADG) of 1.4–1.6 kg/day can be achieved for 10–15 weeks post-weaning, with sustained gains of ~1.3 kg/day maintained up to six months of age. This represents a 50-60 per cent increase relative to conventional forage-based systems and is central to achieving target live weights for age. Crucially, the integration with grazing management during the first season is required to preserve these gains in pasture-based dairy-beef systems. Concentrate supplementation during grazing should be strategically aligned with grass supply and quality to ensure that nutritional demand is consistently met. Failure to sustain this high level of performance during the grazing phase (~1.0 kg/day) will erode early-life advantages and compromise overall system efficiency.
Importantly, live weight advantages established during the post-weaning period are largely retained through to slaughter. Animals offered higher planes of nutrition post-weaning maintain significant weight differentials at housing and slaughter, whereas differences attributable solely to pre-



weaning nutrition are often diminished over time. There is little evidence of compensatory growth sufficient to offset early-life nutritional restriction, confirming that deficits incurred during the first six months persist throughout the production cycle.
From a systems perspective, these responses support the strategic reallocation of a high proportion of concentrate inputs from the finishing phase to early life. Given the superior feed efficiency of young calves, investment in post-weaning nutrition yields greater biological returns in terms of live weight gain per unit of feed consumed. This approach improves economic efficiency while simultaneously reducing environmental impact through shorter production cycles and lower cumulative emissions intensity.
In contrast, nutritional interventions later during the finishing phase for farm system once dietary requirement for energy and protein has been meet, have limited capacity to modify carcass characteristics established earlier in life. Indeed, substitution of cereal sources, such as maize for barley at high inclusion levels, has negligible effects on performance or carcass traits, most notably carcass fat. Similarly, supplementation with rumen-inert fats has not been shown to improve carcass fatness and may negatively impact feed intake and growth performance. These findings challenge prevailing assumptions within the feed industry and reinforce the primacy of early-life nutrition in determining lifetime outcomes.

Conclusion

Early-life nutrition represents a critical determinant of performance in dairy-origin beef systems, exerting lasting effects on growth, efficiency, and carcass composition. The first six months of life constitute a window of opportunity during which targeted nutritional strategies can shape the animal's developmental trajectory. While intensified pre-weaning feeding systems may offer limited benefits, the promotion of early concentrate intake, effective rumen development, and exploiting high post-weaning growth rates are central to achieving optimal outcomes. Crucially, failure to meet growth targets during this period cannot be readily rectified through later nutritional interventions, highlighting the need for a proactive and integrated approach to calf nutrition within sustainable dairy-beef production systems.

FARMING FOR THE FUTURE, THE 'CLIMATE SMART' WAY



Dr. Mary McEvoy, Technical Director at Germinal Ireland Ltd

Farmers don't need to be told that agriculture operates in an unpredictable world. Whether it's the ripple effects of tariffs, surges in fuel and fertiliser costs, or the upheaval caused by conflicts thousands of miles away: farmers feel these shocks quickly and directly. The pace of disruption seems to be accelerating: Ukraine in 2022, Iran today… what comes next?

But while geopolitical issues grab the headlines, a more persistent challenge demands our attention too. That challenge is climate change. Its consequences for how and where we farm are already being felt.

The World Is Getting Warmer

The data is clear. NASA's 175-year temperature record shows that the ten warmest years since recordkeeping began in 1880 all occurred within the last decade (2015-2024). Earth's average surface temperature in 2024 was the highest ever recorded.

The Paris Agreement, signed in 2016 by 194 nations, set the ambition of limiting global temperature rise to below 2°C above pre-industrial levels by 2100, with a preferred ceiling of 1.5°C. Temperatures are already 1.4°C above pre-industrial levels. The UN's Intergovernmental Panel on Climate Change now puts the probability of holding below 2°C at less than 5 per cent. These are sobering numbers, but there is a more positive story emerging.

Ireland Is Making Real Progress

The Paris Agreement is working, at least in part. Many signatory nations are reducing their emissions, and Ireland is among them. A recent analysis of Ireland's Carbon Budget period 2021-2025 by Professor Brian Ó'Gallachór of the Sustainability Institute at UCC writing in the Irish Times forecasts that the country will broadly meet its emissions reduction target of 295 million tonnes of CO_2 equivalent for this budget period. Overall, Irish emissions are on track to be 13 per cent lower than 2018 levels. This is during a Carbon Budget period when the economy grew by one-third and the population increased by 12 per cent. Five out of seven economic sectors have kept emissions within their permitted ceilings. Critically, annual agricultural emissions fell by 4 per cent compared to 2018, even as output grew – with milk production rising from 7.6 billion litres in 2018 to almost 9 billion litres in 2025. Factors like COVID-19 and higher nitrogen fertiliser prices have played a role, but the direction of travel is still positive.

Looking ahead, the focus on emissions reduction will intensify. A national target to cut emission by 50 per cent by 2030 will be followed by an ambition of 90 per cent reductions by 2040. These themes are likely to feature prominently at COP31 in Turkey this November, which also falls during Ireland's Presidency of the EU Council. The conversation is happening at the highest levels, and Irish agriculture has a seat at the table.

More People, More Food: The Challenge Ahead

Climate change doesn't exist in isolation. It sits alongside the equally pressing challenge of feeding a growing global population. Today, the world has roughly 8 billion people. By 2050, that figure is likely to be close to 10 billion, and by 2100, around 11 billion.

The UN estimates that within the next 24 years, food production will need to increase by approximately 50 per cent, with protein output needing to double. Put another way: over the next generation of farming, global agriculture will need to produce as much food as it has during the last 1,000 years!

This is a reminder of just how essential farming is, and how remarkable farmers have been at meeting the challenges they face. Over the last 50 years, output has doubled thanks to improved plant varieties, mechanisation, nitrogen fertilisers and crop protection products. Farmers have always found a way.

But climate change is now reshaping the rules. More frequent severe weather events, prolonged droughts, flash flooding, and new pest and disease pressures are altering the environment in which we farm. The farming systems that have served us well must evolve further to remain resilient.

This is where a Climate Smart approach becomes essential.

What Is Climate Smart Farming?

Climate Smart farming rests on three interconnected pillars:

» Sustainable productivity: supporting output and farm incomes into the future.



- Resilience: building the capacity of farming systems to adapt to the real and growing effects of climate change.
- Emissions reduction: continuing to drive down greenhouse gas emissions, and where possible, eliminating them altogether.

Crucially, Climate Smart farming also recognises what is sometimes overlooked: farming is a multi-generational commitment. It flows through families and across generations. It also must be commercially viable. Farmers must be able to produce what they need to, to generate a decent income, and they deserve the right policy framework and practical supports to achieve this.

The Science Behind the Solution - Germinal Horizon

Science has always been farming's greatest ally, and this is even more the case now. Germinal Horizon is Germinal's plant breeding and product development partner, based at the Institute of Biological, Environmental and Rural Sciences (IBERS) at Aberystwyth University in Wales. Plant breeding has been carried out at IBERS since 1919, with varieties available to farmers from the 1930s onwards. Germinal's partnership with IBERS now spans over 40 years.

IBERS was the first grass breeding programme in the world to look beyond yield alone, focusing on traits like quality, digestibility, and water-soluble carbohydrate (WSC) levels. This work gave rise to the Aber High Sugar Grass (Aber HSG) varieties, which increase protein absorption in ruminant animals, directly reducing emissions of ammonia and nitrous oxide.

Germinal Horizon has also pioneered unique clover varieties, including DoubleRoot, a unique hybrid clover that fixes atmospheric nitrogen while persisting longer in the sward during extreme weather. That means reduced reliance on applied nitrogen fertiliser, lower costs, and lower emissions.

But Germinal Horizon's approach goes further. It views grass and forage not just as a feed crop, but as a tool for delivering wider environmental and public good. Its breeding priorities include:

- **Carbon capture** — deeper rooting grasses and clovers to build more resilient, carbon-sequestering swards.
- **Nutrient efficiency** — higher-yielding grasses, grazing-tolerant red clovers and more effective rhizobia strain selections to fix atmospheric Nitrogen.
- **Emissions reduction** — Aber HSG and high-lipid grasses, and Birdsfoot Trefoil varieties with higher tannin levels to reduce livestock methane emissions.
- **Protein production** — red clover varieties to fix Nitrogen and provide a key source of home-grown protein and reduce dependence on imported soya meal.
- **Home-grown resilience** — crop varieties specifically bred for Irish and UK environmental conditions, pest pressures and disease challenges.

Putting it all into Practice – Germinal's Climate Smart Seed Range

Plant breeding takes time, but the pipeline of new varieties is strong and constantly advancing. At Germinal, the goal is to make breakthroughs available to farmers as quickly and practically as possible. This is why the Climate Smart seed mixture range has been developed around clear, farmer-focused categories:

Climate Smart Clean is the leading grass mixture for intensive grazing systems, built around Aber HSG varieties blended



with top-performing white clovers. It supports high-output production while reducing emissions when used at scale.

Climate Smart Capture focuses on nutrient efficiency - reducing fertiliser inputs and lowering costs of production without compromising output. These mixtures include leading grass varieties with nitrogen-fixing clovers.

Climate Smart Thrive brings together diverse species with varied rooting structures to support soil health, build organic matter, and sustain long-term yields. Healthier soil means greater output with lower artificial inputs.

Climate Smart Adapt contains deep-rooting varieties specifically selected to build resilience and reduce risk when weather conditions become challenging.

A Reason for Confidence

Farmers are resilient and have thrived in adversity, including difficult weather, markets and shocks beyond their control. That adaptability is one of agriculture's defining strengths. Climate change is unlikely to stop, but the work of building resilient, productive and lower-emission farming systems continues, steadily, scientifically, and with the long view in mind.

A Climate Smart approach is precisely that: a long-term, multi-generational investment in the future of family farming and the food systems that the world depends on. The varieties, the science and the support are there. The opportunity is now.

Scan the QR code to download the Germinal Grassland Guide.

LAKELAND DAIRIES MILK SUPPLIER MAKING BETTER SILAGE

Paddy Duffin and his wife Joanna are farming at Ballsallagh Road, Cargan near the beautiful Glens of Antrim.



Pictured with Lakeland Dairies milk supplier Paddy Duffin are Ryan McCauley, farm worker and Matthew Cunning, Manager of Fane Valley Ballymena store.

They also get great help from Ryan McCauley who is employed on the farm. They have a high yielding Holstein Friesian herd of 65 cows (c. 9-9,500 litres pa) and replacement stock. They supply Lakeland Dairies and purchase their dairy nuts from Lakeland Agri and feed for young stock from Fane Valley. Cows are milked with a Lely A5 robot and fed in parlour with dairy nuts and using an Abbey VF 1250 diet feeder.

The TMR mix includes grass and whole crop silage. Three cuts of silage are taken from their mainly hill farm and the Duffin family make 1,800 to 2,000 bales each year using their own machinery. In 2024, they harvest whole crop from 12 acres and last year the crop yield was 109 bales. This is increasing to 21 acres in the current year.

As a milk producer Paddy knows the importance of making the best quality silage so he began making baled silage four years ago using his own machinery. These include three tractors, A New Holland Tm 155, two Fiat 100/90s, a John Deere mower, a Lely rake and a McHale Fusion 2 integrated baler wrapper. They use a local contractor for tedding.

According to Paddy: "When I started baling and wrapping first, I had limited knowledge on the difference in bale wrap quality between the brands on the market. With the poor quality wrap I was getting off the tractor frequently to re-tie because the balewrap kept breaking. During the silage period, we have to move bales across the farm to our storage site and previously we found lots of pin holes in the bales after transporting them. Bales were also easily damaged while stacking and handling them. In addition, when we opened the bales after storage there could be quite a lot of mouldy silage."

However, all that changed after Paddy started buying Silotite balewrap from his Fane Valley store in Ballymena. "Now I never have to get off the tractor to retie bales, bales are not damaged after transport or stacking and we never have any mouldy silage. The Silotite is packed in a sleeve so no boxes to sort out and with the longer 1800 m rolls I am saving lots of time as we get an extra five bales wrapped per reel. Overall, we find the Silotite more puncture resistant and better for protecting our valuable bales during storage and for a longer period of time."

Matthew Cunning, Manager of the Fane Valley Ballymena Agri retail store says that "Improving silage quality, bale integrity, and feed value are key priorities for livestock farmers looking to maximise their return on home-grown forage."

According to Matthew: "Balewrap quality has also improved while using less film per kg of silage DM and the balewrap is more environmentally friendly . Firms such as Amcor Agriculture can supply their Silotite customers with patented Pro technology Balewrap, multi-layer, stronger but lightweight films. Last year, a record number of silage and haylage bales were wrapped worldwide with Silotite film."

The all-new SilotitePro1800 Sustane product now on sale in France is an 1800m film with 25 per cent post-consumer recycled content, which has been certified by Recyclass. It features a lighter weight (8 per cent less) and stronger film embodying a leap forward in sustainable agri-films.

Today, Silotite's market leading range of balewrap films continue to be used worldwide to preserve a variety of winter forages including grass, maize, sugar beet pulp, clovers, alfalfa, and legumes, protecting these vital foodstuffs from climatic conditions.

Through light weighting and the incorporation of recycled content, the environmental load of SilotitePro1800 Sustane 23 µm film (with 25 per cent PCR) is µ24 per cent less than the standard 25 µm film (with 0 per cent PCR), supporting the circular economy and helping to divert waste from landfill.

EFFICIENT SILAGE AND OTHER FORAGE PRODUCTION



Brian Reidy – independent ruminant nutritionist at Premier Farm Nutrition - looks at efficient silage and other forage production for the year ahead.

As I write this in early April, silage season is just over a month away. Producing sufficient silage for next winter and to make quality must be priority over the coming weeks. This message never changes as good quality silage is cheaper to balance and gives better animal performance. Agri inputs are continuously rising, while there continues to be pressure on the farmgate prices of milk, beef, lamb and cereals.
For too long we have been told that average quality silage will suffice, and this has to change. There is never a good reason to produce poor quality silage in any dairy or beef production system.

Silage Production Costs

Grass silage is getting more and more expensive every year. Unfortunately, its quality can be variable depending on weather, cutting date and grassland management/reseeding policy. Too much poor or average silage in the pit will in fact increase overall production costs. Producing silage from rented/leased land has had a hugely detrimental effect on silage quality in Ireland recently. This ground tends to have older swards and unless it is in a long-term lease is not being reseeded often enouh, limed or having P&K indices maintained sufficiently.
In 2026 with fertiliser and fuel costs soaring, 1st Cut Grass Silage will typically cost approx. €50 plus per tonne or €500 per acre when you include reseeding, liming, Fertiliser, weed control and contractor charges. Delaying the cutting date, while perhaps increasing volume will result in poorer feed and increase the cost/ unit of energy utilised by the cattle being fed.

Silage Planning

Remember that you will reduce the tonnage of silage you produce if you cut earlier. But if you cut early the sward will recover faster and the next cut can be made quicker too. Is this a bad thing to cut earlier and more often if your silage is good feeding? Better quality silage has higher energy and digestibility and that is what your animals will perform on. Better quality, high digestibility silages help to maintain optimum rumen health in your animals. If they like it they eat more of it, they then chew the cud more.
Your cutting date is obviously all down to weather, ground conditions, stocking rate, contractor availability, units of N (Nitrogen) applied etc. The amount of N is a major issue in Irish grass silage production. Many overuse N and this delays the cutting date and also can prevent good preservation. If you haven't put out fertiliser for silage yet, then you must make sure that you apply it according to your intended cutting date. For those that have split their application, assess growth before applying the second split, you may be better to put out less than you had intended as recent growth rates will not have used a lot of the first spread yet. Use soil results to determine if P&K are required to ensure efficient use of the N you apply.

Silage Requirements for Winter 2026/2027

How much silage are you going to be carrying into next winter? What is the quality like? Is it in bales or in a pit? Recent years have taught us that we must make sure that we produce more silage than our requirements but try not to go overboard. Build in a 20-25 per cent safety valve to provide for a longer winter due to poor weather, poor growth etc. We have had plenty of long winters and summer droughts in the past and I am sure we will again, so you never know when you will need extra silage. Try to make it good!
How much will each type of animal eat next winter [based on a silage of 22-25 per cent Dry Matter (DM)].

- Dairy cows will consume around 11kg of total DM when dry. This will equate to 45-50kg fresh silage. o Depending on your system this could be all forage or a little less if concentrates and/or straw are offered pre calving.
- Dairy cows once calved will eat approx. 13kg of forage DM once calved, plus appropriate supplementation. 50 to 60kg fresh weight
- Dry Suckler Cows will typically consume 40-45 kg silage per day, similar to dry dairy cows-This will depend on if you are feeding straw and/or concentrates or not.
- Sucklers with calves will consume 45-50kg of silage per day (11-12kg DM) along with some concentrates to provide sufficient milk for their calf and help them to return to cycling.
- Weanlings will eat in the region of 2 per cent of their own body weight in DM of which silage will usually make up 80 per cent. E.g. a 300 Kg weanling will eat 6 Kg of DM and 75 per cent of this is 20-22 Kg fresh silage per day.
- Stores will eat mostly silage during winter feeding, 80 per cent to 85 per cent of their total feed intake. E.g. a 500 Kg store will eat 35-40 Kg silage daily.
- Finishers may not be so dependent on grass silage for winter feeding as they may have access to alternative forages such as Beet or Maize. On a finishing diet depending on Breed and Sex an animal will consume 2 per cent to 2.5 per cent of their body weight in DM. During this period total intake may be split 50 per cent forage and 50 per cent concentrate. E.g. a Bullock of 600Kg will eat 12-15 Kg DM, which equates to approx. 25-35 Kg fresh silage daily.

Adding Other Forages into the Mix

Crops such as maize silage and whole-crop cereals provide high



DM and starch contents. For many dairy and beef producers there has been a realisation over recent years that maize silage is better value and provides significantly better animal performance than grass silage-based diets. In most cases the necessity to feed extra maize to stock due to low yields of silage in recent years has opened their eyes to the huge merits of having more maize silage and perhaps less grass silage. Other Alternative Feeds such as fodder beet, sugar beet and potatoes are also excellent energy sources well worth considering, to improve feed efficiency on farm. The addition of a second forage source along with grass silage to a beef finisher diet will increase forage DM intake by between 10 and 15 per cent. This will result in reduced concentrate inputs being required. Many are now considering the option of eliminating grass silage entirely from their finishing diets. In dairy herds, maize silage is used as an excellent buffer for grazed grass where it complements it perfectly.

Forage Maize

Maize silage produces very high-quality forage when grown in appropriate sites. It encourages high DM intakes and animal performance. Where target yield is achieved the cost per tonne of DM and cost per 1000 UFL is significantly less than grass silage. 2025 proved to be an excellent year for maize growers and virtually every crop has tested and fed very well. There are no rotational constraints with maize, and it utilizes slurry very well. Site selection, sufficient fertiliser, variety and weed control are critical factors in producing a successful crop of maize. Maize is not suitable in some areas of the country so get the right advice before growing a crop to avoid disappointment.

Whole-crop Cereal Silages

Whole-crop cereals, similar to maize, offer the opportunity of improving the returns from beef production. Whole crop can be made from wheat, barley, oats and triticale. Producing a good quality whole-crop means that the crop must be grown as you would grow a crop destined for the combine. Cutting back on fertiliser, weed control, disease/pest control etc is not cost effective. The most critical part of the process is to get the harvest date right. The length of the harvest window will depend on the preservation method you choose.

As with all high DM forages use a long, narrow and low pit and consolidate very well by constant rolling.

Beet, Potatoes and Carrots

Fodder beet, sugar beet, potatoes and even carrots are fantastic energy sources for milk and beef production. Most will not be in a position to grow beet themselves but now is the time to book it from a local producer for next winter. Beet can significantly boost performance in herds by promoting DM intakes resulting in improved live weight gain, milk yield and reduce concentrate requirements. Potatoes and carrots may become available in some regions and can represent excellent value in many years. Compare concentrate costs per 1000 UFL versus these wet feeds before agreeing a price.

Feed Cost – Sensible Comparisons

When comparing crops for feeding the important figures are Cost per tonne DM and more importantly the cost per 1000 UFL of energy utilised. Cost per acre and cost per tonne fresh are the wrong figures to use when assessing your feed costs. How many tonnes are in each acre, how many tonnes of DM in that acre and what quality has been produced in the acre all form part of the calculation.

Alternative forages provide a much more consistent quality product from year to year than Grass Silage. The technology is now there to help farmers produce these feeds on their farm. All of the alternatives produced efficiently will cost less than Grass Silage per 1000 UFL and will enhance animal performance. Apart from that the purchase of these alternatives from a specialized crop producer also remains a viable option in light of the forever variable cost of concentrates. This option is becoming more common as stock numbers rise and specialized tillage producers have identified the need to produce forages for livestock producers.

Plan now for next winter and calculate tonnages required for the number of animals you will be feeding. More and more livestock producers are getting forages grown on contract. It makes a lot of sense to leave tillage experts grow these crops, especially if the alternative is producing silage of old grass swards with a poor response to Fertiliser.

Summary

Alternative forage acreage is increasing year after year in Ireland, not everyone growing them can be wrong. I hear that in 2026, maize silage acres could tip over 50,000. In DM terms that is the same as approx. 175,000 acres of 1st cut grass silage. That 50,000 acres of Maize will have far more UFLs than the 175,000 acres of silage and will require half the units of N. Food for thought going forward.

HOW TO REDUCE HIGHER COSTS FOR BALED SILAGE

Fermanagh man, Donal Corrigan - Amcor Agriculture, new Area Manager for Ireland – offers some advice regarding addressing costs for baled silage in 2026.

Due to higher fuel, film and fertiliser prices making baled silage is much more expensive this year. So, if we can increase the Dry Matter (DM) of the bales and minimise storage losses significant savings can be made of feeding livestock. However, a 24-36 hour wilt will significantly reduce the number of bales (3 to 5/acre), which is beneficial for reducing ensiling costs and improving fodder quality.
Using the innovative Film & Film system baled silage quality is improved and mould losses are minimised in higher DM silage. The new Film & Fim system uses Baletite net replacement film and Silotite Pro balewrap to conserve baled silage. Silotite Pro is available in black, light green, dark green and white colours. Black is the preferred colour in Ireland as the black colour attracts the heat and improves the tack on the balewrap.

Large-Scale Contractors

The new Baletite 3000m netwrap replacement film is designed for large-scale contractors, with 50 per cent more film per roll (the standard reel is 2000m). This allows operators to spend more time in the field without restocking reels, reducing contractor downtime by up to 50 per cent, depending on usage.
The 1330mm width is optimised for all combi machines, ensuring consistent bale formation and effective over-edge protection. This development responds directly to contractor feedback, delivering a film that improves output and produces denser, more stable bales with lower oxygen ingress. By limiting expansion, Baletite also helps maintain bale quality during storage, supporting effective ensiling conditions and long-term forage quality.



Pictured at Grass 2026 in Cuffesgrange, Co. Kilkenny, on the busy McHale Engineering stand are: Amy Wilkinson, McHale Marketing Dept. Ballinrobe, Co. Mayo; with Donal Corrigan, Amcor Agriculture, Area Manager for Ireland.



This new baler film development is a perfect pairing for SilotitePro®, the 1800m longer length balewrap, to boost efficiency. SilotitePro allows for more bales per reel and is supplied in convenient sleeve packaging. SilotitePro is also a stronger but a lighter film so farmers save money as there is less film to recycle. The sleeves can be recycled alongside balewrap so this avoids bulky boxes left behind in the field.

A SilotitePro 1800 Sustane film is also available featuring a lighter weight and incorporating 25 per cent post-consumer recycled content, this embodies a leap forward in sustainable agri films. This film is already on sale in France where farmers are rewarded for their recycling efforts.

Bales wrapped using the innovative Film & Film system have a much longer storage life, are easier to handle or stack and are more valuable to farmers buying extra forage for their livestock.

Efficiency

By using film to bind the bale together, the removal and recycling of the film is made easier, as there is only one product to recycle, and the busy farmer can avoid the time-consuming job of separating netwrap from stretch film.

Indeed, trials undertaken by the ILVO (Institute for Research in Agriculture) in Belgium found that bales wrapped using the Film & Film system on average contained 10 per cent more silage, and these bales were on average 2cm smaller in circumference than traditional net wrapped bales. So, farmers are saving on balewrapping costs with 10 per cent less bales made/acre.

Trial Results

Excellent trial results have been obtained in Wales by Dr. Dave Davies of Silage Solutions Ltd, who acts as an independent consultant to the Silage Advisory Centres. Dr. Davies is a former Senior Research Scientist at the Institute of Grassland & Environmental Research (IGER) at Aberystwyth in Wales.

His commercial farm trial results indicate that a dairy farmer could gain an average of 5.7kg DM per Film & Film bale, so the 67.26 MJ ME gained (on average) for each Film & Film bale could yield an additional 11.6 litres of milk production. For a cattle farmer, each Film & Film bale could result in an additional 1.5kg of beef production. The value of the extra silage is around €5/bale. This calculation is based on feed costings data made available in December 2022 by Dr. Tom Butler of FBA Laboratories. Dr Butler is a well-respected Irish Agri Consultant & Ruminant Nutritionist who previously worked for Teagasc in Moorepark.

Today, Silotite's market leading range of balewrap films continue to be used worldwide to preserve a variety of winter forages including grass, maize, sugar beet pulp, clovers, alfalfa, and legumes, protecting these vital foodstuffs from climatic conditions.

Sustainable

Amcor Agriculture is a leading plastic recycler and converter in Europe, with the scope and expertise to recycle up to 100,000 tonnes of plastic waste each year. The reprocessing capabilities include LDPE, LLDPE & HDPE – specialising in pre-consumer and post-consumer polythene from commercial, industrial, retail and agricultural sources.

Every tonne of polythene recycled saves 1.8 tonnes of crude oil, reduces energy usage by two thirds, entails 90 per cent less water and cuts Sulphur dioxide emissions by 33 per cent. Useful products manufactured from recycled balewrap include agricultural slats, farm fencing, garden furniture etc.



Scan for more info!

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