Living Proof

Glanbia Ireland's Sustainability Strategy



Glanbia Ireland's commitment to farming, food and the future







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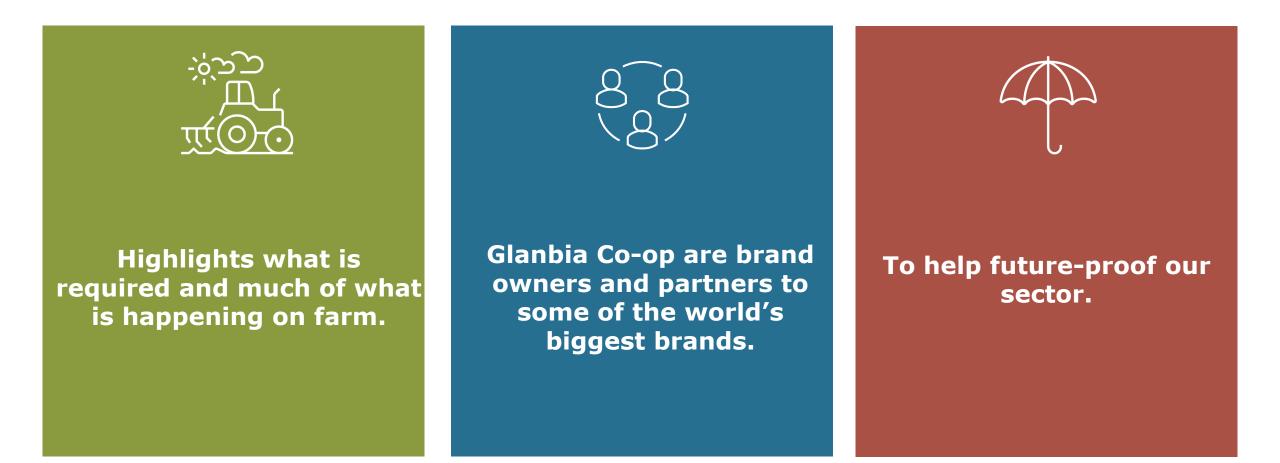
Three generations: The Barron family, mum Ciara, dad Padraig, Fiadh (2) and newborn Paudie with their Grandparents Mary and Pat launching 'Living **Proof**', Glanbia Ireland's sustainability strategy alongside Aoife Murphy, Director of Ingredients, and Chairman, John Murphy, Glanbia Ireland on the Barron family farm at Tullerstown, Co. Wexford.





Why are we doing it













Our Journey



Our Sustainability Journey so far: highlights



Farm Sustainability and Our Natural Supply Credentials



Ireland's food and drink sustainability programme

Founding members of Ireland's pioneering food & drink sustainability programme.



Pioneers in the roll out and implementation of Bord Bia's independent third-party certification Standard. Audit on farm at least once every 18 months.



24,500 calves enrolled on the Cogeca award-winning Twenty20 Beef Club which has an ambition to enrol **50,000** animals per year



Whole of Government and whole of sector collaborative approach taken to improving water quality. Leading role by Glanbia Ireland, in establishment phase.



11 demonstration farms for knowledge transfer on advancements in technology and farming practice for action on climate change.



New brand launched in the USA in 2018.



On Farm Carbon: Calculations on all farms carried out since 2014.
 Anaerobic Digestion: Participation in an Industry led initiative since 2020.



Our Sustainability Journey so far: highlights



CARBON REDUCTION OPERATIONS

- Green electricity at all manufacturing sites.
- Solar project in Ballyragget well advanced.
- Pilots ongoing for green transport electric vehicle for MyMilkMan.

BIODIVERSITY

- **81,000** native Irish trees and hedgerow units planted between December 2020 and April 2021 under Operation Biodiversity.
- Operation PolliNation 1,600 members of the public signed up to the Pollinator Pledge.
- Operation WildNation Over **1,200** entries received in the Colour Me Wild inter-schools colouring competition from pupils nation-wide.

OPERATIO





CIRCULAR ECONOMY

- Plastic and packaging reduction initiatives ongoing.
- The Glanbia Ireland Avonmore brand has moved **12 million** 1.75 litre cartons from fossil fuel plastics to plant-based plastics

WATER & WASTE

- Saving and recycling initiatives on all sites.
- Zero Waste To Landfill.

NATURAL NUTRITION

 Various activities to support the the Glanbia Ireland Nutrition Standard have been initiated.

IN OUR COMMUNITIES

- Since joining FoodCloud in 2018, Glanbia
 Ireland has donated **199.8 tonnes** of food
 under the initiative, equating to more than
 475,000 meals, **639 tonnes** of avoided C02
 and a staggering **€599,000** worth of food.
- ✓ Glanbia Ireland's farmers were contributors to the Irish Red Cross Yemen Appeal through which ICOS raised €190,000





Our Ambition





Our Living Proof Sustainability Ambition Statement



By combining the strengths of our heritage, our farmers and our people we are building on excellent foundations, a rich ecosystem and natural supply credentials to embed our sustainability ethos as we responsibly enrich & deliver a healthy future for all our communities.



The Living Proof Pillars Underpinning Our Ambition



Farming for the Future

Living Proof of our passionate commitment to tackle climate change through supporting farmers on their sustainability journey.

Implementing regenerative agriculture initiatives through building soil health and championing biodiversity.

Safeguarding and protecting animal welfare, our waterways and air quality.



A Healthy Future

Living Proof means demonstrating we care every day, for people and the planet, by offering consumers a choice with both plant and dairy based innovation.

By promoting natural nutrition and sustainable diets, and by providing healthy animal nutrition.

Continuing to lower our own production emissions, championing circular economy programmes and collaborating with producers to source our ingredients responsibly.

Community at Heart

Living proof of our belief in the importance of staying true to our co-operative ethos.

Demonstrating our commitment to diversity, inclusion and fairness amongst our employees.

Actively promoting the well-being of employees and the farming community.

Playing our part in ensuring that rural communities remain vital and sustainable.













Our Pillars, Flagship Targets and Key Initiatives





Net Zero Carbon Ambition by no later than 2050





Signed up to SBTi, aligning to the goals of the Paris Agreement & working with our dairy farmers to reduce carbon intensity from milk production by 30% by 2030

- 100% of Glanbia Ireland farms with a Nutrient Management Plan, Soil Testing and Fertiliser Programme by 2025.
- **100%** of Glanbia Ireland farms certified to A Greener World Animal Welfare Approved Standard by 2025.
- 100% of Glanbia Ireland farms in Priority Areas for Action with water quality plans by 2025.
- **100,000** native trees and hedgerows planted by 2021, as part of Operation Biodiversity.



Achieve 100% of packaging for all consumer brands compatible with the circular economy by 2025

- Deliver **100%** of portfolio compliant to the GI Nutritional Standard by 2025.
- **100%** of inputs for food to be sustainably sourced by 2030.
- Signed up to SBTi, aligning to the goals of the Paris Agreement & working to reduce carbon emissions from Glanbia Ireland processing sites with **30% absolute reductions** by 2030.
- Maintain Zero waste to landfill.
- Halve food waste by 2030.



Enriching all the communities we serve

- Achieve 50/50 female/male representation in leadership roles in Glanbia Ireland by 2030.
- Staying true to our **Co-operative ethos**, through a continuous engagement and support to sustainable sporting, cultural and community projects for the benefit of all.



Sustainability Programme Key Work-streams









Our Sustainability Targets



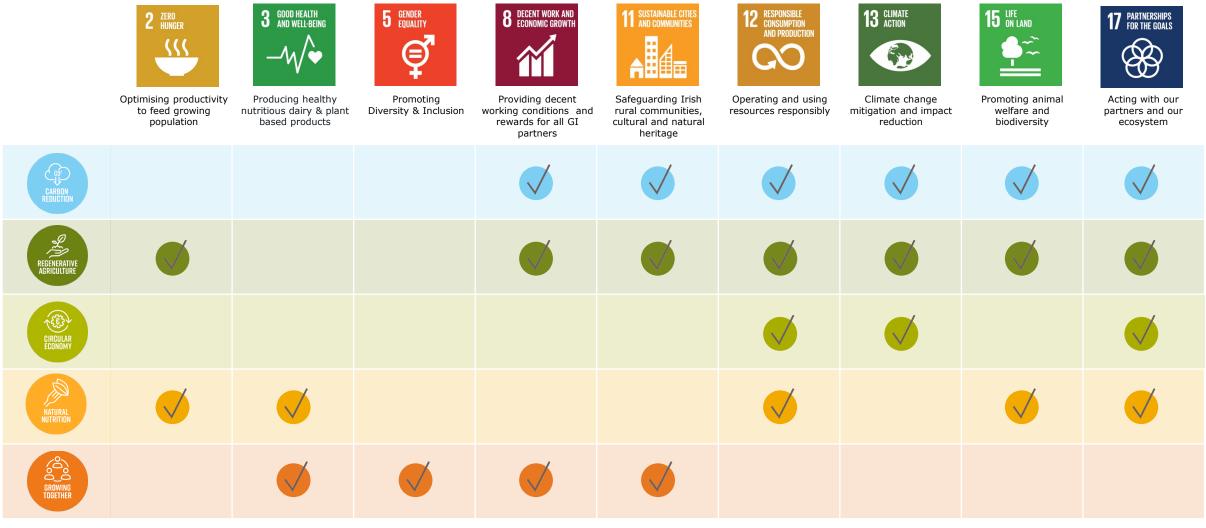
Ambition to reach Net Zero Carbon by no later than 2050

CARBON REDUCTION Sign up to the Science Based Target Initiative (SBTi), specifying targets and timeframes for reducing greenhouse gas emissions	Reduce carbon emissions from GI processing sites with 30% absolute reduction by 2030 (from 2018 baseline)	CARBON REDUCTION Supporting our dairy farmers to deliver a 30% reduction in carbon intensity from milk production by 2030	Building and enhancing soil health, with 100% of our Milk Suppliers having a Nutrient Management Plan, Soil Testing and Fertiliser Programme by 2025	Frotect water quality, with 100% of our Milk Suppliers in Priority Areas for Action having water quality plans in place by 2025	Safeguard animal health and welfare, with 100% of our Milk Suppliers being certified to A Greener World Animal Welfare Approved Standards by 2025	IOO,OOO native trees and hedgerows planted by 2021, as part of Operation Biodiversity
Halve Food waste by 2030 & Maintain Zero waste to landfill	Reduction in plastic usage by 15% by 2025 and 25% by 2030	IOO% of packaging materials compatible with a circular economy by 2025 (consumer- facing brands)	IDO% of portfolio Compliant to GI Nutritional Standard by 2025	IOO% of inputs for food to be responsibly sourced by 2030	Achieve 50/50 female/male representation in leadership roles by 2030	Continue to engage with and support sustainable sporting, cultural and community projects for the benefit of all



Alignment to the UN SDGs

UN SDGs are the global framework to operate













Continuing Our Journey





Advocacy

Industry Participation

Research

Active Participation to Industry platforms



for Climate Action and Sustainable Agriculture is gaining ground and is now essential









Sustainable Agriculture **Initiative Platform**



International Dairy Federation





Sustainability Research

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AMBITION

Catalyze collaborations to address the sustainability innovation gaps through the creation of technologies and science that generate value having an impact for GI's sustainability agenda.



Outlines research priorities for 4 Sustainability Key Work-streams.



COLLABORATION

Contract Research.



FUNDING

- Horizon 2020.
- Enterprise Ireland.
- Science Foundation Ireland.
- DAFM.
- Food Drink Ireland.

PARTNERS

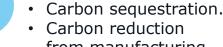


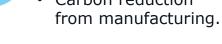


PRIORITY AREAS









NATURAL NUTRITION

CARBON REDUCTION

 Future proofed protein supply chains with a positive impact on the bio-economy, environment, biodiversity, food and nutrition security and consumer trust.



REGENERATIVE AGRICULTURE

• Methane reduction.



CIRCULAR ECONOMY

- Minimizing food waste (packaging).
- Valorisation of waste.





Turning the sustainability strategy into action





Sustainability Action Payment



About the Sustainability Action Payment





Glanbia Ireland has launched a voluntary Sustainability Action Payment which will result in milk suppliers achieving a milk price payment for delivering specific sustainability actions.



0.5c/litre will be paid to all suppliers who deliver on defined actions.

This represents a potential average payment of c. €3,000 to Glanbia Ireland suppliers.



Under this initiative, 18 sustainability 'options' will be available, from which suppliers would be requested to achieve up to seven options that they will action on their individual farms – and provide appropriate proof points of delivery.



On the basis that a supplier delivers on his/her individual selected options, the full sustainability payment will be paid – or a pro-rata basis for partial delivery.



About the Sustainability Action Payment

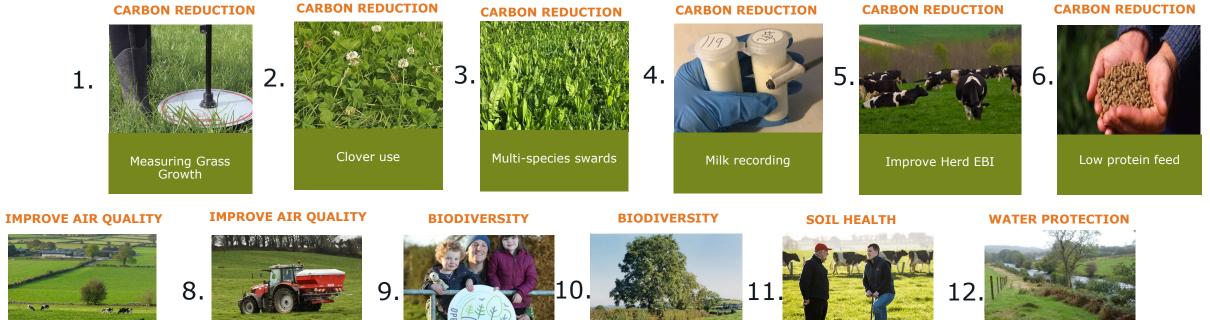


as part of a three ye full review taking pl The success of the p monitored annually	programme will be	(A) A) A) A) A) A) A) A) A) A) A) A) A) A	In recognition of farmers current on- farm sustainability actions, for the first year (2022) all suppliers will receive the full payment (0.5cpl). This will also allow each supplier time to plan for the delivery of their actions from 2023.
, , ,	ed on delivery of up in the <i>menu</i> of will begin in Jan 2023 in of delivery via proof		Over the duration of this initiative, the <i>menu</i> of options can be extended to provide an increased range of choices for milk suppliers in terms of sustainability actions that can be selected.



Sustainability Action Payment – Menu of Options

Suppliers action seven options to receive full payment



Low Emissions Slurry Spreading

Purchase of

Protected Urea

Additional native trees

Additional hedgerows

Soil Nutrient Management Planning

ASSAP water quality planning where identified by LAWPRO

ANIMAL HEALTH & WELFARE WATER PROTECTION **REDUCE FOSSIL FUEL USE** ANIMAL HEALTH & WELFARE ANIMAL HEALTH & WELFARE ANIMAL HEALTH & WELFARE 13. olan 7 15 14. 6 Twenty20 Udder health – SCC Use of sexed semen Participating in Beef Fencing off Renewable energy Herd Disease Twenty20 Club improvement watercourses generation Screening

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Building Sustainability Knowledge Capacity





READY TO TAKE THE SUSTAINABILITY CHALLENGE? 20 PART-TIME FULLY FUNDED DIPLOMA PLACES AVAILABLE

Applying for the Diploma

- The Sustainable Farming Academy's academic partner University College Cork will deliver an
 accredited and fully-funded Diploma in Environment, Sustainability and Climate to 20 farmer
 suppliers.
- The part-time Diploma, is delivered mostly on-line and is designed to fit in with each farmer's fulltime, on-farm responsibilities.
- Closing date for completion of expression of interest forms is 31st May 2022.

Visit www.ucc.ie/en/ace/glanbia for information; the programme begins in September 2022.

- This part-time Diploma is part of Glanbia Ireland and Baileys commitment to empowering farm families, through Ireland's first Sustainable Farming Academy.
- In addition to the Diploma with UCC, the Sustainable Farming Academy is offering three bursaries of €1,000 each to family members of Glanbia Ireland suppliers' that are studying for an agricultural science degree in University College Dublin, University College Cork and Waterford Institute of Technology. Applications will open June/July 2022.
- The landmark initiative is part of Glanbia Ireland's comprehensive sustainability strategy, "Living Proof. Glanbia Ireland has committed to working with our family farm milk suppliers towards a 30 per cent reduction in carbon intensity from milk production by 2030. The company has signalled its clear and unambiguous commitment to sustainability by signing up to the internationally-recognised Science-Based Targets initiative (SBTi).



GLANBIA IRELAND'S COMMITMENT To Farming, food and the future lanbia ireland







Signpost Living Proof Future Farms Programme

Overview

Programme duration: 2021-2025

Key objectives

FPCM = Fat and Protein Corrected Milk NUE = Nitrogen Use Efficiency

- 1. Reduce GHG emissions by 30% to 0.8 kg CO_{2e} per kg FPCM (before sequestration) & ammonia emissions by 20%
- 2. Increase NUE% to 35%
- 3. Net profit >€800 per cow/ > €2,000 per ha

Farm Sustainability Plan

- Prepared for each of the participating farms annually
- Progress benchmarked against:
 - Starting point
 - Other Signpost farmers
 - Targets for the farm
- Will be available at the end of each year



Soil Carbon Sequestration

National Agricultural Soil Carbon Observatory (NASCO)

- Each farm will participate
- Deep soil samples taken
- LiDAR analysis of above ground carbon stocks will be conducted
- Sampling will be repeated in 2025, to monitor changes in soil carbon

WINE PROOF

Flux Towers

Biodiversity & Water Quality

- Biodiversity baseline assessment for each farm, with actions tailored for each farm & included in the Farm Sustainability Plan.
- Water quality risk based assessments carried out & on-farm remediation plans prepared by Glanbia Ireland ASSAP Farm Sustainability Development Advisors.



Building Sustainability Knowledge Capacity





Sustainability Action Payment - th is now

assist our 5,000 milk suppliers as they continue to enhance the €1.000 for the avera ental and economic sustainability of their family farms

Also in this issue

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suppliers must deli below in 2022 South We catch-up with Glanbia Ireland supplier Donal Kavanagh from Co participant in the Signpost Future Farms Programme partnership w the actions he is taking this year to make sure he receives his Sustain 0.5 cent per litre in 2023.



the Sustainability Action Payment is of great benefit to his farm generally, aside from the onetary reward. ecords the otherse as a timely one representing the kind of reality. Animal health measures is

Investes an incurring lists, "Depresents and Earning lists the Earne will be based on actions like these in the pay," he call, "Before the cherne started lives, doing all of of them allyways, sit it was no extra soft to become involved, in fact, it's a boeux to get the payment." screening, "I use Glaribia's o explains, "we check that do and give the leptopirotic o Doral would recommend the feets it improves the overall "That Farmers participating in the scheme are asked to choose seven actions out of a total of 18 options laid out under six headings. In Homal 's case he is undertaking up to 12 actions. Under the heading of carbon reduction alone he identified seven actions the is undertaking. what's going to be expected

edges on an out-

coming breeding season is and using the ICAF size as

The plan is to use Friesia

on the home faces

These include measuring gracs growth, incorporating clover, milk next year and the year after more focusaed on biodiversi econding, improving herd Eiti and using oneed sensen for early adving. These are things that have been improving the farm and the that we are already doing stock, environmentally and economically," he said

in terms of soil health Donal has a nutrient management plan in place, "I soil test the whole farm every second year keeping the Farmer Profile indexes right" he said. This enables him to target fertiliser application. Donal farms: near ikatinglas milking approx. 200 cows o autumn calving. Donal's cu uses money and avoids blanket spreading. Enhancing and protecting the air quality has seen Bonal opt for protected uses over the last three years and he cuts down on the use of machinery by contracting the dury spreading when needed. We also switch back to a low-protein nut once the cows go back on built to breed his future (grass," he said.

Water protection measures have over Danal move fending back from the stream that runs through his land while he also ensures clarry and fertiliser are spread metres away from the boundaries.



READY TO TAKE THE SUSTAINABILITY CHALLE **20 PART-TIME FULLY FUNDED DIPLOMA PLACES AVA**

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argets initiative (SBT)

is he will switch to day GLANBIA IRELAND'S COMMITMENT TO FARMING, FOOD AND THE FUTUR finishing up with an Ang back the breeding process up his callving pattern. H breeding season, with a to breed these helfers of

Protecting farmland pollinators

The Protecting Familiand Polination is a European Innovation Partnership (EP) project coordinated by the National Biodiversity Data Centre, and an initiative of the Al-Initiand Polinanter Plan. Forty participating farmers are encouraged to provide insalt-wildlife habitats for polinantes on their tand. The overshing aim of the polinit's to evable farms across leidend to be more polinitator and biodiversity friendly.

Decline in wildflowers is an ixoue for our palificators and our tendency to 'tidy up' the bindicape reduces recourses for beer. Alled to this providing couth-facing, issee land for the mining bee (that make up 60% of high beer) to - to dig their nexts. and in which Bodiversity and familand management are closely linked. To support polirators and biodiversity-friendly landscapes, implementation of the following steps is encouraged.

· Retain existing biodiversity-friendly areas.

· Maintain existing areas through positive biodiversity-friendly

- management · Restore areas that once provided support for biodiversity.
- Create new biodiversity-friendly areas to enhance its biodiversity value.

Some key actions for farmers are:

Maintaining native flowering hedgerows.

www.glanbiacomvect.com

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Allowing native wildflowers to grow around the farm.

Promoting nesting places for the wild bees.

Reducing pesticide use.

Glanbia Ireland Farm Focus - Issue No. 74 - May 2023

the use of rig

pellinators.

Shane O'Loughlin next generation

Shane O'Loughlin, milks 220 cows at Ogh Monasterevin in Co Kildare where he fam acres of his own land and 350ac of rented "Advertises He is one of 40 farmers in Kildare taking in the Protecting Farmland Pollinators pro an initiative to improve the biodiversity o farms through the provision of food, shell safety for pollinators.

Sharve has implemented three main changes to in policytor populations on his fam. He has placed a p bee bases 1 lim from the boundary of the hedges. "I from 6 x 4 timbers with holes delied into the south-to to encourage solitary bees to next," he said

De Reverta Rever The series and outring of intervals hedgenow has caused on it used to out them every year and you'll be outring them for New one are included both them gained out them every is about them preserve goal for the labor, and the best, the state to about them preserve goal for the labor, and the best, the state and server the states out in the state of the state and server have of the states out in the state in the state in the state in the new Texator. It may have the state of the state and server have of the state out in the state there," he said. mproving Bi The National Biodiversity Data Centre has been man statue trees, I Species sum participating forms and rating their progress on a scale of

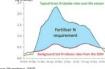
Environmental and economic issues have increased the need to improve nitrogen use efficiency (NUE). It's the single biggest nutrient used on farm and it's the nutrient that by far the most money is spent on. However, when N applications to the soil exceed crop needs, there is a potential for environmental losses to water. In this article we will look at reducing nitrogen rates during the main growing season Festival

emissions

and improving NUE. Improved efficiency can reduce emissions diffuse losses to water and on farm input costs, boosting the environmental and economic sustainability of our farms.

Nitrogen - improved efficiency can reduce

Farmland Biodiversity Summer N applications - rate & timing



The release of background N is bighest during the summer when soil temperatures are high, peaking during August and September provided there is moisture available (Humphreys, 2007). The rate of provided view is influenced by soil temperature and mostere status. If we look at the typical grass growth curve and the pattern of background N release from the soil across the growing season, what we are trying to do with our N applications is to close the gap between what the grass needs to achieve its growth potential in terms of N requirement and what is being released by the soil. Best practice is to match the overall N rate to the farms stocking rate throughout the grazing

season to avoid overuse. The timing of nitrogen is important, a little and often approach is best to maintain consistent supply of grass.

Grass measuring

Farms measuring grass grow and utilise more grass, making efficient use of nutrients. For optimal grassland management we should measure every 5 days during the main grazing season and utilise information such as farm cover, current and predicted grass growth rates to inform decisions on grazing management and N applications. This form of ammonium is positively charged making it more stable in soil than nitrate and less prone to leaching while also reducing If you find yourself grazing covers consistently >1400kg DM/ha or emoving surplus bales in each rotation there is potentially scope to

reduce N applications. Glanbia suppliers are encouraged to adopt grass measuring in the Sustainability Action Payment. A minimum of 10 cover/year must be uploaded to PastureBase Ireland or equivalent software to fulfil the requirements for this action. PastureBase Nitrogen planner The 'Nitrogen Planner' on PastureBase is a tool to help farmers track applications and provide farmers with monthly recommendations

as to how much nitrogen should be applied. The planner will break down the percentage of your total chemical N allowance that needs to be applied on a per monthly basis. The planner will also provide a recommendation for grass clover swards where N will be front loaded for spring and early summer before being tapered off to take advantage of the nitrogen fixation potential. Calibrate the fertiliser spreader

glanbia SUSTAN

Accurately calibrating the fertiliser spreader is vitally important in

the current climate with the economic cost of fertiliser and growing environmental and water quality pressures. Fertiliser calibration will ensure fertiliser is applied accurately and evenly at the right rate, improving nitrogen use efficiency. A growing number of farmers are using GPS systems to maintain accurate spreading widths among other benefits to provide precision fertiliser application. Always remember to maintain a 2m buffer from watercourses w spreading chemical fertiliser.

Soil moisture deficits

emissions.

In very dry weather or drought we should refrain from N application until rain and good growing conditions return, particularly on bare dry soils with little cover. In high soil moisture deficits (>50mm), moisture rather than N is the limiting factor so N applications should be stalled until grass growth rates begin to bounce back. Have fertiliser on farm so you are ready to apply when weather does break.

Nitrate leaching can occur during times of heavy or prolonged rainfall

once N gets washed below the plant root zone. CAN based fertilisers are made up of half ammonium and half nitrate, with the nitrate being much more prone to leaching. One of the main advantages of protected urea is that it converts to the ammonium form of nitrogen

when applied to soil and can be spread across the growing season



Thank you

N.C.Y

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