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AUGUST 2024

IRISH FARMERS MONTHLY

FOCUS: AG-TECH & RESEARCH

INTERVIEWS: PADRAIG HENNESSY, CHAIR, AGTECH IRELAND & GARY RYAN, DIRECTOR, AGTECHUCD; **FARMEYE:** WIDENING ITS FIELD OF VISION; **STRONGBÓ:** WORTH ITS WEIGHT; **AND MORE**

INTERVIEW

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AGRI-ECONOMY

INNOVATION: INVESTMENT
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EDITORIAL



Matt O'Keeffe, Editor

FARMING MAKES PROGRESS ON EMISSIONS REDUCTIONS

Last month, the Environmental Protection Agency (EPA) confirmed that agricultural emissions reduced by 4.6 per cent in 2023. That reduction marks three years in a row where reductions have been achieved in the agriculture sector. The single biggest contributor towards these reduced emissions figures from farming was a reduction in fertiliser use. The huge price increases in fertiliser prices in recent years have resulted in farmers cutting back on this input. Some productivity compensation from reduced nutrient inputs has been achieved by the ongoing introduction of clover-rich and multi-species swards. Lower use of chemical nitrogen (N) overall has been accompanied by increasing use of protected urea, a more efficient N source, allowing farmers to partly offset the productivity losses from lower fertiliser application. Other novel technologies have also contributed, including low emission slurry spreading (LESS), which has increased the efficiency and efficacy of slurry use.

Ultimately, a balance must be struck between reducing inputs and maintaining productivity, unless the industry decides that lower productivity is an acceptable and inevitable outcome from the regulatory requirement to cut emissions in agriculture. This debate is yet to be had and needs to consider economic and social sustainability in addition to the environmental element. The reductions achieved in lowering emissions, most notably through reduced fertiliser use, cannot be looked at in isolation. There is little definitive evidence to date that fertiliser reductions are improving water quality in terms of N levels in surface or groundwaters. The latest EPA analyses of water quality standards around the country show no overall water quality improvements up to the end of last year. This may or may not reflect a natural time lag between cause and effect. Farmers are attempting to maintain livestock numbers by leasing more land. This reduces overall

farm stocking rate but, in many cases, does little to reduce stocking pressures on milking platforms. Further reductions in fertiliser use will result in lower livestock numbers and decreased productivity. If that is the case, then we will have lost significant economic sustainability with negligible, if any, gains in environmental sustainability. Irish emissions reductions may make an infinitesimally small contribution towards mitigating the impacts of global climate change, but will have been bought at a very high price for our farm sector. There remains the valid argument of food production displacement in Ireland resulting in carbon leakage to less carbon-efficient food-production regions. Dismissal of carbon leakage by some observers does not invalidate it as a factual outcome. Without an unlikely fundamental change in eating and dietary habits, it is reasonable to assume that consumers across the world will purchase food from wherever they can source it, without discriminating on its relative impact on the global environment. That is the case now, and reductions in food production in carbon-efficient countries such as Ireland, would only make that consumer decision even more likely in the future, as choice of provenance reduces. It would be far better to allow time and space for scientific advances to deliver the innovative tools necessary to further improve the low carbon footprint food production systems prevalent on Irish farms. Our ag-tech focus in this edition of *Irish Farmers Monthly* highlights some of the impressive advances already made, with the potential for even more greenhouse gas (GHG) emissions suppression and reduction technologies in the pipeline, both in Ireland and across the world. We must embrace these developments and protect our ability to produce environmentally, socially and economically sustainable food for an increasing global population.

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Editor: Matt O'Keeffe Deputy Editor: Bernie Commins Editorial Director: Miriam Atkins Machinery Editor: Noel Dunne
Production: Martin Whelan Advertising Manager: Brian Murphy
Commercial and Advertising Manager: Anna Douglas Accounts: Tricia Murtagh Administration & Subscriptions: Sue Nolan
Chief Executive: Rebecca Markey Printing: W&G Baird Publishers: IFP Media Subscription: €46 per annum
Irish Farmers Monthly, Castlecourt, Gleneageary, Co. Dublin.
Tel: +353 1 7096900 . Email: miriamatkins@ifpmedia.com and berniecommins@ifpmedia.com . www.irishfarmersmonthly.com
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FARM INCOMES COLLAPSE

The Teagasc National Farm Survey 2023 confirms at least one of the reasons why farming is in a generally gloomy space right now. Poor weather, low temperatures, and sluggish grass growth have all contributed to the erosion of confidence among farmers. The Irish Farmers' Association's 'Enough is Enough' campaign highlighted two other contributory factors: overburdening of the sector with regulation; and environmental-related pressures. Ultimately, however, it's income that trumps all other considerations. Last year's incomes across all sectors suffered severe falls, albeit off some historic highs in the previous year. Eaten bread is of little value when farmers are looking at this year's income already

predicted to be no better than 2023. No sector is escaping the triple impact of stagnant prices, high costs, and poor weather conditions. In addition, the outlook for the coming months is not positive. The tillage harvest is already in progress with low prices and mostly average yields in prospect. To buffer the impact of sub-optimum silage crops, many producers are facing the prospect of costly feed inputs next winter. Nevertheless, there is a lot of the 2024 game to be played between now and the end of the year. Maximising grass growth, optimising milk yields, and driving on thrive in cattle and lambs will deliver far more to the bottom line than bemoaning past and current tribulations.



OLYMPIAN LIFT IN SPIRITS?

The benefits for Irish beef sales into the UK that came from England's extended run in the Euros were welcome. While our neighbours came up short in the final against Spain, they provided plenty of opportunities for increased beef and beer consumption for the duration of the championships. Closer to home, our Olympian participants have been providing plenty of opportunity to spark up the barbecue to grill a few lamb chops, steaks, sausages, and burgers. If the Games deliver a few additional cents to the price of beef, so much the better. All we need now is a little bit of summer weather and some of the metaphorical, as well as nimbus, clouds might evaporate, and lift the general gloom in the agri-sector.

THE LAST STRAW

Agriculture minister Charlie McConalogue cannot be faulted for his rationale in suspending the Straw Incorporation Measure (SIM). If livestock farms face a winter-feed deficit, then chopping a potential feed source into the soil would not seem to be a good idea. He is due criticism, however, for the timing of the suspension. As a seasoned politician, he must have been aware of the disapproval he would face for the decision on the eve of the harvest as straw was already being chopped. Tillage farmers had planned their harvest based on utilising the SIM for both financial and soil-fertility benefits. Changing the rules when the game is on was never going to gain the

support of the players. Any compromise was always going to be a muddle with loss of face involved for the minister and loss of finance for at least some of the tillage farmers involved. Was the SIM ever such a good idea? Surely a circular economy of utilising straw as a bedding material on livestock farms and then returning it to be spread on tillage soils would have been a more logical strategy to improve tillage soil fertility status. Payments for supporting transport and spreading could have been considered. The SIM was always more of a financial band-aid for hard-pressed grain growers than a progressive effort to improve soil carbon content and organic matter.

DAIRY UNDER PRESSURE DOWN UNDER

Imagine if 1,300 Irish milk producers quit production in one year. That's exactly what happened last year in Victoria, Australia's biggest milk-producing state. It's an ongoing phenomenon in Victoria, with almost 40 per cent of its milk producers gone out of business over the past 25 years. The numbers have reduced from 7,400 producers to fewer than 2,800 in that quarter of a century. The collapse in producer numbers has been matched with closures of milk-processing facilities over the period. Since January 2024, 11 processing units have shut down across Australia. That reflects the fact that Australian milk production has been in freefall for the past two decades, down from 11 billion litres to an expected eight billion-plus litres this year.

It's not as if Australians have stopped consuming milk products. They are consuming almost 30 per cent more imported butter and cheese than two decades ago. The reasons for this dairy decline are mainly weather-related. As a continent, Australia is prone to drought and the last big one, 30 years ago, lasted 14 years and badly affected the most fertile farming regions of southern Australia. The after-effects are still being felt by farm families across the region. Another drought of that magnitude – when, and not if, it hits – would have devastating impacts on the whole Australian farming industry.

No one can prevent a natural drought disaster, unlike the self-imposed, potentially disastrous consequences of European over-regulation which could decimate European and Irish food production in the coming years. The *Irish Farmers Journal*-sponsored KPMG report makes for frightening reading. Between nitrates and emissions reductions, as well as CAP reorientation and consequent lower productivity across all livestock sectors, as well as tillage enterprises, the losses to the Irish rural economy are estimated at €30bn annually. Who needs a drought?



Autumn reseeds: don't delay!

Maeve Regan,
Head of Ruminant Nutrition, Agritech

Early autumn reseeding is the preferred option for many due to reduced pressure on grass availability and the increased availability of grazing ground after second-cut silage.

After several months of poor grass growth this year, many reseeds were delayed so it's important to get back on track when the opportunity presents itself. However, timing is crucial, so the earlier you plan on getting your reseed complete, the more flexibility you'll have regarding grazing and weed control.

The target turnaround with a reseed should be 50 to 60 days. Therefore, if spray-off is completed by mid-August, target first grazing should be approximately the same date in October. Ideally, one more grazing before winter should create a more established sward for the following spring.

Taking the reseeding opportunity earlier will also help with clover establishment. With clover high on the agenda for those reseeding grazing block ground, it is important to get the basics correct to aid in its establishment. Clover has a high pH requirement, favouring soils at a pH of 6.5, and index 3-4 for phosphorous and potassium.

Avoid jeopardising your investment in reseeding by skimping on weed control or missing the ideal window. Post-emergence spraying is always your best chance to control weeds, typically applied approximately five to six weeks after sowing. Where clover was incorporated in the seed mixture, use a clover-safe spray (take care to use a clover-safe spray at the three-leaf stage).

One of the most common issues seen with reseeds where conventional ploughing has not been used is inadequate rolling of new reseeds/poor firmness. Rolling is essential to create good soil-to-seed contact.

Too often plants emerge quickest where the tractor tyre marks are, or in the headlands due to greater contact. Rolling the seed bed prior to sowing to increase firmness.

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DR PHIL

It was heartening to see Phil Hogan receive some belated recognition for his services as a TD, a member of Government, an EU Commissioner for Agriculture where he served a full term, and as an EU Commissioner for Trade before his term was, unfortunately, cut short. His Honorary Degree of Doctor of Science by University College Dublin last month acknowledged his services to the State. The citation said he was being recognised for his 'distinguished contributions' in the areas of politics, trade, EU policy, economics, the environment, rural development, food, climate, and the bio-economy. We wish him well in his future endeavours.



GATES OPEN FOR FRANKENBUTTER

Bill Gates's obsession with artificial anything and everything knows no bounds, it seems. After investing some of his billions in fake-meat production, he has now targeted butter as his latest conquest of the natural world. Savor, a start-up company backed by Gates, is trying to develop a butter substitute that contains no milk, no calcium, no butterfat, no... well, just about no anything! It will be made - if the R&D is successful in bringing the product to market - from air. There will

be a few additional ingredients such as beta-carotene for colour and rosemary oil for flavour. Otherwise, it's carbon dioxide, mixed with hydrogen and oxygen to create a synthetic fat. The fat then becomes something resembling butter by adding water, and an emulsifier. The carbon used in the process comes from natural gas, fossil gas, if you like, and requires heat for the thermochemical process of turning air into butter. Sounds like a lot of hot air, but butter it certainly ain't.

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InTouch



WHAT A YEAR!

CATHAL BOHANE
HEAD OF INTOUCH NUTRITION

What a year it has been so far. From a growth and productivity perspective, it never really got going, and even a turnaround now will not make up for losing the best part of it. Poor temperatures, and in some cases poor moisture levels, meant that we never got close to our potential growth rates. As a result, we are struggling to meet supplies of grass for grazing, and silage, and milk yield has suffered. What has been, has been. We can dwell on the past, or we can move forward and plan ahead. The latter is preferable. A plethora of surveys have shown that we are short on feed for the winter and a lot of us have done little about it. Over the coming months, demand will outstrip supply and that will lead to scarcity and increased expense. Now is the time to act.

Forage requirement per month

Dry cows	1.5t
Milkers	1.5t
Weanlings	0.6t
Finishers	0.45t
Stores	0.9t

So, first and foremost, complete your feed budget, detailing the supply of feed you have, or will have. Then, do a quick tally on the number of animals you will have over the winter. The forage-requirement chart (above) will detail what you need (remember, there is an autumn and spring requirement, and you must account for any issue that could crop up again next spring). Only now will you know what you are dealing with. If you are short <100 tonnes of feed, then a combination of animal adjustments, straw and concentrates can go a long way to make up a shortfall. If the shortfall is >100 tonnes, then you need to look at getting additional forage. It is important to remember that, while replacing absent silage with more grass silage is the most logical step, the possibility of using an alternative like maize, whole crop, beet or possibly a moist feed should not be ruled out. While not the norm, these alternatives can have several benefits such as better levels of energy in the form of starch and sugar, which will have direct benefits to milk and protein yield, and they can be cheaper on a per-tonne basis. Furthermore, when their energy value is taken into account, they could be considerably cheaper. Other considerations when purchasing feed include: animal type; dry or milking over winter; finishing animals; or getting them to grass in early spring. Location in the country is always a factor and you should try to avoid transporting low dry matter (DM) feeds over long distances, eg. 30 tonnes of beet is just six tonnes of DM.

There are options available if you are short on feed. It is important to utilise the expertise that is out there from nutritionists, feed reps or advisors to make the best decision for your farm.



NEW REFORESTATION PILOT SCHEME LAUNCHED

A new forest scheme has been launched by the Department of Agriculture, Food and the Marine (DAFM). The Climate Resilient Reforestation Pilot Scheme aims to increase the climate resilience of the national forest estate by increasing the proportion of forest land managed under permanent forest cover. It is being initially launched as a pilot scheme and offers financial support to forest owners who wish to reforest for a different purpose with the aim of building resilience in response to the challenges that climate brings to Irish forests, according to the DAFM. The scheme will build capacity for more sustainable forests that can produce high quality timber products and deliver important ecosystem services, such as protecting and improving soil and water quality.

Forest owners can choose from three different elements in the scheme: Reforestation for Continuous Cover Forestry (CCF); Reforestation for Native Forests; and Reforestation for Biodiversity and Water.

MAXIMUM GRANT LEVELS

ELEMENT	FIXED GRANT – €/ha	
Element 1 Reforestation for Continuous Cover Forestry (CCF)	€1,800	
Element 2 Reforestation for Native Forests	High ecological priority area	€4,000
	All other sites	€2,225
Element 3 Reforestation for Biodiversity and Water	€2,500	

PREMIUM PAYMENTS PER HECTARE

Element 1 Reforestation for Continuous Cover Forestry (CCF)	€150 (for 7 years)
Element 2 Reforestation for Native Forests (high ecological priority area)	€650 (for 7 years)
Element 2 Reforestation for Native Forests	€500 (for 7 years)
Element 3 Reforestation for Biodiversity and Water	€350 (for 7 years)



Damien O'Reilly
EU Affairs and Communications Manager, ICOS

LETTER FROM BRUSSELS

Brussels goes quiet in August. It's holiday time and expats head home for the month. But, there is still a lot happening as the new Parliament and Commission continue to take shape. New MEPs have been finding their way around here since the June election, from looking for a place to live, to finding committees to sit on.

There are more than 20 committees spanning all areas of European policy, industry, and society. The ones we keep an eye on are the agricultural committee and the environmental committee. These committees do the spadework when it comes to studying, amending, and adopting the legislation proposals from the Commission. It is these committees that liaise with Member State ministers and the various lobby groups with an interest in the broad agri-food spectrum as pieces of legislation delicately move through the, sometimes years-long, legislative process. Three Irish MEPs will sit on the agriculture committee, or ComAgri as it is better known: Fianna Fáil's Barry Cowen; Maria Walsh of Fine Gael; and independent MEP, Luke 'Ming' Flanagan. And, on the environmental committee, or ComEnvi as it is better known, Sinn Féin's Lynn Boylan is the sole Irish full committee member. The remaining 10 MEPs are scattered across many other committees of interest to them.

The focus now switches to the EU Commission. The next big task for the MEPs is to act as job interviewers as the committees will have the pleasure of grilling the commissioner candidates relevant to their committee. So, the agricultural committee will quiz whoever is nominated by Commission president, Ursula von der Leyen to be the next agriculture commissioner. At time of writing, the favourite for the job is the Luxembourg commissioner, Cristoph Hansen. He is aligned to the European Peoples Party (EPP), which would be seen as broadly supportive of farmers, and of which Fine Gael is a member.

President von der Leyen herself comfortably returned as Commission president for a second term despite rumours that she would struggle to get the bare minimum number of MEP votes to get across the line. In the end, she had well over 100 votes to spare, so she continues to command the position as arguably the most powerful politician in the EU. Right now, her first job is looking for each Member State to nominate a male and female candidate to choose from in order to fill her 26 commissionerships. Ireland has already nominated Michael McGrath and might be inclined to tell the EU where to go with their demand of a female candidate considering that they are nominating such a senior minister.

The four Fine Gael MEPs were the only Irish MEPs to support her in that crucial Parliament vote last month with the four Fianna Fáil MEPs among those not to support her. This will not go unnoticed by President von der Leyen. Could it impact on the quality of the post given to Michael McGrath in the autumn? Cynics would say it will. We will know soon enough.

Of course, that all means that Mairead McGuinness's 20-year political career in Brussels is coming to an end in November. Mairead made a big impact there and had climbed the ladder to vice-president of the European Parliament before successfully being appointed as EU Commissioner replacing Phil Hogan in the wake of 'golfgate' – remember that? She was a great ally for farmers in the Commission even if her portfolio wasn't necessarily anything to do with farming and she was always more than happy to engage with Irish co-op and farm groups visiting Brussels, and listen to their concerns. Mairead wanted to stay on in the role but party politics at home meant there was no hope of that happening. She can look back at her stint in Brussels extremely positively and all eyes will be on her next move.



MINISTER MAKES STRAW MEASURE U-TURN

The Straw Incorporation Measure (SIM) is set to continue in 2024, with the announcement at the end of July by Minister Charlie McConalogue of his intention to introduce a straw-baling measure to run 'in tandem' with the SIM.

The minister had announced his intention to engage with Farmers' Charter members on a proposal to defer the SIM in 2024 to ensure that there were sufficient supplies of straw through the winter months. But the idea was shot down by most farming organisations and the farming sector, in general, as well as the minister's colleague at the Department of Agriculture, Food and the Marine (DAFM), Minister of State, Martin Heydon.

Minister McConalogue said that against a backdrop of depleted fodder reserves and poor growth rates this year, his aim is to see quality straw, due to be chopped under the SIM, baled for sale, while also ensuring that that SIM funding stays within the tillage sector.

"I met with farm organisations representing the majority of tillage farmers to discuss options for the SIM that meet both of these objectives. To meet these aims, I have proposed that a baling option will be introduced to run concurrent with the SIM. Farmers can stay in the scheme and receive their payment for incorporation as normal or they can withdraw from the scheme and receive a payment for baling instead."

Farmers who opt to withdraw from the SIM in order to bale, will receive a payment rate of €175/ha.

Minister Heydon welcomed the change in approach from the agriculture minister: "My opposition to the scheme's suspension was due to the fact that the SIM is a well-established scheme which is very important to tillage farmers. This new agreement ensures its continuation, and the integrity of important schemes is safeguarded."

"Since the introduction of the measure in 2021, straw chopping has become part of the annual planting and harvesting plans. It has allowed farmers to build organic stocks in their soil in addition to providing an important financial support."

The Irish Farmers' Association and the Irish Grain Growers issued a joint statement following the development, in which they said: "It is important that a guarantee had been given by the minister that all applicants to the scheme will be paid regardless of the outcome of ranking and selection process."

"The announcement by the minister [to defer the SIM] was an error of judgement and caused huge stress and uncertainty for tillage farmers. It was a model of how not to do things and it can never be repeated in relation to any scheme in any sector."

The statement continued: "The reality is that the tillage sector is already in the middle of a very challenging year due to weather challenges and low projected grain prices."

"Earlier this year, the Minister announced that he would pay each farmer who planted crops in 2024 a minimum of €100 per hectare. The Minister doubled down on this commitment during our negotiations this week. However, we want to stress that a significantly higher payment will be required to assist farmers in 2024 to keep them in the sector."

VIGILANCE URGED DURING HIGHER-RISK PERIOD FOR BLUETONGUE

The Department of Agriculture, Food and the Marine (DAFM) is urging farmers to remain vigilant as Ireland is in the higher-risk period for Bluetongue virus (BTV-3), which runs from April to November.

Bluetongue is an exotic animal disease, found in many European countries.

High temperatures on the continent have added to increased infection pressure, which has led to a surge in cases there recently. The disease represents a serious threat to Irish livestock if it were to spread to Ireland.

Since September 2023, the Netherlands has

been dealing with an ongoing outbreak of Bluetongue. The virus was detected on approximately 6,000 holdings across the country. Despite having acquired emergency approval of recently developed BTV-3 vaccines, the Netherlands continues to see an increasing number of cases of clinical disease. These vaccines have not yet received EU-wide authorisation. Bluetongue has also been detected in neighbouring countries, Belgium and Germany.

The DAFM is reinforcing the vigilance and biosecurity messages, and says it continues to

closely monitor the situation.

The DAFM also urges importers to avoid importing susceptible animals during this higher-risk period. Where susceptible animal imports cannot be avoided, the DAFM says that advice must be sought from a vet or local regional veterinary office (RVO).

"It is important to ensure that imported animals are virus-free before they leave their country of origin, by requesting a pre-movement PCR test for the virus. It is crucial to report any suspicion of Bluetongue to your local RVO immediately," according to the DAFM.

MSD ANIMAL HEALTH ACQUIRES ELANCO'S AQUA BUSINESS

MSD Animal Health (MSD) has acquired the aqua business of Elanco Animal Health Incorporated.

The acquisition, according to MSD, 'bolsters its position in this area with a comprehensive approach to promote fish health, welfare and sustainability in aquaculture, conservation, and fisheries'.

"With the completion of this acquisition, we are well-positioned within the aquaculture industry with a robust and comprehensive portfolio across warm water, cold water, vaccines, anti-parasitic treatments, water supplements, and nutrition," said Rick DeLuca, president, MSD Animal Health. "We are excited to welcome our new colleagues to MSD Animal Health and we look forward to working together."

As a result of the acquisition, MSD now owns innovative products such as: Clynav, a new generation DNA-based vaccine that protects Atlantic salmon against pancreas disease; Imvixa, an anti-parasitic sea lice treatment; and water treatment products for warm water production, complementing MSD Animal Health's vaccine portfolio. The increasing use of medicines and vaccines, nutritionals, and supplements for aquatic species is driven by the growing demand for protein and food safety, the need to ensure a supply of quality food, and the protection of public health.

"This acquisition allows MSD Animal Health to supply the world-leading Irish aquaculture industry with an even broader range of vaccines and medicines so it can continue to meet demand for its high-quality, organic salmon," said Fergal Morris, general manager for Ireland, MSD Animal Health. "It also highlights our ongoing commitment to support rural communities in Ireland by providing a comprehensive range of products that support animal health and welfare."

PTO SHAFTS COVERED UNDER SAFETY MEASURE

Minister of State at the Department of Agriculture, Food and the Marine with special responsibility for farm safety, Martin Heydon (pictured right), recently announced the reopening of the National Farm Safety Measure.

This will provide a financial contribution to participating farmers covering 60 per cent of the eligible cost of power-take-off (PTO) shaft covers. In the 10 years from 2014-2023, farm vehicles and machinery accounted for over half of all fatalities on farms.

Entanglement in PTO shafts has caused fatalities and life-changing injuries on Irish farms. The Safety, Health and Welfare at Work Act 2005 places a legal obligation on farmers to ensure that plant and machinery are safe and without risk to health. Launching it recently during the 2024 Farm Safety Week, Minister Heydon said he was reopening the measure to help protect farmers and everyone involved in operating PTO-powered equipment from serious and fatal injuries.

"This measure will support farmers in the purchase of new PTO shaft covers.

Unsafe practices must be addressed and through this measure I am raising awareness of the risks posed by operating PTO-powered machinery that has defective or missing PTO shaft covers. "Farmers are required to maintain a Farm Safety Code of Practice risk assessment.



I am urging farmers to review their farm safety risk assessment and identify any hazards on the farm, including defective or damaged PTO shaft covers. There are unique hazards attached to farming, but by identifying and putting steps in place to mitigate them, we can reduce the risks on farms." The Farm Safety Measure will be funded from the National Exchequer. The measure will be open from July 24 to November 1 on www.agfood.ie. The maximum amount of aid under the measure is for four PTO shaft covers. The grant aid will be at a rate of 60 per cent, subject to a maximum eligible cost of €100 per PTO shaft cover. Farmers who applied for grant aid under the National Farm Safety Measure 2023 are also eligible for this measure.



Pictured at the AgTechUCD Innovation Centre at UCD Lyons Farm, Co. Kildare are: Desmond Savage and PJ Maguire, Moonsyst; with Marion Cantillon, Pitseal. Photo: Nick Bradshaw, Fotonic.

SEARCH IS ON FOR AG-TECH AND AGRI-FOOD START-UPS

AgTechUCD is seeking applications from early-stage start-ups with innovative products and services in the ag-tech, agri-food, equine and veterinary sectors, who have ambition to grow and scale on the global stage, to join its accelerator programme, which is now in its fourth year.

Twenty-seven start-ups have completed the AgTechUCD Agccelerator programme over the last three years. The 2024 programme, commencing this October, is an intensive 12-week hybrid programme that includes dedicated business development workshops and investor readiness training, mentoring from industry experts and business advisors and facilitated introductions to AgTechUCD's venture capital and business angel networks. The in-person workshops will take place at the AgTechUCD Innovation Centre at UCD Lyons Farm in Co. Kildare.

Commenting, director of AgTechUCD, Gary Ryan said: "Building on the success of our three previous programmes, our dedicated Agccelerator programme is tailored to address the specific needs and challenges facing start-ups in the ag-tech and agri-food sectors. Our aim is to fast track the business development and leadership skills of participants and to provide them with support and guidance which is needed to accelerate their start-ups on the national and, indeed, the global stage."

Partners on the Agccelerator programme include: Enterprise Ireland, AIB, The Yield Lab Europe, FBD, IFAC, Thrive/SVG Ventures and support from AgTech Ireland member companies.

Cork-based Moonsyst, co-founded by Desmond Savage and Peter Gesler, developed a smart rumen monitoring solution that collects real-time information from inside cattle. The company is one of

27 to have completed the Agccelerator programme. Sales lead for Moonsyst, PJ Maguire said: "It was a very positive experience for Moonsyst and a great foundation to build from. We particularly benefited from the speed mentoring side of things which was really good. Quick meetings with different people from different sectors really gave us a broad perspective on where we needed to go with our business, and how they might be able to even help us down the line.

"I highly recommend the programme to any ag-tech related start-up, at the early stage of development or even start-ups further along on their entrepreneurial journeys. Among other benefits the programme will enable you to review what your company is doing and in what direction it should be going, and how best to present your start-up when pitching to or meeting with investors."

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Joe Molloy, Tullamore Show; Martina Gormley, Health and Safety Authority; Jim Dockery, FRS Network; and Ciaran Roche, FBD Insurance.



FARM SAFETY LIVE RETURNS

CIARAN ROCHE, RISK MANAGER, FBD INSURANCE, OUTLINES DETAILS OF THE 'FARM SAFETY LIVE' DEMONSTRATION ARENA, WHICH RETURNS TO THE TULLAMORE SHOW THIS MONTH

The Farm Safety Live demonstration arena returns to the Tullamore Show & FBD National Livestock Show on Sunday, August 11.

We're delighted to be continuing the longstanding partnership with Farm Relief Services (FRS), the Health and Safety Authority (HSA), and the Tullamore Show committee to bring these vital interactive farm-safety demonstrations back for the ninth year.

This year's Farm Safety Live demonstrations will emphasise the safe operation of tractors and quad bikes. Fittingly, for the day of the FBD National Livestock show, handling of livestock will also be a central feature of this year's safety demonstrations. Throughout the day, farm-safety experts will offer practical tips and demonstrations that can be directly applied to everyday farming practices. Let's delve into some crucial safety points for these topics.

SAFE QUAD OPERATION

To comply with the new quad bike regulations that were introduced last year, it's essential for operators in all workplaces to complete a quad bike training course from a registered training provider to a QQI standard, or equivalent. Additionally, wearing appropriate head protection is mandatory. Here are some key steps for safe quad operation:

- ▶ **Training is vital:** Ensure you have completed the required quad-bike training.
- ▶ **Wear helmets:** Helmets significantly reduce the number and severity of serious head injuries.
- ▶ **Avoid overloading:** Do not overload the

quad or any trailed implement.

- ▶ **Towing guidelines:** Comply with the manufacturer's specifications for weight and size when towing implements.
- ▶ **Regular maintenance:** Regularly check tyre pressures and adhere to the manufacturer's servicing guidelines.
- ▶ **No passengers:** Never carry a passenger on a quad bike.
- ▶ **Secure keys:** Remove keys and store them safely away from children.

SAFE HANDLING OF LIVESTOCK

Handling livestock safely is crucial to prevent injuries. Keep these points in mind:

- ▶ **Stay vigilant:** Always be aware of potential risks.
- ▶ **Watch for aggression:** Pay attention to warning signs of aggression, especially in bulls and newly calved cows.
- ▶ **Cull difficult animals:** Remove fractious and difficult bulls/cows as soon as possible.
- ▶ **Proper equipment:** Ensure bulls are fitted with a nose ring and chain.
- ▶ **Use safe handling facilities:** Always use appropriate handling facilities.
- ▶ **Have an escape route:** Always have an emergency escape route planned.

SAFE TRACTOR OPERATION

Tractors are integral to farming, but safety must come first. Here are some important steps:

- ▶ **Regular maintenance:** Keep tractors in good condition, focusing on brakes, lights, mirrors, and wipers.
- ▶ **Functional controls:** Ensure all controls are working properly and clearly marked.

- ▶ **Guard moving parts:** Properly guard all moving parts like the PTO shaft.
- ▶ **Safety frames:** Ensure a cab or safety frame is fitted.
- ▶ **Experienced operators only:** Only allow competent, experienced individuals to operate tractors.
- ▶ **Avoid rushing:** Take your time and stay vigilant.
- ▶ **Safe parking:** Always park the tractor safely and remove the keys.
- ▶ **Mind blind spots:** Always be aware of blind spots.
- ▶ **Child safety:** Adhere to the Code of Practice on Preventing Accidents to Children and Young Persons in Agriculture, which states a child must be at least seven years old to sit in a tractor, and the tractor must have a properly fitted passenger seat with a seat belt inside a safety cab or frame.

FBD is committed to promoting safe farming practices. We are proud to continue to support Farm Safety Live and to see farm safety being highlighted at the Tullamore Show. I would encourage all visitors to the show to spend some time at the Farm Safety Live demonstrations; you'll find us at stand L105. We look forward to seeing you there.

For more farm safety information, scan the QR code below:



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Ciaran Fitzgerald
Agri-food economist

INNOVATION INVESTMENT CONSTRAINTS

Recent announcements around public support for research in agriculture and food, and increased support for the ag-tech sector are positive, writes agri-food economist, Ciaran Fitzgerald, but they are not without their challenges

Any thriving industry needs a balance between in-company investment in research (based on customer feedback) and external support for the sector from the State, which can deliver longer-term, strategic, research-based outcomes. Many of the new sustainability technologies and practices in Teagasc's Marginal Abatement Cost Curve (MACC), which identifies the most cost-effective pathway to reduce greenhouse gas (GHG) emissions in the agricultural and land-use sectors have come from a robust, well-functioning research and knowledge-transfer system, mainly developed and disseminated by Teagasc. There is a mutual benefit between public and private research and development (R&D), and neither is likely to thrive without the other. Industry benefits from public research that has the capability of delivering macro breakthrough technologies over the longer term, while universities and technological institutes need the close-to-customer feedback from agri-food companies that guide the longer-term direction of R&D.

Undermining investment

There is, therefore, huge concern that the current policy-driven moves to constrain Irish agricultural output will undermine future much-needed investment in


R&D, at first in industry itself, because of imposed costs and regulatory constraints, and then, inevitably, in the public R&D sphere.

Agriculture and food production, from farm to fork, depend on continuously delivering against quite a number of fundamental metrics. So, while there is a clear, obsessive focus currently on environmental and climate impacts of food production, to survive and prosper, farmers and food manufacturers must also continue to deliver on a range of other fundamental parameters, not least cost competitiveness and innovation. Moreover, the unrelenting response over the last 20 years or more (allegedly on behalf of consumers), from grocery retailers, supermarkets and discounters alike, to ever increasing economic and regulatory costs of production, has been to drive down the producer margin again and again. In response to complaints from producers that this strategy is unsustainable, the mantra from their purchasers has been that they will source product elsewhere if producers cannot or will not reduce their margins.

So cost recovery through increased prices (notwithstanding wishful commentary from EU spokespeople and environmentalists, that EU and global consumers will pay for sustainable food production) is not realistic. In the case of food pricing, past performance is very much an indicator of future outcomes.

New quota system

Irish dairy, in particular, is in the process of being 're-quota-fied' either through sectoral emissions budget constraints or change to/loss of the Nitrates Dero-



gation, or both. This means that, even based on planning for success in delivering improved water quality outcomes and retaining the derogation at the 220kg level, Irish milk production/dairy output will struggle to get to the nine billion litres level achieved in 2022.

A purely policy-driven production cap/quota is constraining output and economies of scale. In addition, that same policy is requiring swift and costly decarbonisation investment to be borne by milk producers and processors. Dairy-processing decarbonisation, as currently envisaged, equates to an additional one billion litres in increased unrecoverable costs onto a politically constrained production capability.

There are additional cost burdens, including the change from relatively competitive natural gas to green electricity, that are likely to mean higher relative energy costs, in particular. It is important, therefore, to reflect that dairy output growth from 2015, while it required significant capital expenditure and extra energy usage and cost, contemporaneously delivered the increased throughput that paid back the investment. It also delivered an additional 3,000 direct and indirect jobs, contributing an annual €5bn to the Irish economy and exporting €6bn of dairy products globally by 2023. Similarly, dairy growth and economies of scale made increased investment in R&D economically viable.

Processing cost constraints

The new, (purely policy-based), paradigm for Irish

dairy means that increased costs – both capital expenditure and energy/operating expenditure costs – will now have to be absorbed by a constrained processing throughput. Investment in much-needed R&D faces the same constraint. And, while other sectors in the Irish economy may face high capital expenditure decarbonisation costs, future production levels in these sectors are not constrained. So, unlike Irish agriculture, economies of scale and selling power can deliver some cost recovery.

When quotas were introduced at EU level in 1984, the latent growth capability in Irish dairy was met by companies such as Kerry, Glanbia and the Irish Dairy Board investing in growth, innovation and expansion overseas, mainly in the US. Growth and innovation were achieved, but not in Ireland. Moreover, the previous quota system involved internal price supports and export subsidies to the tune of €5/6bn to deliver price stability as a quid pro quo for production limits, whereas the abolition of quotas in 2015 was predicated on the dilution of price supports in the EU dairy sector. Price supports are not likely to return, but an approach to decarbonisation from farm to fork – similar to the billions committed in the US Inflation Act of last year or the German, Dutch and Danish supports for their key industries – is feasible under EU state aid rules. Not only that, but it is essential if we are to manage successfully the huge competitive challenges being imposed on the agri-food sector, hereby sustaining the economic and social contribution of this sector to the national economy.



Niamh Bambrick,
ASA president.

NIAMH BAMBRICK IS MULLINAHONE CO-OP'S LIVESTOCK IDENTIFICATION AND INTELLIGENCE DIVISION MANAGER, AS WELL AS THE CURRENT PRESIDENT OF THE AGRICULTURAL SCIENCE ASSOCIATION (ASA). SHE CHATTED TO MATT O'KEEFFE ABOUT THE UPCOMING ANNUAL ASA CONFERENCE, CHALLENGES WITHIN THE SECTOR, AND ASA MEMBERS ADAPTING CHANGE THROUGH INNOVATION AND TECHNOLOGY

CONFERENCE COUNTDOWN

The ASA's annual set piece is its conference, this year being held in Niamh's home county of Kilkenny on September 5 in the Lyrath Hotel.

"We are currently finalising the list of speakers, and the theme of the conference this year is Trading with the Global Consumer," said Niamh. Former Irish minister and former EU agriculture and trade commissioner, Phil Hogan, will be the guest of honour at the ASA conference banquet and should provide a lively perspective on global trade, as well as the challenges and opportunities for Irish food producers, processors and exporters.

She commented: "The last two conferences were focused on sustainability and, while sustainability remains a key focus of the industry, we wanted to broaden the perspective and look at trade and how it is managing that whole sustainability agenda. Global trading affects everyone in the agriculture, farming and food sectors and it drives everything our ASA members do every day. It's also changing everything we do, for instance, in terms of how different consumers are interacting in different markets.

"We export up to 90 per cent of production, across dairy, beef, and beverages. That's €14.5bn in annual exports, so international trade is a key element in the Irish economy."

A GLOBAL PERSPECTIVE

The conference will kick off with that global perspective from Dr Mark Lyons, president and CEO of Alltech, who will address the opening session. "I think Mark will give us a grounding for the day. Our first panel will be chaired by Damien O'Reilly, the EU affairs and communications manager in ICOS. We will have John Clarke, the former director of international relations in the European Commission, and a former EU chief agricultural trade negotiator. Then, covering the Asian viewpoint, we have Ian

Lahiffe, a China-based agri-tech expert, and it should be interesting to hear how our traders are interacting with China and the greater Asian region. Co-chair of the UK Food and Drink Export Council, and a former CEO of the Food and Drink Federation, Ian Wright, is also a panellist."

The second panel comprises Sean Molloy, the new CEO of Tirlán, who will join Nick Curtis-Davis, the director of global insights with Bord Bia, and Joe Manning, the commercial director for Tesco Ireland and Northern Ireland.

"That provides views from the production/processing sector, a multinational retailer and a food promotion viewpoint from Bord Bia," explained Niamh. "We really wanted to have a multinational retailer because they're buying the product from our farmers and processors. Our third conference session will include a farmer, Jim Mulhall, who will talk about the industry from the producer end, how he manages the risks, challenges and opportunities involved in milking cows, and how farmers are adapting to change."

LAND-USE DEMANDS

Niamh addressed the challenges facing Irish agriculture, chief among them the demand for land and these, too, will feature at the conference: "Government and the EU are bringing in a lot of different policies at the minute, which will ultimately affect the amount of land that's available to produce our exports. We want to include that fact in our conference discussions and in a larger industry-wide debate. If we don't have the current land base to produce our exports, then what's going to be the knock-on effect on trade? We are very aware that farmers will make, and are entitled to make, different decisions on what they want to do with their land. But there are knock-on effects on exports, jobs, rural economic activity, if land is diversified to solar, anaerobic digestion, rewetting, nitrates-driven stocking-rate reductions, more housing, wind turbines or forestry. Based on projections for all these competing land uses, we could have one million hectares taken out of food production. "Do we want to continue at the same level

of food exports, or are the Government and EU accepting that food production will move to other countries with lower environmental standards or higher carbon footprints per kilo of food produced? That brings us back to sustainability and our comparatively higher sustainability standards."

ASA MEMBERS EMBRACING CHANGE

When asked how ASA members are adapting to developments in technology and innovation, Niamh said: "This is affecting everyone both at farm and processing levels. We run tech-related events regularly and the numbers in attendance show how aware our members are of the need to keep up with technological advancements and to raise their expertise to manage these developments.

"For instance, in one ASA-organised event this year we liaised with AgTech Ireland and had 15 companies presenting different technologies that are in place or were about to be launched on farms. The level of adoption is quite impressive, and our members are keeping up to speed with assisting and managing the ongoing change right across the industry from farms to businesses to export strategies. The aim is to make better decisions based on sustainability and performance. I'm very much a person who believes that production and performance can't be hindered. Any technology that you're implementing on farm should increase production, productivity, efficiency, and profitability."

THE DAY-JOB

Niamh's day job at Mullinahone Co-op is very much witness to the various advancements in technology that exist now. "We have three different companies within Mullinahone Co-operative. I head up the division dealing with cattle identification tags, which again has undergone huge technological advances. An EID tag in an animal's ear, literally with a ping of a button, can tell you everything about that animal. There's full traceability from birth to end of life. The tags are one side. We also have the MSD SenseHub monitoring system.



BASED ON PROJECTIONS FOR ALL THESE COMPETING LAND USES, WE COULD HAVE ONE MILLION HECTARES TAKEN OUT OF FOOD PRODUCTION

We distribute MSD's range on the animal identity and monitoring technology front. The collars that you see on the cows allow drafting, heat and health monitoring, and we see a huge boom in the numbers of farmers that are adopting the technology, from smaller to larger dairy and suckler herds. It's having a massive impact. Breeding windows are tightening as heat detection becomes more reliable. Herds are far more productive and are reducing their sustainability footprint with more effective breeding, annual calving and greater longevity. There are now so many different companies that have similar technologies to us and entirely different technologies in totally different spaces. It's a huge part of the agri-industry today with lots of jobs advertised for technology-based roles within the industry."

AGRI-CAREER OPPORTUNITIES

Niamh noted the reduction in CAO applications for agri-science-related courses: "It is disappointing because there are fantastic courses and great job opportunities across the sector. At college you can travel and study on placement. There are far more colleges offering diverse courses, so the career window is wider than ever. The opportunities are endless, from technology to food systems to advisory and research. Ambition to develop your own business can be driven by an agri-science qualification."

Register for the ASA conference and/or banquet here: www.asaireland.ie



FIVE DECADES OF MEMORIES

WELCOME TO OUR NEXT TRIP DOWN MEMORY LANE, AS WE CELEBRATE A MILESTONE 50TH YEAR FOR *IRISH FARMERS MONTHLY*. 'THE MONTHLY' AS IS IT COMMONLY AND FONDLY KNOWN HAS BEEN A FAMILIAR AND DEPENDABLE SOURCE OF AGRICULTURAL AND RURAL-LIFE NEWS FOR FIVE DECADES. THIS MONTH, WE LOOK AT WHAT WAS FILLING THE COLUMN INCHES IN THE LATE 80S AND EARLY 90S

Good Farming Does Not Mean A Bad Environment

Throughout Europe concern is being expressed about the environment and about the effects which intensive farming may have on it. On the Continent some groups are calling for extreme measures such as curbs on the use of nitrogen and on stocking densities.

In Ireland, the situation has not reached that level but there have been some problems traced to farming. Here Dr Tom Walsh argues that good farming and a good environment can go hand in hand with benefits for everyone. However, he warns that care must be taken if problems are to be avoided.

There is increasing pressure on farmers to produce food of a quality which can meet the ever more demanding demands of consumers both at home and abroad. This can be done with the best care available. We are all conscious of the increasing sensitivity in the matter of nutritional value and health at a time when almost every day there are news headlines about the effects of bacteria, pest and other harmful chemical products on health and well-being, and when in part there is generally no fault to be found in the industry concerned. In these times, however, professional advisers have lost themselves in such over-zealousness when attributing various effects to vague food composition factors.

It is impressive that we have adequate knowledge about what quality means and how it can be achieved. In the past, however, this has only been appreciated in a theoretical way - especially when the consumer has had no knowledge of any real thing when food is produced, and indeed, in the context of the overall quality of life in these areas. In this regard there are a number of things...

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▲ A selection of adverts, and the chance to win a walkman - remember those?

▲ This article's headline - and much of its content - is as relevant today as it was 37 years ago. Dr Tom Walsh from Teagasc writes that throughout Europe, there is concern about the impact of intensive farming, with some groups calling for 'extreme measures such as curbs on the use of nitrogen and on stocking densities'. From an Irish perspective, although some problems are traced to farming, he writes that good farming and a good environment can go hand in hand. But, he warns, 'care must be taken if problems are to be avoided'. He goes on to discuss the vested interests that rural-Irish people have in maintaining a high-quality environment, and the potential good in multi-factorial land use such as farming, horticulture, forestry and recreational. He highlights three main considerations in relation to securing high-quality food products and a good living environment: a strategy to develop land for food and crop production, while minimising the impact on the environment; a strategy to develop, for economic purposes, the resources of land, water and air requiring a balanced science-based approach; and thirdly, that a base must be laid to ensure, aesthetically, the future of our rural areas for living purposes.

FARM HOME

SUPER QUINN

◀ An interview with Mairé Geoghegan-Quinn who was elected to Dáil Eireann in a by-election in 1975, following the sudden death of her father Johnny. Still in her twenties when she was appointed Minister for the Gaeltacht, she was the first Irish female cabinet member since the foundation of the State.

ICMSA



Denis Drennan
President ICMSA

GOVERNMENT SHOULD BE ASHAMED

The Teagasc National Farm Survey, released recently, showed a fall in income across every sector of farming and an almost unbelievable 69 per cent collapse in dairy-farm incomes in the last year.

Any reasonable examination of the data would indict the Government of – at the very least – incompetence, if not downright sabotage. Try to imagine any other occupation in Ireland requiring workers to put in 60-hour weeks only for a Government agency to produce figures showing a fall in income in just a single calendar year of almost 70 per cent! Try to imagine a situation in, for instance, the public sector where a group of workers were asked to just shrug and accept a fall in income of even 7 per cent, let alone 10 times that! Imagine the response. And imagine the Government falling over itself to apologise and explain why the fall in income has happened. Our farmers – arguably the best in the world – are losing their livelihoods and the Irish Government, we feel, is not responding appropriately, too concerned with implementing regulations and schemes aimed at non-commercial farming and funded at the expense of the farmers – like the milk suppliers – who are seeing their incomes falling by massive double-digits year-on-year. A shambles has been made of what was, until recently, Irish agri's flagship sector – the one area in which Ireland was deemed 'world-beating' and the economic engine of rural Ireland.

It's even more alarming when you note that the Teagasc figures calculate the income of a single labour unit at €34,567 (the €49,432 figure is based on 1.43 labour units). So you see that farmers have been working well below the minimum hourly rate set out by law when you take debt repayments of the average dairy farmer into account.

The average dairy farmer working at least a 60-hour week at €34,567 per year, is coming out with about €11 per hour – and that's before they meet debt repayments.

The Irish Government and the civil servants responsible for the state of the dairy sector should be ashamed to show their faces in public on the basis of those figures.

SKIP THE PRETENSE

The pretense that nothing can be done about the farm income situation, that it is just 'market forces' at play, adds insult to injury. We do not accept that. At the very least, the Government could take their regulatory foot off the necks of these farmers. Everywhere you look the Government's policy is either to do nothing to make it better or – more often – to do something that makes it worse. Those in charge should be ashamed of the aforementioned figures and be determined to turn them around. If they're looking for straightforward, logical steps that would at least begin that process, then they must consider the below list of actions that the ICMSA made in its 2025 budget submission.

1. A measure to address excess income volatility within the farming sector whether caused by output or input prices, weather, or the regulatory burden on farmers. The Programme for Government drawn up almost five years ago had made a commitment on a volatility measure that had not been delivered to date. Budget 2025 provides this Government with its last opportunity to deliver a measure that was eminently logical and do-able, while being critical to the future of Irish farming.

2. The need for inheritance tax reform to support the transition of the family farm from one generation to the next and supporting farmers in the land market.

The ICMSA is proposing an increase in the Class A threshold from €335,000 to €500,000 and an amendment to the reliefs to ensure that farmers are favoured over investors in land.

3. A 70 per cent grant for all farmers investing in slurry storage facilities.

Considering the massive increase in the price of (particularly) concrete and the

generally low incomes in agriculture, the ICMSA believes that a 70 per cent grant would represent a very effective investment by Government in terms of supporting the delivery of sustainability improvements in Irish agriculture.

4. A Dairy Beef Calf Scheme delivering a payment of €100 per head for the calf rearer and a further €100 per head for the cattle finisher subject to certain criteria.

Dairy beef now accounts for over 65 per cent of total beef production in Ireland with a ready-made supply of calves from the dairy herd and, notably, it is a very climate-efficient system of beef production. This system of production needs to be supported and directed and a scheme delivering reasonable payments to farmers is an obvious 'win' in terms of sustainability.

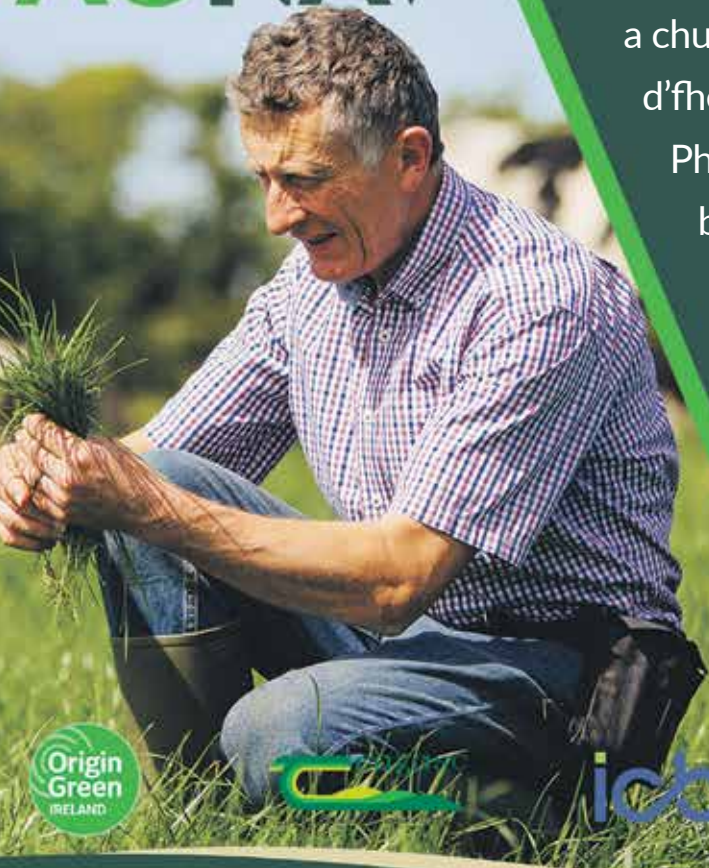
5. ACRES participation. Should be increased to 70,000 farmers with a focus on intensive farmers.

6. Amendment to VAT and/or capital allowances to support investment in environmentally friendly equipment on farms. The taxation system must support farmers who are willing to invest in environmentally friendly equipment that is not always economically justified.

7. Funding for the Food Vision Groups' recommendations made to the Minister for Agriculture, Food and the Marine (some of which were made over two years ago). There have been many positive recommendations from these groups and to date, the Government has utterly failed to support the sector in their implementation. Fodder and cashflow are very current and serious challenges facing farmers and the ICMSA has impressed on the minister the need to support farmers in what is an extremely challenging year following an equally difficult 2023.

These are eminently sensible and logical measures that would make a real difference to farm families. This Government will be judged on their willingness to act on these measures and include them in Budget 2025.

AGNAV



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DRIVING INNOVATION



AgTechUCD director, Gary Ryan.

novel development adds to efficiency and effectiveness and productivity and viability and sustainability on the farm, then we can support it," he says.

PRACTICAL APPLICATION

Labour and time are scarce commodities in agriculture and ag-tech has a role to play in improving efficiencies in both areas, explains Gary. "Sustainability, in terms of economically, environmentally and socially sustainable farming, drives a lot of innovation in the ag-tech sector. Farmers are quite creative. There's nothing like facing a problem to make you think about a solution.

"Our innovation centre at Lyons is only open in the last 12 months, but prior to that, we had commenced a specific agricultural accelerator programme called Agccelerator, aimed at very early-stage innovation concepts. The people involved include post-doctorate graduates, researchers and students in third level, who have come across something in their research that lends itself to a business idea. Some are in other industries, including the tech sector, and this range of additional perspectives is something we're keen to explore. They see a particular piece of technology and recognise its potential in the agriculture or equine industries."

Gary has been a judge at Enterprise Ireland's Innovation Arena Awards at the National Ploughing Championships for several years. The experience opened his eyes to the creativity and innovative thinking that exists in the country: "I found that young people in secondary school are great for novel ideas

FORMER CEO OF THE FARM TRACTOR AND MACHINERY TRADE ASSOCIATION, GARY RYAN MOVED FROM THE TRACTOR TO THE TECH SECTOR AT THE END OF LAST YEAR, WHEN HE ASSUMED THE ROLE OF DIRECTOR OF AGTECHUCD. MATT O'KEEFFE CAUGHT UP WITH HIM TO FIND OUT MORE ABOUT THE ROLE, AND THE REMIT OF THIS NEW INNOVATION CENTRE

AgTechUCD is based at University College Dublin's (UCD's) Lyons Farm in Kildare. It is part of NovaUCD, the commercialisation arm of research and innovation at the university. Nova deals primarily with spin-out companies coming out of university research. AgTechUCD has a broader remit, Gary explains: "We deal with university spin-outs. We will also engage with 'spin-ins', companies external to UCD but in our space, and we're the only part of Nova that is sector specific, being exclusively focused on ag-tech oriented projects. Nova is in existence for more than 20 years now. It has built up huge experience in start-up development and commercialisation."

LEVERAGING EXPERTISE

Ag-tech was a logical step for UCD to take, says Gary. "With its agriculture and veterinary faculties, UCD believes it can leverage its expertise and strengths in these areas and ag-tech was a very logical area to move into. "In addition, ag-tech is a high priority area for Enterprise Ireland, which is part-funding the programme, as well as providing support under its regional enterprise development fund for the infrastructure developed at Lyons for AgTechUCD. Our remit allows us to work with somewhat more established companies in the ag-tech space."

Ag-tech is a very broad term, he adds: "If a

and concepts. We have seen them exhibit at the Innovation Arena over the years. They have a different way of thinking, as young people do. In addition, quite a few really good concepts have come from farmers, often based on challenges they have personally faced. Established companies that you might not necessarily think are going to be innovative, are also coming forward with new concepts as they face new challenges."

FROM IDEA TO COMMERCIAL SUCCESS

It is one thing to have a good idea, another entirely to execute it. That is where AgTechUCD comes in. "People with an idea think, why is the world not knocking at their door? Unfortunately, that's not how it works. Turning that idea into a business is where our accelerator programme (see page 11) and the wider concept of AgTechUCD comes into play. It's to equip innovators with the skills to turn their ideas into a business. Some of the skills required are basic business skills. We need to turn that idea into a minimum viable product, or MVP. That involves moving into the prototype stages so that you have proof of concept. In other words, the idea has practical and commercial application."

FINANCE IS CRITICAL TO SUCCESS

A lot of the roadblocks that fledgling companies face are around finances; you need money to make money, Gary says. "Depending on what the idea is, that might be quite a considerable amount of money. Our parent organisation, Nova, through the work it has done over the years, has a considerable network of venture capitalists and early-stage investors. Several of them have an ag-tech focus with European operations based in Ireland. Generally, they are not looking at long-term investments. They're looking to exit at some stage. Sustainability is a big thing for them because they often want the business to be globally scalable to increase its value. "The sustainability piece can mean something that is transferable internationally. Our grass-based production system is

a huge strength to us. It is not directly transferable to many other markets but some of the concepts and developed products or services are replicable in other types of farming systems. The solution is in identifying a need and coming up with a solution, in a global sense. That allows you to raise money. Once you have the finance, or before you even go talk to a financier, you need to protect your intellectual property. That's hugely important. If you don't, your time and effort may be gone for naught. "But there is a pathway to successful commercialisation for a lot of people. It involves them recognising their strengths and these may well be technical. They may not have commercial strengths, and we often look to partner them with either a team of advisors or a co-founder who would come in with them. They have the skillset that will turn it into a business. It's quite common in the start-up world that the ideas person is not necessarily the person who's going to manage it to commercial success," says Gary.

COLLABORATIVE INNOVATION

When he was Minister for Enterprise, Trade and Employment, Simon Coveney announced €7m in funding over six years to UCD to deliver a new food and agriculture innovation and entrepreneurship training programme, in partnership with Teagasc. The Food and Agriculture Sustainable Technology Innovation Programme (FAST IP) is part of an overall Enterprise Ireland-funded programme called the Innovators' Initiative, Gary says. "It involves taking in a cohort of people each year, mid-career people, if you like. They will include people with professional experience under their belt, but not necessarily in agriculture. Their individual profiles include a wide range of industries, some from hospitality, some very much from the food and agri-space. Each group comes without any preconceived biases. We will spend the first part of the programme immersing them in the industry environment. In our case, it will be agriculture in the broadest sense, running from production, supply, through

processing and on to where food goes, looking at that whole value chain to identify real challenges that are being posed to the industry.

"Initially, the focus is on needs and challenges within the industry, not solutions. Ultimately, through teamwork and mentoring, the target is to identify solvable needs, and then create viable, commercial solutions. At the end of each year, we expect a couple of developments to become real start-ups that will go on into the Enterprise Ireland path, where they will have commercialisation executives available to help drive on towards creating a business. The aim is that some of the start-ups will achieve the status of Enterprise Ireland high-potential start-ups."

AGTECHUCD FACILITIES

Gary gives an overview of the types of facilities at the AgTechUCD innovation centre. "We have a range of co-working spaces available for start-up companies, and they can incorporate the 'hot-desk' concept. There are some private offices. We also have lab spaces. Those spaces are available to businesses as a commercial transaction. We put our clients at the heart of the Lyons farm and that gives them access to university researchers. It's a commercial relationship to a point, but with a lot more benefit than they're going to get in another rented space." He explains a little about the research and commercialisation process: "If a concept comes from university research, the university owns that research, and we'll have a slice of the equity. It varies, depending on the circumstances. Once the research is completed, sometimes a researcher wants to pursue commercialisation, sometimes not. If the latter is the case, our technology transfer office may identify another company which may have an application for the technology, and it will be licensed out to the company. That's quite common. A majority of the companies we work with, however, would be at launching stage. We fully support our graduates if they have potential commercial ideas to explore and develop."

REAL-TIME DATA FOR EFFICIENCY AND HEALTH

AMIE PEERS, INTOUCH IRELAND MANAGER AT ALLTECH, WRITES ABOUT HOW TODAY'S AG-TECH IS EXPERIENCING AN EXCITING TRANSFORMATION, AND THE ROLE THAT ALLTECH'S FEED-MANAGEMENT AND ON-FARM NUTRITION SYSTEM IS PLAYING IN THAT



Amie Peers, InTouch Ireland manager at Alltech.

The history of agriculture has been shaped by advances in technology, beginning with the introduction of modern machinery, which significantly improved farming efficiencies, alleviating challenges such as shortages in skilled labour.

Today, agricultural technology, also known as ag-tech, is experiencing an exciting transformation, with innovations such as driverless tractors and advanced biotechnology pushing the boundaries further. Recent years have seen a surge in new technologies and an increase in their use.

The term ag-tech covers a wide range of

areas in the agricultural industry, including innovations in crop and soil management, livestock management, and indoor vertical farming. Ag-tech also provides data insights which offer improvements in yield, efficiency and profitability, and which also drive environmental sustainability and food security.

Alltech places a high emphasis on ag-tech, using global research and network collaborations with industry partners, top universities and research institutions to stay ahead of industry trends and bring the latest advancements to farmers in Ireland and worldwide.

IRELAND'S ROLE IN AG-TECH

This year has been challenging in Ireland, with a long winter followed by the sixth-wettest spring on record. These conditions have highlighted the need for advanced ag-tech. Ireland is ready to meet that need. In fact, it is already emerging as a significant player in the ag-tech sector, leveraging its strong agricultural roots, noted research institutions, and forward-thinking government policies. Ireland's commitment to innovation is also driving the adoption of these ag-tech solutions, taking them from the lab to the farm.

THE INTOUCH SYSTEM

One solution gaining ground in Ireland and beyond is Alltech's feed-management and on-farm nutrition system, InTouch, which uses real-time data to optimise feed efficiency and animal health.

The InTouch system, in combination with the technology of Keenan diet feeders, ensures

consistent feeding, aiding in dry matter intake, reducing waste, and optimising performance. Expert agricultural advisors, both at the InTouch hub and on-farm as needed, are available to monitor and advise on feeding operations. If there is a drop in animal performance, an advisor can quickly assess the problem, reformulate the ration, and submit an update to the InTouch system, which will automatically and immediately make the change.

With a current customer base of over 600 farmers, InTouch has demonstrated, again and again, the on-farm benefits of optimising feed formulations to meet animal nutritional needs efficiently – and farmers are impressed with its ease of use, including the user-friendly InTouch dashboard and the new app that allows users to easily connect to the system from their tablet or smartphone.

RELIABLE, EXPERT SUPPORT

Dairy farmer, John Roche, has been using InTouch for over 10 years. He incorporates InTouch on his farm with Alltech dry cow minerals and Mycosorb. Access to the Keenan diet feeder and the InTouch controller and nutrition service, all supported by advice from InTouch feeding specialist Emma Swan, has improved his overall farm efficiency and profitability.

"InTouch takes the variability out of farming during a time of volatility, with milk price and high input costs," he says. "Having Emma at the end of the phone when we want to change diets is invaluable, and the consistency of the diet when using InTouch is second to none."

John adds that nutritionist support has provided 'clarity and peace of mind' when managing budgets and cost efficiency. "Emma will sit down and go through the cost of feed for the winter, rather than buying ingredients/feed for the sake of it," he says.



INTOUCH

Measure. Monitor. Manage.



Full controller view on
your smartphone screen



Up-to-the-minute, precise
tracking of changes in diet
and feed cost



Easy transfer of diets
and pen updates

InTouch is a total farm management system that helps optimise your feeding operation through innovative technology supported by a team of expert nutritionists across the country.

Our team can advise you on grass and forage management, optimising feeds for performance, and driving on-farm efficiencies. This nutrition advice is complemented by the InTouch dashboard and feed management app, which provide accurate, real-time data and insights to help you make feeding adjustments quickly and simply.

**Find out how the InTouch team
can help your herd today.**

**contactintouch@alltech.com
0599101320 (ROI)**

Alltech®

Padraig Hennessy, CEO of Terra Nutritech, showcases the company's innovative livestock nutrition solutions to a herd of curious cows.

DELIVERING A LICENCE TO FARM

PADRAIG HENNESSY IS CHAIR OF AGTECH IRELAND, THE REPRESENTATIVE BODY FOR COMPANIES IN THE AG-TECH SPACE. HE CHATS TO BERNIE COMMINS ABOUT THE IRISH AG-TECH SECTOR, WHICH HE SAYS IS STILL AT FLEDGLING STAGE BUT IS SET TO REACH GREAT HEIGHTS

"Ag-tech has really only come into the common vernacular in the last five or six years," says Padraig. "Even my own business, Terra Nutritech, which started out over 10 years ago, wouldn't have been described as an ag-tech business back then. Ag-tech is still a fledgling industry that people are trying to find their way through. But there are loads of good ideas out there," he says. Many of these good ideas have made their way from the backs of napkins to bricks-and-mortar businesses that are thriving. So much so, it spurred on the establishment of AgTech Ireland in 2021 as a member-funded, industry-led organisation to promote and enhance the sector. Padraig explains that AgTech Ireland is not the gatekeeper of what ag-tech is or isn't, it is an all-encompassing organisation where companies that have already 'been there and done that' can share the t-shirt with the new start-ups that need some direction.

VALUE FOR MONEY

Enterprise Ireland carried out some information gathering in 2020 among 80 ag-tech client companies – 84 per cent of which were established, and 16 per cent of which

WHAT IS AG-TECH?

Padraig says: "It is anything that makes a farmer more productive in whatever area they are in. A better handle on a shovel would have been considered ag-tech at one time, and a thrashing machine was cutting edge in its day. Technology in agriculture is about helping farmers. The latest ag-tech out there is to do with machine learning, artificial intelligence, edge computing, and so on. You can use all the fancy terms, but if you invent a new gate latch in the morning that is much better than everything else, well, that is ag-tech as far as I am concerned."

were start-ups. Enterprise Ireland found, at the time, that Irish ag-tech sales amounted to around €1.1bn, of which 60 per cent were generated through exports. Around 3,000 people were employed in the sector and 87 per cent of companies were located outside of Dublin. A more up-to-date global value for 2024, based on information from Zion Market Research, estimates the value of the

ag-tech sector at between USD\$25-30bn with an expectation for that to jump to north of USD\$70bn by the early 2030s.

Commenting, Padraig says: "Every farmer is spending money on something every year to help them on the farm. The size of the market defines the value of it, and that is certainly growing."

Environmental, economic and social pressures are all feeding into its growth, Padraig comments: "Times have changed from when people were happy to work 70 hours a week to people wanting a balance, wanting to bring their kids to football every Tuesday night and watch them play a match on Saturday. People are looking at ways to do jobs more easily on the farm and to have them done automatically where they can. That is a huge driver of ag-tech.

"Getting skilled labour that you can rely on every day is next to impossible, especially when you can't guarantee you're going to have good margins next year due to price volatility. This is another huge driver of ag-tech."

But one of the most prominent drivers of ag-tech now, is the environmental one, explains Padraig. "I always say farmers can't work harder, but they're going to have to work smarter. Farmers are coming under huge pressure from all sides. So, working smarter means utilising technology to help

with all the various issues on farm that will help cut emissions because, ultimately, that's going to be the licence to farm." But the costs associated with this undertaking cannot fall on the farmer alone, Padraig says. They need to be borne by the processors and, ultimately, the end consumer.

LOVERS OR LOATHERS?

Are farmers lovers or loathers of new-technology adoption? The answer to this question is not a simple one, Padraig explains. "With our production system in Ireland, and I am mainly talking about the dairy side here, and because we're low cost, farmers think longer and harder about adopting technology compared to farmers with larger units on the continent. There, their cost bases are higher, they're putting through more litres, and they can spread capital investment in technology over more litres, I suppose.

"The top 25 per cent of farmers [here] are adopting technology and they are adopting it quickly because they're seeing the return on investment when they adopt it correctly."

But there is a cohort of Irish farmers over a certain age, explains Padraig, who are less inclined to adopt. According to the 2020 farm census, almost one third of all farm holders were aged 65 or over compared to just above one fifth in 1991. This has an impact.

"It is very difficult, mindset wise, for a certain cohort to adopt these new technologies. Being honest, they are sometimes scared of new technologies, and that is not easy for them. So, when you are dealing with that constraint on size of the potential market, effectively it slows down uptake of new technologies."

This can be problematic when so much is being demanded of farmers in a climate context. Padraig agrees that a combination of retirement and a change in farming practices will see technology adoption increase soon. This is already happening. "Some farmers are just reaching retirement age and, especially, if there's no succession plan in place, they are wondering, what's the point?" says Padraig. "They are not willing to put up with the stress anymore and with feeling so vilified. It certainly looks like there are more dispersal sales happening through marts now.

The younger cohort is more au fait with technology and happy to adopt it. But I think there needs to be a huge educational drive – probably led by Teagasc – to help farmers to understand what technology is,



A BETTER HANDLE ON A SHOVEL WOULD HAVE BEEN CONSIDERED AG-TECH AT ONE TIME

and I don't mean advocating for individual ag-tech solutions on the farm, I just mean in general, about technology. That could be as simple as a 60- or 70-year-old learning how to take a picture of a machine and send it to a mechanic. Those of us who can't leave down our smartphones for 10 minutes take that for granted. We need to educate farmers on where tech is at, what it can do for them, and where it will go in the future, but that is a step-by-step process.

"I've seen some dashboards on systems that are taking information on farms and, to be honest, you would need to be a data engineer to figure it out. While we need to be able to give farmers actionable insights they need to be accessible and not reams and reams of data."

A SLOWER ADOPTION CURVE

Ag-tech has a slower adoption curve when compared to other sectors, explains Padraig: "You don't get mass adoption overnight. In general, it's a farm-by-farm basis. And nearly every year, there is something that holds the market back – could be weather, prices – and it is very difficult to work when you don't have a solid forecasting mechanism because it is up to the skies at times to dictate the way sales will go. That is similar all over the world.

"But when farmers do adopt a technology on the farm and it works for them, they are some of the most loyal customers you could ever get, so in that respect, it is a really good industry to be involved in, you are at the coal face and you can see the difference that it can make."

JOINED-UP THINKING

Padraig raises the issue of the need for greater connectivity between on-farm technologies. "There is a lot of information being generated in various forms but it's being generated from four or five different

areas and all of that information is being kept separate. We need to start looking at how we can we pull all of that information together to give those farmers much better actionable insights."

This requires cooperation and buy-in from all companies, and that will involve some groundwork. Padraig comments: "There needs to be, in my opinion, some sort of not-for-profit organisation, that can house this information and protect the intellectual property (IP) of the various companies, obviously, but also allow for information to be analysed at individual farmer level.

"But this information can never be used for any other purpose, or to 'penalise' farmers, or to impact payments. There are various GDPR issues, but I think they can be overcome. Farmers, if they were going to get value from it, and if it would affect their bottom line, would easily opt into that."

This, Padraig says, is crucial for farmers to be able to hit the environmental targets set for the sector. Ag-tech has already been successful in helping to achieve some of the easier environmental wins such as using less chemical fertiliser, soil sampling, and so on. But some big hitters are still to come. "We have some more difficult targets to hit over the next three to four years," says Padraig. "One of the big ones relates to methane. All around the world there are methane-abatement projects being worked on. I believe there will be multiple solutions to that, and we [in Ireland] may even surpass the 25 per cent sectoral target that was set for the agriculture sector." Farmers must be in a position to avail of those solutions but costs around training, education and implementation, Padraig says, cannot fall to farmers alone. It is an industry-wide problem that needs to be borne by the industry, he adds.

WHAT ARE WE GOOD AT?

So, what are ag-tech innovators good at here in Ireland, and are start-ups being overly influenced by the climate crisis? "I think it is varied in terms of the solutions that companies are looking at," says Padraig. "Obviously, there is a bit more focus on anything that makes farming more sustainable because people see the potential market in that. Historically, we've been really good at what I will refer to as the metal ag-tech – the likes of Keenan's and Abbey Machinery, for example. We have always been excellent in these areas. This is probably



Padraig Hennessy, CEO of Terra Nutritech.

extending now to what I will call hardware or software ag-tech – sensors, for example.” The ag-tech sector is proving that you certainly don’t have to be a farmer to solve farming problems: “Some of the best innovators in the world would never have worked in some of the industries they have ended up in,” says Padraig. “They would have come in from another industry, reimagined it, and brought in other best practices. I am a big believer that you don’t box yourself in with the idea that ‘things have always been done this way’. There is always a better way to do things.

“But there is still a huge love for the land [in Ireland] and virtually everybody knows a farmer or has a family member or cousin or neighbour or friend in farming. We’re still very close to it as a nation, so a lot of people are starting to use the training and education that they’ve gotten for other industries, and are bringing it back into the agricultural fold.”

SETTING UP AND SCALING UP

Each year at the National Ploughing Championships, the high standard of agri-innovation and ag-tech is displayed through Enterprise Ireland’s Innovation Arena and associated awards. Here, all those good ideas are given a chance to shine bright. Recently, AgTechUCD announced that its Agcelerator programme was accepting applications from early-stage start-ups in the ag-tech space to help them along their business journeys. So, ideas are plentiful, supports are there but there are challenges to setting up and scaling up. Padraig comments: “There are various funding mechanisms there if you come up with a great idea, ranging from feasibility grants from local enterprise offices to various R&D grants also. There is a level of funding there but people new to it all are a little scared of it, of how to access it, of how

to get business plans together. Engaging with State bodies can be daunting.

“From a research side, to work with a third-level institution, there can be a misalignment between the objectives of some research work and the objectives of companies. That is, companies need to get commercial and revenue-generating as quickly as possible, whereas at a lot of the research institutions, it is about the research only. So there is an educational piece required there for both sides to understand where the other is coming from. There are two agendas or priorities, so that can be frustrating.”

CROWDFUNDING OPTION

From a funding perspective, banks are slow to respond at the moment, says Padraig, but there is another way: “What I think has not been used correctly in Ireland is crowdfunding. I think if there are good enough agri-solutions you will have various farmers willing to put in small amounts of money and wanting to be part of some of those journeys. I think there’s a there’s huge goodwill for the right products in Ireland. Crowdfunding is one mechanism that I haven’t seen any company use to their advantage yet.”

This, Padraig, attributes to the Irish psyche of not wanting to put yourself out there in case you will be put down, or accused of having ‘too much ambition’ or ‘a big head’. But he advises against this way of thinking: “Any start-ups I’m ever talking to, it is about being proud of what you are doing and just get it out there. If you fail, then you fail, but at least you tried.” This, Padraig says, is part of the ‘university of life’ where valuable lessons are learned. And that is what aids success.

GLOBAL APPEAL

Ireland is a very small market, and

entrepreneurs must have an eye on the international market-scape when developing a product. But a good idea and global appeal are not enough to make a mark globally. “It is very, very difficult,” says Padraig. “The way I describe it is, if I invented a machine in the morning that turned water into wine, you still must have a sales mechanism to get that out there. Customers will never come banging on your door to buy your product.

“So if you are going international, you need to put a lot of money into it, and feet on the ground, or you need to work with partners in the individual countries. You need to consider logistics, training, legal entities, and, potentially, stock levels. All of it takes a lot of money. You need a war chest to do that.” Padraig notes: “Some companies, including ourselves, are doing it slowly and looking at one or two markets at a time and generating revenue from there to get to the next market. Unless you are taking in tens of millions [of euros] you can’t go global overnight. It can be quite daunting for companies at the start. You need really good advice. Enterprise Ireland are hugely helpful but you still have to take some big leaps yourself.”

It is in this area that membership of AgTech Ireland can be really beneficial for peer support and knowledge sharing. Other companies have paved the way and are more than happy to lend a hand to the new ones coming up, Padraig says. “It is a very small industry here and everyone knows each other and there is a huge amount of goodwill there. A lot of companies are selling into the same markets but are not in competition with each other.

“I got help from people in different industries on the way up and I’m really keen to help other people, and I know that there are other people in the industry who are happy to pay it forward.”



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WORTH ITS WEIGHT

IT IS ALMOST A DECADE SINCE STRONGBÓ AGRITECH DEVELOPED ITS PROTOTYPE TO AUTOMATICALLY WEIGH LIVESTOCK ON FARMS. WITH THIS DEVICE, CALLED THE AUTO WEIGHER, THE COMPANY SET OUT TO ADDRESS INEFFICIENCIES IN LIVESTOCK MANAGEMENT, SPECIFICALLY WITHIN THE BEEF SECTOR. **BERNIE COMMINS** CATCHES UP WITH **MICHEÁL MCINERNEY**, MANAGING DIRECTOR OF THE GALWAY- AND CANADA-BASED AG-TECH COMPANY TO FIND OUT MORE

Problem-solving is the raison d'être for all tech companies and for StrongBó Agritech, there was one critical beef farming problem that needed addressing.

Micheál explains: "That was to enable beef farmers to understand the performance of their herds in real time. Before our technology became available, beef farmers needed to wait for months to get performance data because manual systems were not practical for regular use."

This resulted in a lack of frequent, regular data, as manually weighing cattle – which requires handling animals in a crush – is a risky process, only done when absolutely necessary. StrongBó Agritech's automatic system changed that. Micheál continues: "The automatic weighing system uses attractants like salt or molasses to get the animals to approach and stay on the weighing platform. The system takes thousands of weight readings and processes the data locally, ensuring highly accurate weight data." Measuring and collating accurate weight data

provides essential information for farmers, underpinning present and future decisions. StrongBó Agritech, Micheál explains, homed in on five areas where this information would make an impact.

Knowing the weight of a group of beef cattle: Some farmers don't even use manual systems and instead guess the weight of their livestock. Some farmers can be close with their weight estimates, but that is rare and often leads to inaccuracies.

Average daily gain (ADG): This metric, which indicates how much weight an animal gains per day, is crucial for farmers to know if they are making a profit. With the best data available to farmers, this information can take weeks and even months to determine accurately. By then, significant gains have been lost.

Weighing is time consuming and dangerous: Manually weighing cattle is a burdensome and risky task, requiring significant time and posing dangers to both farmers and animals.

Selling stock at the correct time: When animals reach a certain weight or start to drop in performance (ADG), StrongBó Agritech's system can detect this within a few days. This allows farmers to decide which animals to send for slaughter and which to keep for further feeding, leading to additional weight gain and higher sale value.

Sustainability: The Auto-Weigher contributes to more sustainable farming by optimising resource use. Accurate weight data helps farmers manage feed more efficiently, reducing waste and improving overall herd health.

Micheál elaborates: "Once the device is placed within the herd, information can be obtained after just a few hours. After two days, almost all animals in the herd are weighed. This gives a quick and accurate group average, which can be tracked for the benefit of feed and pasture management, optimal timing of sale, and herd valuation." Being able to track ADG enables farmers to make decisions based on live data and not

The Auto Weigher takes thousands of weight readings and processes the data locally.

FROM CONCEPT TO CREATION

StrongBó Agritech was founded by Ivan Wahlrab and Micheál McInerney to tackle a growing need for innovation in the beef sector, where extensive farming operations, harsh climates, and large animals can hinder the frequency at which farmers can assess their daily output. Micheál, from a beef-farming background in south Galway, identified the problem of beef-performance metrics on his family farm, which led to the concept of an automatic weigher and the creation, in 2015, of a prototype. The business was officially incorporated in 2019, after several years of working with early-stage customers and researchers. In early 2021, the company announced a partnership with Dr Marty Metzger in Ontario, Canada, where he had been developing similar technologies for the beef industry there. In 2023, the company finally commercialised its design. After securing seed investment in 2023, its team quickly expanded and a strong mix of commercial leaders and engineers were hired to help up-scale the business. The team combines agricultural knowledge and technological expertise. Currently, there are four full-time employees and three part-time contractors.



THE AUTO WEIGHER - HOW IT WORKS

- ▶ **With the animal:** It uses an automatic weighing platform that attracts cattle with salt or molasses. Once the animals step onto the platform, the system takes thousands of weight readings and processes the data locally.
- ▶ **The technical specifications:** It is built with a heavy gauge galvanised steel frame, stainless steel load cells, and UV- and chemical-resistant electronics. The system can send data via Bluetooth, cellular, or satellite, ensuring connectivity even in remote areas. It also features an app (available in the App Store and Google Play) along with a web app for PC access allowing farmers to view and manage their herd data securely from anywhere. The data is easily extracted and fully secure on our servers.
- ▶ **With the farmer:** Farmers can access real-time data through an easy-to-use interface, allowing them to monitor ADG, identify underperforming animals, and make informed decisions about feeding and selling. The system reduces the need for manual weighing, saving time and minimising risks. The towing ability of the Auto Weigher is designed for convenience, allowing farmers to easily move it from paddock to paddock or field to field, ensuring continuous data collection and no gaps in monitoring.
- ▶ **To achieve sustainability and environmental benefits:** It contributes to more sustainable farming by optimising resource use. Accurate weight data helps farmers manage feed more efficiently, reducing waste and improving overall herd health.

information from two or three months ago, and it helps them to identify underperforming animals quickly so they can decide which animals to sell or keep for further feeding. Micheál adds: "Tying in with that, it allows beef finishers to evaluate individuals on a daily basis and to determine if it is time for slaughter. Every animal stops gaining weight and knowing when this occurs, will save you massively.

"The system is 100 per cent autonomous, and works for years with no maintenance. This means no need for a manual system, and no need to risk running animals through the crush," he says. And it ticks the sustainability box also, he explains: "Unlike other trade-offs with economic development and the

subsequent impact on the environment, beef efficiency is very different. Improvements in this sector have a direct impact on reductions to greenhouse gas (GHG) emissions.

GLOBAL APPEAL

In the almost 10 years since its conception, StrongBó Agritech has made its mark, globally. With the Auto Weigher's widespread appeal, the company has made significant inroads in the North American and European markets, where automatic weighing has been well received by large-scale beef-farming operations. "We are also exploring opportunities in other regions with robust livestock industries and a high demand for innovative agricultural solutions," says Micheál.

The US and Canada are prime locations in this regard.

The company's partnership with Gallagher Animal Management has been key to reaching markets abroad. "Gallagher has extensive access to a global market of beef producers and has served these customers for almost a century. Our small team fits in extremely well with Gallagher, as our agility allows us to make improvements to existing products quickly or create solutions to completely new problems."

POSITIVE RECEPTION

The device been positively received by farmers who 'appreciate the ease of use, accuracy, and the actionable insights provided by the



EVERY ANIMAL STOPS GAINING WEIGHT AND KNOWING WHEN THIS OCCURS, WILL SAVE YOU MASSIVELY

system' according to Micheál. "Many have reported significant improvements in herd management, increased productivity, and reduced operational costs," he says. "Farmers particularly value the real-time data and the ability to make informed decisions without the risks and hassles associated with manual weighing."

But the journey so far has not been without challenges, he admits: "Some farmers initially expressed scepticism about transitioning from traditional methods to an automated system. Additionally, integrating new technology into existing farm operations required a learning curve. However, once farmers saw the benefits and ease of use, their adoption and satisfaction levels increased significantly."

"Despite the challenges, the strong adoption rate and positive customer feedback have encouraged us to continue innovating and improving our offerings to meet the needs of farmers worldwide," says Micheál.

Additionally, the environment in which the technology operates is one of the harshest in the world, with machines experiencing up to 23 hours of use per day in large North American feedlots. The challenges are compounded by things like snow, ice, frozen manure, and the physical stresses from 800kg animals," says Micheál.

He adds: "Additionally, the electronics need to function in this environment with low power consumption and reliable cloud connectivity, whether in an indoor barn in Galway or Ontario or remote locations in New Zealand."

EXCITING PROJECTS

StrongBó Agritech now has several exciting projects in the pipeline. Micheál elaborates: "We are focused on developing new technologies to provide even more detailed and accurate data on livestock health and performance. Additionally, we are working on integrating advanced AI capabilities to

HAVING A FIELDAYS

The company recently travelled to the largest agricultural event in the southern hemisphere, Fieldays in New Zealand where they had the opportunity to showcase the Auto-Weigher to a diverse audience. There, they received positive feedback from farmers and industry experts, says Micheál.

"As a result of our participation, we have established valuable connections with potential customers and partners. The exposure and recognition at Fieldays have opened up new business opportunities and collaborations in the region, further validating the global relevance and impact of our solutions."

offer predictive analytics, which will help farmers make proactive decisions about herd management."

The company is also exploring the application of its technology to other types of livestock beyond beef cattle, such as sheep and pigs, to broaden its market reach. "Our goal is to create a comprehensive suite of smart-farming solutions that cover all aspects of agricultural management, from health monitoring to feeding optimisation. Our commitment to sustainability remains at the forefront of our development efforts. We are continually looking for ways to enhance the environmental benefits of our products, ensuring that our technology not only improves farm productivity but also contributes to more sustainable and eco-friendly agricultural practices."

INNOVATION IS KEY

Agriculture has always evolved and innovated but it is going through a very exciting period right now where serious challenges are being met with serious solutions. Micheál agrees

but says that the beef sector has not seen the same level of change as that of other sectors. "Dairy, pork and poultry have been transformed with new tech and processes but despite genetic improvements, the beef industry remains somewhat unchanged when compared to 50 years ago.

"We believe that innovation is the key to unlocking the full potential of farming. Technologies such as Internet of Things, AI, and advanced data analytics are enabling farmers to make more informed decisions, optimise resource use, and improve the health and productivity of their livestock. These innovations are not just about increasing efficiency; they are about creating a more resilient and sustainable agricultural system."

Michéal continues: "The integration of sustainable practices with technological advancements is particularly exciting. By reducing waste, improving animal welfare, and minimising environmental impact, we can create a farming ecosystem that supports both the farmer and the planet. The development of solar-powered systems, like our Auto-Weigher, is a prime example of how technology can contribute to sustainability. "Innovation in farming, more than in other industries, requires a significant practical component and unwavering reliability. Beef producers have limited capacity to adopt cumbersome technology, and tight margins can greatly affect early adopters. We recognise this as a major barrier to tech adoption. This is why our partnership with Gallagher is so beneficial. Gallagher's reputation and experience help break down entry barriers. Overall, the current wave of innovation in agriculture is setting the stage for a more productive, sustainable, and resilient future. We are proud to be part of this movement and are committed to continuing our efforts to drive positive change in the industry," says Michéal.



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FARMEYE – WIDENING ITS FIELD OF VISION

DR EOGHAN FINNERAN, CEO OF IRISH AG-TECH COMPANY, FARMEYE, TALKED TO MATT O'KEEFFE RECENTLY ABOUT BUSINESS, EXPANSION, AND THE TECHNOLOGY THAT UNDERPINS THE ESSENTIAL SERVICES THAT FARMEYE PROVIDES TO THE AGRI-SECTOR

Software company, Farmeye was set up in 2017, co-founded by Eoghan along with Joe Desbonnet and Brendan Allen as a spin-out from a University of Galway research project. At a basic level, it focusses on data management and technology that can improve the lives of farmers and the environment. But the nuts and bolts of this are highly sophisticated. We are talking about geographical information systems, soil carbon sampling, and soil health analysis. The company has even collaborated with the European Space Agency (ESA) to explore the vital role hedgerows play in Ireland's ecosystem and agricultural landscape. Until two years ago, most of its business was in Ireland, which still accounts for 70 per cent of activity, with over 1.5 million hectares mapped and stored on the Farmeye database. However, its field of vision has widened significantly in that time, and there are now Farmeye programmes established in nine countries across the UK and Europe. Eoghan offers a bit more insight: "We provide software tools for measuring natural

capital on farms and in nature. We have three different streams of technologies. The first stream, which involves mobile apps, is used in the fields by trained engineers or agricultural advisors, or soil samplers, for example. Then, we have a set of satellite-driven technologies, which model everything from water quality to farm habitats. And finally, we have a reporting mapping system, that's posted on the web where a farmer can access it to assess biodiversity or water quality or generate a soil report for the farm, all at the click of a button."

SOIL HEALTH

Outlining Farmeye's customer base, Eoghan says: "Our customer is usually the likes of dairy co-ops such as Tirlán or Lakeland Dairies or companies like Diageo. In the case of Diageo, we run a regenerative agriculture programme with Guinness where farmers could be end users as suppliers of grains. Another example is Lakeland Dairies. Every year, up to 300 Lakeland suppliers sign up to the co-op's soil-health programme. Through



FARMERS ARE BUSY PEOPLE [...] THE LAST THING THEY WANT IS ANOTHER APP OR ANOTHER SITE WHERE THEY HAVE TO ENTER DATA

that, the farmers get a comprehensive colour-coded map report from Farmeye, which lets them plan their fertiliser use very efficiently, saving money in the process.

"Ultimately, the farmer is the end user, but typically they're not the direct customer of Farmeye. The aim is to help the farmer economise, to make more profit. It's two-fold really, from the farmer's point of view. Firstly, to save money. The average dairy supplier in the soil health programme with Lakelands would be saving about 30 per cent on their fertiliser bill every year, by having an efficient fertiliser plan because of our GPS



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soil-sampling and colour-coded mapping services.”

As well as operational efficiency, there is an all-round positive impact on the environment, says Eoghan: “Because less fertiliser is being used, less diesel has been burned, and there is reduced loss into the atmosphere or groundwater. It’s a win-win – positive for the farmer, and the environment.”

DEMAND-DRIVEN SERVICES

Demand for Farmeye’s services has grown significantly in recent years, as food companies, agri-food corporates, government agencies, and the likes, come under pressure from the marketplace in terms of scope 3 emissions, and are demanding a verifiable carbon footprint on products. Eoghan elaborates: “They’re also under pressure from the regulators. There’s new legislation, such as the Corporate Sustainability Reporting Directive, which has just come in this year. That impacts some of the larger agri-food companies in Ireland. The third direction from which pressure is coming is financial markets. Large corporations, if they require funding, now need sustainability credentials as part of the data set that the financial institutions will look for before approving lending.”

AUTOMATED DATA COLLECTION

Eoghan discusses the practicalities of using advanced technologies to drive their services: “The simplest principle that we like to follow in Farmeye is that farmers are busy people. While they might be end users, for example, of our soil reports, the last thing they want is another app or another site where they have to enter data. As far as possible, we try to collect data automatically or through an app that’s used by a trained professional who could be an agronomist or a farm advisor. While the farmer can easily access the end results, we don’t want to be asking the farmer to spend their valuable time learning a new technology or inputting data. The service needs to be automated to the greatest extent possible. We take a lot of data from satellites, for example.

“We’re pulling data from the European Sentinel

satellites [operated by the European Space Agency], which pass over Ireland twice a week. We also pull in data from the European weather model, which is updated for every three kilometre-squared grid, four times a day. We’re also integrated digitally with all the main soil labs in Ireland and the UK. Farmeye is able to predict pinch points, for instance, in terms of possible contamination of waterways from nitrogen, phosphorous or other potential contaminants.”

MONITORING WATER QUALITY

There are four different streams of natural capital, Eoghan explains, and they are the natural resources employed in farming. “We divide them into soil health, soil carbon, biodiversity, and water quality. We have a suite of technology products and reporting services associated with each of those four pillars. For water quality, we’re the first company in Ireland with the digital capability, at the touch of a button, to generate a water quality report for every farm in the country. This report will identify potential pollution sources above ground and below ground on that farm and can draw on the latest reporting data from local Environmental Protection Agency (EPA) monitoring stations.”

TWO-HANDED APPROACH

“In terms of manual data collection, we either employ subcontractors or our customer could have trained agronomists who go out to farms and use mobile apps to geotag, photograph, survey, soil sample, whatever it is that needs recording on the ground.”

Meanwhile, distance calculations are becoming increasingly detailed. It’s a fascinating area, but with potential pitfalls, Eoghan explains: “There are companies out there, some of them based in London, that trade carbon credits based off nothing more than a satellite picture. That, to me, is very dangerous. It’s not realistic, it’s not verifiable, and it’s not trustworthy. You need that groundwork, that survey, even if it’s only a geotagged photograph in the field. However, there is a lot of data that can be captured remotely. We use a combination of the two,

making use of satellite data for regular updates at scale, while maintaining boots on the ground to verify that what’s being picked up by the satellite is correct. The satellite can pick up a lot. We use the ‘normalized derivative vegetation index’ (NDVI). Basically, that’s an index of chlorophyll activity. If you have 30 fields on a farm, it can monitor growth over a 12-month period. While it won’t give you an actual tonnage of yield, it will tell you if the field- had the same crop and were managed the same way. It’ll rank them from 1-30. That’s a very useful tool based on satellite data.”

MONETISING CARBON

Eoghan says that we are lucky in Ireland that we have very healthy soils, in general, with just enough rainfall. “As a result, we have higher levels of carbon in our soils than most of Europe. Across the EU, carbon sequestration in soils is not allocated at a national level to farms or agriculture. It’s counted under Land Use, Land Use Change and Forestry, which is a separate category. That means farmers can’t get credit for carbon they might sequester in their soils. In many countries, it’s treated differently. In Australia, for example, where we have a project starting off, the government regulated for carbon farming two years ago. As a farmer in Australia, if you can verifiably measure your soil carbon, and come back and measure it in five years’ time, you can get a payment from the government based on how much soil carbon you have built or increased over that period.”

Eoghan says that while it is possible for a farmer in Ireland to measure and get a carbon credit, and sell that on to what’s called a voluntary market, it’s not regulated by Government or at EU level. “Because of that, there’s a reluctance among farmers and the industry in general to get involved. I share that hesitancy because we know there is legislation coming down the line. The EU is developing a carbon farming framework. Legislation is expected in Ireland as well. It’s probably better that people wait until the legislation is in place rather than do something now that might not be in line with it.”

FARMING FOR WATER: RIVER SLANEY PROJECT

Tirlán is committed to playing our part and taking action to improve water quality



As part of our work to improve water quality and to support the retention of the nitrates derogation, we recently launched the Farming for Water: River Slaney Project to address challenges in this river which flows through the heart of the Tirlán catchment area. A new Farm Support Service is now up and running to help enhance the economic and environmental development of farms within the River Slaney catchment.

The River Slaney Project aligns with and provides advice on how to access the Government's recently announced €60 million European Innovation Partnership (EIP) 'Farming for Water' project. The current phase of the collaborative project targets the River Slaney catchment area in counties Wexford, Carlow and Wicklow.

To find out more about actions that can be taken on farm to enhance water quality – scan the QR codes below:

Read more in the River Slaney Project brochure



Watch this video from the Poole family, Co. Wexford and hear about their on-farm actions to protect water quality



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Chair of Collaborative Finance, Joe Healy.

GREENING AND GROWING

FIFTY-FIVE IRISH CREDIT UNIONS NOW OFFER THE CULTIVATE LOAN PROGRAMME TO THEIR FARMER MEMBERS AT 170 OUTLETS ACROSS THE COUNTRY. MATT O'KEEFFE DISCUSSED THE PROGRAMME WITH JOE HEALY, CHAIR OF COLLABORATIVE FINANCE, WHICH OVERSEES THE CULTIVATE PROGRAMME'S LOAN OFFERINGS

In 2023, loan applications increased to more than €50m, which is double that of the previous year. Joe explains the rationale for its offering to the farming community: "As a farmer myself, I understand that farmers want flexibility, a simple format and a personal relationship with the lender. Surveys have confirmed that the Credit Union is trusted, with high customer satisfaction."

A SHADE OF GREEN

A strategic appraisal of the Cultivate offering has led to the introduction of a new 'green' loan, Joe explains: "We have introduced the Greenify loan product to our farming-related loan book and it is being standardised for use across the Credit Union structure. It's about encouraging farmers to improve their carbon efficiency on their farms, whether that's solar panel installation, the use of low emission slurry spreading, cow collars, or for financing the costs of converting to organic production. Upgrading milking parlours is included, as are GPS systems for fertilising and spraying." But it is not just higher-end technologies that are eligible. Joe explains: "Farmers have also taken out loans to finance fencing off watercourses, or for solar-powered water troughs. They seek short-term finance to reseed fields with clover and multi-species swards as well as finance to cover the cost

of soil sampling. The loans range from very small amounts to the maximum of €75,000 for an unsecured loan under the Cultivate programme. Last September, we announced increased loan ceilings up to €300,000 for loans that are secured."



FARMERS HAVE ALSO TAKEN OUT LOANS TO FINANCE FENCING OFF WATERCOURSES, OR FOR SOLAR-POWERED WATER TROUGHES

DEMAND DRIVEN

The Greenify loan facilities are driven by customer demand, Joe says: "No matter what sector of farming or the general economy you are involved in, there is an awareness that environmental protection has to be included in all developments and activities. The latest Environmental Protection Agency (EPA) report showed agricultural emissions down by 4.6 per cent. That's proof that farmers are taking their environmental responsibilities seriously. "Agriculture does get an unfair representation at times in relation to greenhouse gas emissions. We are an agricultural country. We don't have heavy industry as other EU countries do so our emission figures are

skewed in relation to agricultural activity. There is no dilution factor on account of this. The only proper measure to compare like with like is the carbon footprint per kilogramme of protein produced. When that's considered, Irish milk and beef are up there with the best in the world."

Joe continues: "The latest figure I saw was 0.9kg of carbon per kilogramme of food protein produced. We can't afford to rest on our laurels. There is a lot of technological innovation and adoption, as well as advice and training, helping us. The Credit Union Cultivate loan programme has a central role to play in assisting farmers in adopting these technologies. In many cases, the cost is ultimately neutral or positive. It is the initial cost that is a barrier to adoption. Once in place, these technologies deliver improved profitability, lower labour costs in many instances, and allow farmers to manage their farm enterprises more efficiently. It can be, as I said, low tech investments or higher end technologies that will deliver improvements. "Reseeding with clover or multi-species can be just as effective as health-monitoring cow collars. The Credit Union representatives understand this and that's why we have broadened the scope of our loan programmes to help finance that effective and practical greening aspect of farming."

EPA REPORT – WELCOME NEWS FOR FARMERS



MATT O'KEEFFE REVIEWS THE RECENT REPORT FROM THE ENVIRONMENTAL PROTECTION AGENCY (EPA) THAT UNVEILED SOME GOOD NEWS FOR THE AGRICULTURE SECTOR, AND OUTLINES HOW THE SECTOR IS DELIVERING ON ITS EMISSIONS-REDUCTION TARGETS

There was a general welcome for the Environmental Protection Agency's (EPA's) report last month, confirming a national reduction in emissions of 6.8 per cent, a reduction of four million tonnes of carbon dioxide equivalent (CO₂ eq.) year on year.

The different economic sectoral performances were listed, with agriculture-related emissions reducing by 4.6 per cent (or 1Mt CO₂ eq.) in 2023. The primary driver of this reduction was a substantial fall in nitrogen fertiliser use, allied to a decrease in liming, probably due to unfavourable weather and ground conditions. Commenting on the emission reduction figures, the Minister for Agriculture, Food and the Marine, Charlie McConalogue, said he was positive that Irish agriculture is on the right path, especially following on from reductions in 2022. He highlighted the importance of continuing the current trajectory, with the ultimate aim of achieving a 25 per cent reduction in greenhouse gas (GHG) emissions for agriculture by 2030.

NOVEL INNOVATIONS

The widespread adoption of novel technological innovations is considered to be central in achieving the emissions reductions, with genotyping of three-quarters of a million calves already achieved, ongoing renewable-energy production and use on farms, and further reductions in fertiliser and pesticide use, as well as soil-health improvements, all listed as important developments to build on existing emissions reductions. The Green Party's Pippa Hackett, Minister

of State in the Department of Agriculture, Food and the Marine (DAFM), added that the Organic Farming Scheme, the Protein Aid Scheme, and the multi-species sward and red clover silage measures have all contributed to delivering emissions reductions and should be expanded and promoted in the coming years. The area of land farmed organically has trebled to 225,500ha (5 per cent of land area) in three years. If that expansion continues, Irish agriculture would hit the 10 per cent target set for the sector by 2030.

This year has seen the completion of the National Agricultural Soil Carbon Observatory, supplying the scientific infrastructure to measure GHG fluxes from soils under agricultural management. Irish work in this regard is at the forefront of EU carbon sequestration research. In another reference to technological innovation aiding emissions-reduction strategies, Minister of State at the DAFM, Martin Heydon pointed to the provision of increased funding to accelerate the development of AgNav, a digital platform created collaboratively between Teagasc, the Irish Cattle Breeding Association (ICBF) and Bord Bia. AgNav provides a whole farm sustainability assessment and includes a decision-support function that allows science-led plans to be made for individual farms to reduce emissions and increase carbon sequestration.

THERE'S MORE...

Ongoing refinements of the GHG inventory have already led to adjustments in relation

to the emissions levels achieved from reducing live-weight finishing targets and improved average daily weight gain in cattle. The revised approach also better tracks the changes in slaughter age in recent years. Another encouraging sign that further emissions reductions, especially in methane production from cattle, are achievable comes from research supported by the DAFM on feed additives such as 3-nitrooxypropanol (3-NOP). These are now close to roll out onto Irish farms. This product has received European Food Safety Authority approval and has been trialled on 18 Teagasc Signpost farms involving housed livestock. Results show up to a 30 per cent reduction in methane in these scenarios. Further research is ongoing to adapt the technology for use in the rumen of grazing animals.

Meanwhile, this year significant recalculations were undertaken by the EPA based on new country-specific research that enabled the refinement of estimations on emissions for the agriculture sector and Land Use, Land Use Change and Forestry (LULUCF) sector. This adjustment shows that emissions calculations for agriculture and LULUCF are continually being revised and refined as new country-specific research becomes available. Commenting on this, Minister McConalogue highlighted the importance of these developments and said the research calculations of emissions and removals must continue at pace and that farmers must be credited for the carbon they are storing in their forests, hedges, grasslands and crops.

Jack O'Connor, ruminant business unit director, MSD Animal Health.

BETTER MONITORING, MEASURING, AND MANAGING

JACK O'CONNOR, RUMINANT BUSINESS UNIT DIRECTOR AT MSD ANIMAL HEALTH (MSD) HAS BEEN IMMERSSED IN THE ANIMAL-HEALTH TECHNOLOGY SIDE OF THE BUSINESS FOR THE PAST NUMBER OF YEARS. HERE, HE SHARES WITH **BERNIE COMMINS SOME TRENDS HE HAS WITNESSED, AND TALKS ABOUT NEW AND FUTURE TECHNOLOGICAL DEVELOPMENTS**

While technology may taketh in terms of rendering certain jobs and roles redundant, it certainly giveth in terms of opportunities it can create and the problems it can solve. This is something that Jack has seen firsthand since MSD's acquisition of Antellic Corporation in 2019. This move was taken to position the company prominently in animal health data insights, traceability and monitoring technology. It saw how the animal-health industry was evolving; incorporating digital solutions that complemented the traditional pharmaceutical approach. For MSD's ruminant team in Ireland, these digital solutions presented in the form of a wearable collar called 'SenseHub.' "In 2020, that team would have started out with three people – two full-time and one part-time – selling that technology throughout Ireland," says Jack. "Today, there are 13 people in MSD's ruminant team in Ireland. In 2020, when we started selling that technology, it was worth about €300,000. Now it is worth €7m. That shows a trend in the demand within agriculture to use technology on-farm to tackle a multitude of challenges," says Jack.

One such challenge, which needs no introduction but desperately needs addressing, is the shortage of labour. Jack explains: "We know that on Irish farms there is an absence of between 4,000 to 6,000 skilled labour jobs. Now, the herd size averages at 92 cows, but the number of farmers is decreasing slowly so the average herd size is increasing a little in some cases. This is leading to an increase in labour-saving technology and that comes in all forms such as automatic drafting gates, heat-detection systems, automatic scrapers, automation in milking and feeding," says Jack. "Since the quota abolition there has been expansion in animal numbers, and expansion in infrastructure, too. I think the infrastructure has caught up to facilitate the number of animals on farms, and now it is more about precision, and how can farmers maximise production on farm."

THE ANSWER

Ag-tech, Jack says, is anything that allows farmers more time to measure and to manage the herd more precisely. With policy pressures on farmers in terms of nitrates, the derogation, water quality, and more, farmers are really starting to look at what is going on inside the farm gate, at the things they

TRANSFORMATIVE TECH

It is an exciting time for ag-tech and one of the things that has piqued Jack's attention recently is the work of scientists at the Tyndall National Institute – one of the institutes that hosts the VistaMilk SFI Research Centre. They have developed a unique electronics-free material that can transmit health and welfare information from cows to mobile devices or computers. According to VistaMilk, this material is so inert and flexible that it could be formed into ear tags, udder tags, or skin patches, as curvature does not affect its ability to function. These devices could 'read' the animal for stress, hydration and general wellbeing, and present the data for collection. According to VistaMilk, the technology can interpret the data that is being gathered from the patch or tag by special scanners (like retail barcode scanners) which, in the case of cows, would be situated in milking parlours or cowsheds. This process is achieved with the use of AI models (trained on data collected by state-of-the-art robots) which enable accurate decoding of the data collected.

"This is quite a unique offering. It is still in the early stages but

it shows the extent of the innovative research and development that is ongoing to deliver the next solution," says Jack. He also refers to 3D facial recognition in pig farming that is being used in some of the Asian markets. This technology helps to monitor pigs for various things such as lethargy or lack of appetite/not eating. Audio recognition, too, can detect breathing and coughing irregularities.

From an MSD perspective, the company has launched into the US and Canada market the industry's first monitoring technology for dairy calves from birth through the first 12 months of life. Jack explains: "These are ear tags that give insights into their health status – which we will hear more about here at the back end of this year." In 2025, Jack says, MSD hopes to work with some of the calf feeding companies to give farmers a greater insight into the health of their calves so they can monitor feeding, thrive, and disease. "We know that a dairy calf that has one clinical case of pneumonia in the first eight weeks of life will take 15.2 days longer to reach the milking parlour in two years' time."

can control, and what changes can be made for the better, according to Jack. Ag-tech is definitely playing a part. "I feel there is great opportunity with fertility performance. The average six-week calving rate in Ireland is about 65 per cent, whereas our target is 90 per cent. So, technology will play an important role in helping farmers achieve that. It means a greater financial return for farmers as well as a sustainability return.

"For every one per cent that a farmer increases (six-week calving rate) that gives a return of €8.22 per cow. So, very quickly, if you increase the six-week rate for a 100-cow herd, there is a significant financial reward.

"From a sustainability point of view, we have done research with some milk processors and we have benchmarked some of the herds within the processors' pools, that are wearing SenseHub technology, against the national average. We have shown between a 5-8 per cent reduction in carbon emissions per kilogramme of fat- and protein-corrected milk. I feel there is a great opportunity to do even more in this space.

"Processors are paying farmers bonuses for taking certain sustainability actions, and it is important that the actions that farmers are taking are having the most benefit. Technology,

using hard data-driven insights, will identify the steps that will have the best return for farmers."

RECEPTIVE

Farmers, according to Jack, are generally quite receptive to technology but it varies among the demographic. "There are 220,000 SenseHub collars on Irish farms, which is roughly about 13 per cent of the dairy herd wearing this technology. Between this and the other technologies available, that figure is somewhere around 20 per cent of animals wearing some kind of monitoring system. It shows that the Irish farmer is receptive not only because of what the system delivers in terms of data but also what it can do for the farmer [in practical, labour-saving terms].

"Additionally, policy pressures may well force some farmers into reducing the number of cows that they have but farmers still want to produce the same outputs, so they are looking at ways to be more efficient. They are receptive to the technologies out there but it varies: you have your innovators at 2.5 per cent; early adopters at 12.5 per cent; early majority; late majority; and laggards. We are entering the early majority stage now but over the next two to three years, we will see an even greater

adoption of wearable technology, and other tech that is satisfying labour issues, also.

CONNECTIVITY

The issue of non-connectivity between various health-monitoring or data-gathering technologies on farms is addressed by Jack. There is an abundance of information from various sources but it all must be accessible to farmers. It is something that MSD has recognised: "From our perspective, we are trying to develop a full ecosystem where all our own products will talk to each other and we are open to connecting with other companies too. We know there is other drafting technology on Irish farms and we are open to connect with those technologies. It is always a challenge to have every piece of information available in one location but when farmers are choosing technology, it is important to ask suppliers what else they will have in the future and if it will be integrated.

"We have collars, we have a drafting gate, we have milking technology and this all connects back to the one app, to the one location and we are approaching other companies to see if they will connect with us, because we have customers in common. Technology will connect, sometimes it is the people who don't."



INNOVATIVE STRATEGIES FOR SUSTAINABLE PIG FARMING AND GRAIN PRESERVATION

SUSTAINABLE PIG FARMING IS ABOUT FINDING A BALANCE BETWEEN MAKING A LIVING, PROTECTING THE ENVIRONMENT, AND TREATING ANIMALS ETHICALLY. JOHN O'DOHERTY, FULL PROFESSOR OF MONOGASTRIC NUTRITION AND HEAD OF ANIMAL AND CROP SCIENCES AT THE SCHOOL OF AGRICULTURE AND FOOD SCIENCE, UCD, WRITES ABOUT THE RESEARCH WORK INVOLVED IN TRYING TO ACHIEVE ALL THESE THINGS

Farmers need to be financially stable, but with fluctuating grain and feed prices, this can be tough. When production costs rise without a matching increase in market prices, many farmers struggle to stay profitable, leading to fewer pig farms globally. By 2100, the world population is expected to reach 10 billion. Feeding everyone sustainably while protecting our planet is a major challenge. The pig-farming industry plays a crucial role in this effort, addressing several key sustainability issues.

PROPERLY HANDLING PIG WASTE

Transforming waste into valuable resources like fertiliser helps prevent environmental contamination and promotes sustainable

agriculture. Effective effluent management involves treating and recycling waste, thus minimising its environmental impact and contributing to soil health.

Reducing greenhouse gas emissions is essential to combat climate change. This requires innovative farm-management and more efficient feeding practices. Techniques such as using anaerobic digesters to capture methane from manure significantly reduce emissions and create renewable energy sources.

Raising pigs in humane conditions that meet their needs is both an ethical obligation and important for productivity and meat quality. Practices that ensure adequate space, proper nutrition, and veterinary care lead to healthier

and more productive animals, improving overall farm sustainability.

With antibiotic resistance on the rise, finding new ways to keep pigs healthy, such as improved biosecurity and natural supplements, is critical. These approaches help reduce reliance on antibiotics, mitigating the risk of antibiotic resistance and promoting long-term animal health.

INNOVATIVE SOLUTIONS IN GRAIN PRESERVATION

Environmental conditions, including temperature, humidity, and moisture, strongly influence the development of moulds and mycotoxins in stored grain. Controlling these parameters is crucial for mitigating contamination during storage. In Ireland, the average moisture content of wheat and barley at harvest has exceeded 18 per cent over the past five years, highlighting the requirement for effective preservation. While industrial drying is a conventional method of grain preservation, it raises significant economic and environmental



concerns due to its high energy consumption. Variations in the drying process can lead to moisture content inconsistencies within grain batches, potentially creating an environment conducive to mould and mycotoxin production. Conversely, over-drying can result in the denaturation of proteins, thereby diminishing the nutritional value of the grains.

ROLE OF ORGANIC ACID MOULD INHIBITORS

This is an area of research that we have been investigating over the last few years. Recent studies at UCD, carried out by Shane Maher and Ruth Connolly, aimed to investigate whether an organic acid (OA) liquid surfactant mould inhibitor (MycocURB ES Liquid) could be a superior alternative to conventional drying methods for preserving wheat and barley below the critical dry matter (DM) threshold of 85 per cent. The findings are very promising. Despite variations in moisture content after storage, both preservation methods resulted in grains with similar nutritional compositions on a fresh-weight basis. This finding aligns with previous research suggesting that

OAs can serve as a practical and effective alternative to conventional drying methods for cereal grains. Traditionally, a lower DM content is associated with an increased risk of fungal growth and mycotoxin contamination. However, the results of the current studies suggest that the OA mould inhibitor effectively mitigated mould and mycotoxins in both wheat and barley during storage. Dried grains had higher concentrations of harmful mycotoxins like DON, OTA, and HT-2. These toxins can negatively impact animal health, reducing feed intake and growth rates. The study found that OA-preserved grains had lower levels of these toxins, suggesting that the OA method is more effective in preventing fungal contamination.

HEALTHIER PIGS AND IMPROVED PERFORMANCE

The weaning process introduces abrupt nutritional, environmental, and psychological changes for piglets, often resulting in reduced feed intake and transient growth setbacks. These challenges frequently coincide with the onset of post-weaning diarrhoea. Historically, pharmacological levels of zinc oxide (ZnO) and in-feed medication were added to post-weaning pig diets to mitigate these issues. In the UCD studies, the inclusion of ZnO, in both dried and preserved grain diets, reduced diarrhoea incidence during the first 21 days post-weaning. However, pigs offered the preserved grain diet exhibited lower diarrhoea incidence compared to those offered the dried grain diet but not to the same extent as those supplemented with ZnO.

NUTRITIONAL STRATEGIES AND PIG PERFORMANCE

Throughout the experimental period, pigs fed the preserved grain diets showed higher average daily feed intake compared to those fed the dried grain diet, with intake levels similar to those supplemented with ZnO. This increase in feed intake partially explains the enhanced average daily gain and improvement in feed efficiency, and the increased final body weight (BW) observed in pigs fed the preserved grain diets. Our studies would have

also shown that pigs offered the preserved grain diet showed significant improvements in the coefficient of apparent ileal and total tract digestibility of nutrients compared to pigs offered the dried grain diets, which would partially explain the improved growth performance.

MICROBIAL COMPOSITION AND PIG HEALTH

The gut microbial composition can be positively influenced by nutritional interventions to enhance pig performance and health, with OAs playing a significant role in inhibiting the growth of undesirable microorganisms and potentially limiting dysbiosis. In our studies, the abundance of beneficial microbes like *Faecalibacterium* increased in pigs offered the preserved grain diet, while harmful bacteria like *Streptococcus* decreased. These changes in gut microbiota likely contributed to the overall improvements in intestinal health and pig performance. Our studies highlight the potential of using an OA liquid surfactant mould inhibitor as an effective alternative to conventional drying methods for grain preservation. This innovative approach not only maintains grain quality but also supports better health and performance in pigs, particularly during the critical post-weaning period. By reducing mycotoxin levels and improving nutrient digestibility, OA-preserved grains can help enhance pig growth and health, offering a sustainable solution for pig farmers.

Consumers, governments, and retailers are all calling for more sustainable and ethical practices in pig farming. This means the industry must constantly innovate, especially in areas like feed efficiency, diversifying feed sources, and creating products that meet consumer demands. By embracing these changes, pig farmers can help ensure a sustainable future for the industry, our environment, and global food security. The use of OA mould inhibitors for grain preservation is a step in the right direction, offering a practical solution to improve both pig health and farm profitability.

MESSAGES

- Food production in Ireland is responsible for 37% of Ireland's greenhouse gases (GHG).
- Know the environmental messages from Teagasc's Johnstown Castle environment research open day.
- Lime is your number-one fertiliser – spread it now!
- August is a big month – you must do all your analyses.
- Plan your last applications of protected urea.
- Grass targets to extend autumn grazing.
- Scan now, sell empties, and review 2024 breeding season.



By Matt Ryan

ENVIRONMENTAL MESSAGES FROM JOHNSTOWN CASTLE

- » **One of the key messages was that farmers (based on the fact that so few turned up to this open day) must show more interest in being informed of this topic.**
 - Teagasc had up to 90 informative stands manned by enthusiastic researchers doing innovative work to try and overcome the environmental challenges faced by farmers.
 - Attendance at events conveys support for their efforts, and these events provide an opportunity to learn more and do better.
 - » **It is important to know carbon dynamics.**
 - Plants use sunlight, CO₂ and water to produce carbohydrates.
 - Plants exude carbohydrates through their roots and feed soil organisms to obtain nutrients.
 - Fallen leaves, branches, and root mortality add carbon to the soil.
 - Soil organisms decompose the organic matter and release CO₂ through respiration.
 - Clay minerals stick to carbon and protect it inside aggregates.
 - Water and temperature regulate microbial activity.
 - GHGs are responsible for climate change while ammonia emissions pollute air, affect health and biodiversity.
 - » **Quotation: "Agriculture is responsible for circa 37% of Ireland's GHGs."**
 - A friend of mine said this is misleading terminology, so I will rephrase that sentence, based on his recommendation.
 - » **"Food production in Ireland is responsible for circa 37% of Ireland's GHGs."**
 - From now on, I am going to use 'food production' instead of the word 'agriculture' because so many non-farmers in Ireland seem to have forgotten what farmers work for – to produce food for everyone else.
 - Some people think farmers exist only to make money/profit. But they are providing a really important service for the public.
 - Nobody thinks that nurses or train drivers work 'just' to make money. The nurse cares for patients and the train driver transports the public from A to B. They provide important services and, yes, they get paid for doing so.
 - » **Now, let me summarise some of the research reasons why food production in Ireland is responsible for GHG emissions and how we are going about reducing it to achieve the 25% sectoral target.**
 - Nitrous oxide (N₂O) from fertiliser, manures, and urine accounts for about 30% of primary-food-production emissions.
 - The big challenge is to reduce the reliance on fossil-fuel-derived fertilisers.
 - The remaining 70% comes from slurry management and animals.
 - Managing these is not only good for the environment, but is also profitable for the farmer – that is a fact.
 - It was reported recently in an editorial of the *Irish Farmers Journal* that carbon measurements in Johnstown Castle showed that carbon sequestration there [on grassland] was six times greater than the international estimate currently used in our GHG calculations. Imagine that. Six times greater!
 - Recent changes to our understanding of the drainage status of our grassland peats has reduced estimated emissions by 5 million (m) tonnes – from 9m tonnes to 3.9m tonnes of CO₂ equivalent (eq.).
 - That's what RESEARCH does – establishes the scientific facts!
 - Ireland has 28 flux towers (costing €70,000+ each) spread across the country monitoring farm carbon – the highest density of such towers in Europe.
 - A proposal to rewet 340,000ha of grassland on reclaimed peat soils has 'stressed' many farmers but Teagasc found that 200,000ha had already been rewetted and, therefore, were not emitting as much carbon as originally believed.
 - The entire 'primary-food-production' sector emitted 8.5m tonnes fewer CO₂ eq. between 2018 and 2023 than had been initially calculated by the Environmental Protection Agency due to better liveweights and daily gains than assumed.
 - Support Teagasc, inform yourself of the science it generates and utilise the advisory expertise they provide free through the Agricultural Sustainability Support and Advisory Programme (ASSAP) and the Signpost programmes.
 - Progress is being made but there are a lot more 'simple' things to do on farm.
- » **Teagasc has initiated a 'Better Farming for Water Campaign' which focuses on eight actions to improve both surface water (only 54% of which has a satisfactory/good rating, although this is above the EU average) – and ground water:**
 1. Reduce purchased N and P surplus per hectare.
 2. Ensure soil fertility for lime, P and K are optimum.
 3. Ensure fertilisers and organic manures are spread at appropriate times and under appropriate conditions.
 4. Have sufficient capacity for slurry and soiled water.
 5. Manage and minimise nutrient-loss from farmyards and roadways.
 6. Fence off watercourses to prevent animal access.
 7. Adopt targeted actions, such as riparian margins, buffer strips, and sediment traps to reduce nutrient and sediment loss to watercourse.
 8. Maintain over-winter green cover to reduce nutrient leaching from tillage fields.
 - » **A summary of easy wins was switching to protected urea, using low emission slurry spreading (LESS), minimising nutrient loss from farmyards and roadways, fencing off watercourses, and less cutting of hedges.**
 - » **For dairy farmers to achieve the 25% target reduction by 2030, it was suggested they continue to focus on the following:**
 - Animal productivity – further improvement of herd genetics.
 - Grass production – grow more grass with less N.
 - Better reproductive performance – the national six-week calving rate is too low at 67%.
 - Early compact calving – the calving season is far too long.
 - Reduce percentage crude protein in cows' diets – easy to achieve!
 - Use protected urea only – negative attitudes must change quickly on this.
 - Decrease the reliance on fertiliser N – farmers are positive on

- this.
- Sow white clover – clover can fix between 80-120kg N/ha (65-97 units/acre).
 - Cover slurry tanks, where possible – this is possible with overground steel tanks.
 - Use LESS systems – most dairy farmers have adopted this recommendation to beneficial advantage.
- » **Do not spread fertiliser when:**
- Heavy rain is forecast – consult Met Éireann.
 - Soil temperatures are below 50°C.
 - Grass growth predictions are low due to drought conditions.
- » **The key drivers of nutrient-use efficiency are:**
- Use LESS.
 - Use lower levels on N inputs.
 - Apply N in optimum weather conditions.
- » **Minimise nutrient/sediment loss from open silage pits/concrete yards and animal and machinery routes by:**
- Collecting and moving waste silage to a manure store.
 - Regular sweeping of yards but have adequate capacity for soiled water and slurry to cover the busy calving season.
 - Use a settlement tank and pond and filter discharge through topsoil.
 - Good house/yard keeping.
- » **Drainage ditches and farm roadways (they contain very high levels of concentrations) pose great risk of N and P entering waterbodies:**
- For ditches, slow the flow, install drops to catch sediment but as P builds up over time, they must be cleaned up regularly.
 - Farm roadways are a big issue:
 - They must camber, 1:25 to the field side, away from watercourses.
 - Concrete beams to direct run-off away from drains.
 - Moving entry points to paddocks/fields away from watercourse to reduce sediment/nutrients entering streams.
- » **Lime is a fertiliser and where pH is low, 25.30% of applied N is lost.**
- » **Phosphorous – target is Index 3. Increasing P from Index 1 to 2 will increase grass yield by 1.5 tonnes/ha and similarly for every index increase.**
- » **Potassium (K) – target is Index 3. Increasing from Index 1 to 3 will increase grass yield by 2 tonnes DM/ha, while reducing N₂O emissions.**
- » **Nitrogen compounds – use 18:6:12 or 10:10:20 instead of the high N compounds, such as 24s and 27s – this could reduce N₂O emissions by 40%.**
- » **Multi-species add benefit over ryegrasses:**
- They gave consistently higher yields from lower N systems.
 - Yielded 2.5 tonnes DM/ha/yr more at 150kg N/ha/yr.
 - Yielded 1.5 tonnes DM/ha/yr more with 150kg N/ha/yr less N used.
 - Better overcame the effect of drought:
 - Yielded 2.3 tonnes DM/ha/yr more at 150kg N/ha/yr.
 - Yielded 0.3 tons DM/ha/yr more with 150 kg N/ha/yr less N used.
- Similar/better animal performance.
 - They had higher yield stability, lower N₂O emissions, and a very low weed biomass.
- » **Prevent soil compaction:**
- Why?
 - Results in poorer soil structure.
 - Reduces yields by up to 40%.
 - Reduces environmental losses.
 - Improves plant resilience.
 - More carbon storage.
 - How to prevent:
 - Maintain soil organic matter.
 - Keep living roots in the soil.
 - Avoid trafficking wet soils with machinery and high stocking rates.
 - Spread the load – larger tyres, lower inflation pressure, increased flexion/very increased flexion (IF/VF) tyres (which can carry 20% and 40% more load respectively at the same pressure as a standard tyre), more wheels, etc.
 - Control traffic:
 - Work at appropriate soil moisture.
 - Reduce the number of passes.
 - Manage headlands (soil compaction tends to be most prevalent in these areas).
 - Consider fixed tramlines (cereals).
- » **Approaches to alleviation:**
- Identify compaction and its depth.
 - Rest land – reduce traffic, change crops.
 - Switch headland crops from cereals to grassland.
 - Apply organic fertilisers, particularly dung, to problem areas.
 - Subsoiling should be a last resort,
- » **Advantages of intercrops (growing a cereal + legume crop such as peas, together):**
- Easy to grow.
 - Excellent source of starch and protein.
 - You have a number of harvesting options eg. silage, crimp or full harvest.
 - Protein aid at €250/ha available.
 - Low costs of production, competitive crop against weeds.
 - No N required as legumes fixes enough N.
 - Great biodiversity above and below ground.
 - Species mixes could be oats + peas, or peas + beans, etc.
- » **Biodiversity – identify what you have, maintain and create new habitats.**
- This piece of advice may be like a red rag to a bull for some of my readers but we can enhance where we live without compromising profit.
 - What are they?
 - Flowering hedgerows.
 - If less intensively managed, they can offer shade to animals, mitigate against flooding, sequester and store carbon, increase crop yield and biodiversity.
 - Aim to have them at least 2.5m high and 1.5m wide.
 - Provide fruit for birds. Recently, I met a farmer's 11-year



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John Feely House, Dublin Road, Limerick.
 Tel: 061 314677 Fax: 061 315737 Email: cathaimacCarthy@icmsa.ie Web: www.icmsa.ie

old son whose hobby was learning bird species by their songs.

- Non-farmed areas.
- Waterbodies.
- Trees.
- Hay meadows.
- Biodiversity exists below ground too in the form of snails, worms, etc.

LIME: FIRST STEP TO NUTRIENT AVAILABILITY!

- » Why apply lime?
 - It is a fertiliser and must be applied regularly.
 - Essential elements – N, P, K, S, Ca and Mg – show reduced levels of availability under acid conditions.
 - Lime corrects soil acidity. This facilitates micro-organisms to thrive so that they can break down plant and animal residues which results in more plant growth.
 - There are no restrictions in place for lime use. One trial showed that applying lime to a very low-P, acid soil increased the availability of P from 0.8 parts per million (ppm) to 5.7ppm.
 - Increases earthworm activity, which improves soil structure.
 - Assists the survival of clover-fixing bacteria, thus increasing clover N fixation.
 - Perennial ryegrasses and clover survive the competition from poorer grasses.
 - It improves grass palatability, and hence animal performance.
 - It helps to extend the grazing season at both ends; hence we grow more grass.
- » As intensive dairying removes nearly 1 tonne of lime per year, get your farm soil tested immediately and apply lime early this autumn.
 - We are wasting a lot of N and P by farming acidic soils.
- » Increase the soil pH to at least 6.3 (6.0 in high molybdenum areas but get a test to confirm).

AUTUMN ANALYSIS

- » Silage should now be analysed for feeding value, DM and for minerals.
- » Soil testing should be done now – maximise growth by having the basics correct.
- » Get a faecal egg count (FEC) done to determine if there are worm eggs or larvae in animal dung samples.
- » Johne's control – join up now! Talk to your vet.
- » Use milk health test results to identify animal health issues and act.
- » Milk-record now to identify poor yielders and high SCC cows.

LAST APPLICATIONS OF PRO-UREA!

- » Now is the time to take stock of how much N you have used so far this year relative to what you are allowed to use.
 - Overuse will result in penalties, but be sure to use your allowance.
- » Farmers stocked at less than 2.24 cows/ha should only apply N once over the next two months.
- » Farmers with no clover in sward should apply 17 units/acre in August, decreasing to eight units with 15% clover and none with 20% clover.
- » Response is much better in August.
- » This N should all be blanket-spread early in month. There is no reduction in grass yield for August-September with blanket-spread N applications.

TARGETS TO EXTEND AUTUMN GRAZING:

- » Farmers must rely solely on grass to feed cows, which is a big challenge in autumn as grass growth decreases relative to demand.

- » Table 1 outlines target covers (kg/DM) per cow to increase autumn grass.

Table 1: Target grass covers per livestock unit (LU) for the autumn.

Date	Stocking rate	Stocking rate	Stocking rate	Rotation
	2.5 LU/ha	3.0 LU/ha	3.5 LU/ha	Length
August 1	180	180	190-200	20 days
Mid August	200	250	220	25 days
September 1	300	330	280	30 days

- » Grass build-up starts in August:
 - In the south, on August 10.
 - In the north, on August 15.
- » The following possible ways of building up grass, or a combination, should be applied:
 - Reduce stocking rates on milking platform by taking away calves or cattle, selling cull cows, drying off very poor yielders. Stock cows at 2.9 cows/ha for grazing – a little higher this year!
 - Reduce second-cut silage plan, particularly if you have enough pit silage.
 - Introduce meals (expensive option) but will be necessary at high stocking rates. A budget will tell you when to start but early rather than too late. An alternative to meal is to feed high-quality round bales and this is the preferred option.
 - Apply more N – but stay within your limits – in August as you get a better response than in September.
 - Graze out pastures well (3.5cm-4cm) as there is a temptation to leave too much after each grazing in August.
 - Set up a third-cut-graze bank of grass.
 - Protect regrowth by not having cattle or cull cows grazing after cows or spending more than 24 hours in each paddock.
- » It's a very good idea to set up this third-cut-graze because:
 - It brings into the grazing rotation a bank of high-quality grass for grazing in September.
 - Allows you use 2-3,000 gallons (16-24 units N) of slurry per acre on it at closing.
 - Allows you put on 55-65 units of N (discount the slurry N) to cover the six-week closed-up period and the extra N will grow extra grass which will feed 10-12 cows for one extra day for every acre closed up.
 - The way you do it is to set aside 10-15% of the farm for this purpose by stocking the cows at 2.9-3 cows/ha for grazing.
 - These fields should be topped or very well grazed-out (skinned) leaving no butt, apply the slurry plus 25-35 units of N per acre and leave for six weeks and it should result in extending the grazing rotation by 10-12 days in mid-September.
 - An interval of three to five days should be allowed between spreading slurry and applying nitrogen, so as to avoid losses of N by denitrification.
 - If grazing grass is tight during this period, some of this area can be grazed.
 - However, at low stocking rates (2.2 cows/ha or less) because the demand will be low, 40-45kg DM/day, it will not be necessary to do any of the above to build up grass. It will happen naturally.

SCAN NOW AND REVIEW 2024 BREEDING MANAGEMENT

- » I think there is a great need to scan all cows and heifers in August (32 days after AI/bull removal) to confirm pregnancy.
 - Where grass/silage is scarce, 'empty cows' should be culled now.
 - While it is fresh in your mind, you will be able to analyse the 2024 breeding season.
- » Replacement weight targets should alert you to action (check with the contract rearer):
 - Calves (R1s) should now be 30% of their mature weight (at six months). That means 150kg, 165kg or 180kg for animals whose

mature weights of dam are 500kg, 550kg or 600kg, respectively.

- For the same mature weights, in-calf heifers (R2s) should be 350kg, 385kg and 420kg at 18 months old (now, August 1) or 70% of mature weight.
- Any R1s or R2s under these weights now must be separated out for special attention. That is, preferential grass or some meal in the diet.
 - For R1s, the response is four to one, which is the best response of the year.
- To establish the mature weight of your herd, cows should be weighed in June/July but do it now to get a rough idea. On the ICBF EBI page, you will see the maintenance figure for your herd and that will give you a pretty accurate mature weight for your herd as follows:

EBI maintenance figure	Estimated cow weight (kg)
0	641
10	591
20	541
25	516
30	491

- » Breeding heifers should get their first treatment for leptospirosis at end of August and the second one in mid-September with all the cows.
- » They should get their first injection for salmonella at end of August and again the second one with all the cows in mid-September. I consider the leptospirosis and salmonella vaccinations essential for every dairy herd.
- » Try to keep the R2s in a fly-free area to avoid mastitis infection.
 - Where the risk is high, use pour-ons, impregnated fly tags, Stockholm tar or teat spray.
- » Farmers who have calves with a contract rearer should make absolutely certain that they are on target weights. The only way

to do this is to have them weighed independently or be there yourself.

- Any contract rearer not providing regular heifer weights is not serious about the job.

BITS AND PIECES

- » **Take a holiday.** I put the onus on partners to encourage farmers to take two weeks off – they, generally, won't do so.
- » **Mentally it has been a very tough year.**
 - Insist on a family holiday so that they can enjoy time with their children.
 - On holidays, turn the mobile off so that you remove yourself from farm life and enjoy a relaxed frame of mind.
- » **This is a good month to do maintenance work around the farm.**
 - More family is available.
 - Compile a list of one-person jobs and two-person jobs.
- » **While not the best time to reseed, if done in early August, you should seriously consider reseeding damaged, under-performing fields.**
 - Seriously consider multi-species, red clover and white clover if ploughing.
- » **Meal feeding:** If stocking rate is low, you should not be feeding more than 1-2kg of meal (12% P) to cows.
 - Small R1s should get preferential quality grass and 1-2kg of meal.
- » **Lameness:** Deal with it by getting an expert to look over the cows' locomotion, and lift feet.
- » **Winter feed:** Again, establish if you have enough to feed the planned stock numbers,
 - Consult last month's notes for your options.

QUOTE OF THE MONTH

"Control your own destiny, or someone else will!"

Jack Welch



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CATERING FOR THE 'MOST DIVERSE FARM NEEDS'

JOHN DEERE RECENTLY ANNOUNCED A NEW 6M TRACTOR SERIES WITH A SIGNIFICANTLY EXPANDED MODEL LINE-UP - 17 TO BE PRECISE! THIS MONTH, WE TAKE A LOOK AT THE MAIN FEATURES OF THIS VAST SERIES, RANGING FROM THE 6M 95 TO THE 6M 250

John Deere's 17-model new 6M series includes 10 above 150hp, suitable for the most diverse farm needs. From the compact to the powerful, the series spans various frame-size segments, and offers farmers even more choice when looking for high performing tractors with little handling complexity. Noteworthy additions, according to John Deere, include the high-horsepower (hp) four-cylinder 6M 150 and the upgraded 6M 145 with six cylinders. The 6M 230 and 6M 250 models with an extra-large wheelbase of 2,900mm further extend the line-up at the top end. Equipped with a 4.5L or 6.8L engine, all models offer additional horsepower of up to 20hp (rated power) with Intelligent Power Management (IPM) system in transport or PTO applications.

A broad range of transmission choices are also available according to John Deere, from the mechanical PowrQuad Plus to the stepless AutoPowr technology. Furthermore, all six-cylinder 6M models can be equipped, as an option, with larger hydraulic pumps delivering 155L/min or up to 195L/min enabling maximum productivity when running larger implements. More and larger tyre options present a larger footprint on the field for reduced soil compaction. For intuitive handling and control of the tractor, the new 6M series features customisable control functions as well as a new corner post display

that is larger and fully graphical, allowing farmers to adjust even more tractor settings than before.

EXPANDED LINE-UP

The series starts with the 6M 95, which has a maximum power of 120hp with IPM and is ideal for front-loader work in tight spaces. At the top end, the powerful 6M 250 offers a maximum engine power of 281hp with IPM for heavy-duty applications and outstanding on-road capabilities.

In the small-frame segment, the new 6M 150 joins the line-up as a high-horsepower model that is exceptionally powerful with a maximum 177hp with IPM but is also compact and nimble. Within the midframe segment, the 6M 145 model has been upgraded to feature six cylinders instead of four, while the addition of the new 6M 165 and 6M 185 models further diversify this entire segment.

The large-frame segment incorporates two additional models, the 6M 220 and 6M 240, offering robust performance and versatility for demanding tasks. The extra-large frame segment now showcases the all-new 6M 230 and 6M 250 models, setting new standards in power and efficiency for larger-scale operations.

POWERFUL AND FAST

The IPM solution provides additional

horsepower of up to 20hp (rated power) in transport and PTO applications, so farmers can efficiently tackle demanding tasks. Transmission options range from the mechanical PowrQuad Plus with soft shifting, AutoQuad Plus with speed matching, via the CommandQuad Plus with enhanced automatic capabilities to the stepless hydro-mechanical AutoPowr technology. Next to the compact CommandARM option, the AutoPowr transmission is also available with the right-hand console for drivers who want the comfort but favour a more straightforward control unit. For all models there is the 50km/h option available, saving valuable time during road transport, thus boosting overall productivity, according to John Deere. Building on its unique and proven full-frame design and offering rear-hitch lift capacity from 5.7t to 9.9t, depending on model, they can tackle big loads and implements, whether it's larger seeders, planters or ploughs. The pressure and flow-compensated hydraulic system delivers from 114L to 195L per minute, ensuring maximum productivity in every operation. Furthermore, the models of the 6M tractor series offer a broad portfolio of axles and tyre options, including flange and rack-and-pinion axles. These options enhance versatility and productivity and contribute to reduced soil compaction, preserving the soil's health while maximising operational efficiency.



NOEL DUNNE
Machinery editor

A GOOD BINGE

Well, readers, my second favourite time of the year has arrived – harvest time! Farmers around me have been anticipating good, early results and a few fine days to break the back of this year's winter-barley crop.

But, no sooner had the good weather commenced, than the rain started. Then, the proposed suspension of the Straw Incorporation Measure was announced by agriculture minister, Charlie McConalogue. This has since been overturned and will now continue in tandem with a new baling scheme. The main thing is that the money stays in tillage! But it was just another thing for farmers to have to deal with, unnecessarily!

BINGE TIME

With the break in the weather and a few hours to kill, I decided to go on a binge. NOT of the alcohol variety – I know what you are thinking! No, this was a Clarkson's Farm kind of binge! Now, most of you will know all about Jeremy Clarkson, Kaleb, Lisa and Charlie and, of course, Gerald, the stars of this show. This is a fly-on-the-wall look at the day-to-day running of a farm in the UK – the trials and tribulations, problems, rows, costs, objections, opinions, and much more besides!

As I watched each episode, the parallels I drew between farming issues in Ireland and in the UK were unreal. What was startling was when they segmented all areas – tillage, beef, sheep, alternative incomes, etc. – in terms of actual profit and loss. The losses were so great in some areas, that it would make you question why you would bother at all.

I wish we had a similar series here in Ireland. It might help people appreciate more what it takes and costs to put the food on our plates. In the UK, Clarkson's Farm has done more for British farming and its image than any agricultural minister or department. It has bridged the urban-rural divide. It has given people an appreciation of where their food comes from and promotes British-produced foods. So, to any budding production companies out there, there may well be an opportunity here in Ireland to do something similar.

Now, let's do a quick round-up of what is

happening on the machinery front. Krone has launched its new Vendro C 1340 13-rotor tedder with a working width up to 13.4m; Pottinger has just launched the new Novocat V 9200CF rear mower unit – more on this in next month's issue; SlurryKat has announced MC&S as its new dealer in Co. Cork; and Massey Ferguson has added two new heavy-duty butterfly mowers and six new twin-rotor rakes to its collection.

At a machinery auction in the UK, an immaculate 1995 Massey Ferguson 390T – once the go-to tractor in Ireland for all dairy livestock farmers – sold for €50,000 at auction! I would love to know what it was actually purchased for 30 years ago.

It was recently reported that gardaí arrested someone in connection with a farmyard burglary in the Naul, Co. Dublin. This will come as welcome news to every dealer, farmer, and contractor in Ireland as the theft of GPS systems from machines over the last few years has gone out of control.

ELECTRIC DREAMS

I read recently that, while on a trip to Ethiopia, Tánaiste Micheál Martin commented that all Irish tractors would eventually be electric. Now, he said this in the context of launching the first-ever Irish-built electric tractor there. But that was a 40hp machine – I have bigger lawnmowers! I think an all-electric tractor fleet here might be a bit of a wait away.

But following on from that, French start-up Seederal has secured €11m in funding to further develop its first prototype electric tractor, based on the JCB Fastrac 4000 series, and coming in at 160hp! The challenge is, however, to produce a tractor between 100hp and 200 hp that is capable of working a full day on one charge.

It has been a month of anniversaries and celebrations. Congratulations to IAM Machinery on celebrating 40 years of Hardi sprayers in Ireland; and to Teagasc Oak Park which recently celebrated 60 years. I wish them all the best for the future.

A quick look at tractor figures to the end of June show that 1,290 new units have been registered – 154 units, or 11 per cent, down on the same time last year. The European and US markets are also down against a continued backdrop of uncertainty and caution. On that note my friends, until next month, farm wisely, farm safely.

INTUITIVE HANDLING

The new series features customisable control functions, offering a choice between a right-hand console or the compact CommandARM for personalised operation. The new corner post display, located on the A-post, provides operators with a perfectly organised and easy-to-adjust overview of key tractor functions, enhancing operational efficiency. With maximum visibility facilitated by a panoramic roof and a large glass area, drivers can achieve precise and rapid front loader work. The TLS front axle suspension and mechanical cab suspension ensure a smooth and comfortable ride, even in challenging terrains.

PRECISION FARMING

With the high-resolution 10.1" G5 or the 12.8" G5Plus Universal Display, operators can seamlessly connect their Isobus implement and utilise John Deere Precision Ag Technology for enhanced productivity. Features like AutoTrac, Section Control, and Variable Rate Application offer precision farming solutions, optimizing field performance. Data Sync enables wireless sharing of field data and guidance lines between machines, streamlining operations and maximising efficiency. The integration of JDLink provides remote operator support and ensures that all new 6M tractor models receive the latest over-the-air software updates, keeping them up to date with the latest advancements in technology.



Tom Murphy
Professional Agricultural
Contractors of Ireland

Do I hear voices predicting a fodder shortage following this year's harvest?

You would need to have a crystal ball at the start of every season to know how the weather will affect the silage harvest. However, you do not need to be a genius to realise that advice given to farmers over the years has contributed to the predicament that farmers find themselves in when fodder is in short supply and very costly to buy in. Having looked after the interests of agricultural contractors for over three decades, I think I can safely say that I have witnessed a succession of farm advisers tell farmers to save money on contractor costs by reducing the number of silage cuts. In theory, that is not

ONE-CUT ROULETTE

bad advice, but in practical terms it is a high-risk policy that plays roulette with a farmer's finances. When it goes wrong the advisors blame the weather, over which they have no control.

From the very first time this advice was proffered I am on record as saying it was not a good strategy. The answer I got was 'you would say that wouldn't you.' I believe there is a culture whereby if the proverbial hits the fan, then the Government will be forced to step in and dig the farmers out. Even when this does happen, there is still a cost to farmers, not only in monetary terms, but the situation contributes considerably to the stress that farmers already endure.

I believe that it is now time for advisors to accept that is not the right advice and even if it is seen as a U-turn, to have the moral courage to make it. There is no shame in that. It will take a few years to complete a reversal of the existing policy, to persuade farmers to adjust to the change and to explain the

economic advantage of second or even third cut silage. There also needs to be full consultation with farmers and their contractors to ensure they are on board and in a position to meet a change in requirements. One consequence of all this is that many contractors left the industry because it was not profitable and they were not prepared to put themselves and their families at further financial risk by acquiring very expensive machinery, at the whim of advisors who rarely consulted with them when changes were being made that would have serious consequences for them. Agricultural contractors are an integral part of farming and deserve more respect for their contribution. Without them, consider what the plight of farmers across the island would be. It is unthinkable what their loss would be to our economy. There needs to be a radical re-evaluation of the way contractors are treated and recognition of the indispensable part they play in the economy of our country.

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KRONE AND LEMKEN EXPAND AUTONOMOUS APPLICATIONS RANGE

Krone and Lemken are 'significantly expanding' the range of applications for their autonomous process unit by utilising the front attachment space, according to the companies. With their joint Combined Powers project, the companies say they are 'endeavouring to advance and bring into focus not only the development of autonomous process units, but also the associated work processes by carrying out additional practical deployments at home and abroad'. The findings and results of field trials in 2022 and 2023 were incorporated into the optimisation and further development of various features of the process units.

The functionality of the autonomous process unit has been significantly enhanced by the integration of a front linkage with PTO shaft; this means that two separate, intelligent attachment spaces are now available. This combination can be used profitably in both grassland and arable farming.

For grassland specialist Krone, for example, the use of a front-rear combination significantly improves mowing efficiency. Initial experience



Lemken continues its autonomous collaboration.

was successfully gained using the Krone EasyCut F 320 front-mounted mower in combination with the Butterfly EasyCut B 950 Collect.

Lemken, on the other hand, utilises the additional function particularly in the areas of stubble cultivation and sowing where rollers and front hoppers can now be easily carried and used. The autonomous process units were further developed, taking into account ease of maintenance, practicality and optimisation of the sensor carriers. Another highlight is the improvement in the diesel-electric drive. The new generation of machines retains its power output of 170kW/230hp and continues to feature four-wheel steering with large tyres for maximum tractive power and minimum ground pressure. The transport solution presented at Agritechnica 2023, using a drawbar, is possible even in combination with front-mounted implements.

The new tractor units are characterised by their uniform paintwork in dynamic platinum grey. The advanced autonomous tractor units from Krone and Lemken enable large-scale practical trials and significantly improve the reliability of autonomous processes, according to the companies. The test deployments take place on various farms in Germany and neighbouring European countries in order to test the functionality and communication of the autonomous process units using various implements under real conditions.

Both companies want to further develop the product in close cooperation with practising farmers and to make it marketable as quickly as possible, helping to address labour shortages and enabling farmers to act as system operators of autonomously operating machines in the future and to focus more closely on arable farming issues and farm management tasks.



The **Solitair 9+ Duo** high speed pneumatic seed drill combines precise depth and separation control with the flexibility needed to simultaneously apply any sized seed(s) and up to 250 kg/ha of fertilizer.

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ROW CROP CULTIVATOR CONFIGURATION MADE EASY

Pöttinger's new online application, **Row Crop Assist**, gives interactive support to get the optimum configuration of Flexcare row crop cultivators. First, it requests information on the planting process and the tractor that will be used for the crop-care work. The application then shows the optimum row crop cultivator configuration in a way that is clear and accessible to everyone, the company says.

Pöttinger has already implemented the Tramline Assist application for an optimum tramline system in arable farming. For harvesting grassland, Haytool Assist makes it quick and easy to find the right tedder to match different mowers. Building on this success, Pöttinger's Row Crop Assist optimises the set-up of mechanical crop-care machines.

The objective of all the Pöttinger Assist applications is to optimise farming processes using intuitive on-screen visualisation and outputting notification messages with



recommendations. That's how complex knowledge is tailored to specific-use cases and displayed in a way that makes it easy to use. The hoe elements and weeding tools can be adapted to different processing scenarios in just a few steps.

Because climatic, social and political conditions are continuously changing, there is increasing demand to rethink existing arable farming strategies, according to Pöttinger. The Flexcare row crop cultivator optimally prepares farmers and contractors for the future. The unbeatable flexibility of

the row crop cultivator allows the farm to try out new crops and new planting systems without cost-intensive new purchases. This significantly lowers the barrier to start hoeing oil seed rape, field beans and cereals. In addition, it can be used for contract work and by machinery rings to increase machine utilisation.

The Row Crop Assist applications provides support before and after buying a row crop cultivator to configure the machine in the best way possible depending on the seed drill and crop care technology used.



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KRONE LAUNCHES NEW VENDRO C 1340

Krone's new Vendro C 1340 is a 12-rotor tedder with a working width of almost 13.4m. It is equipped with the OptiTurn rotor concept and 24cm increased working width. As standard, the Vendro C 1340 comes with a reversible drawbar and 40mm drawbar lug for top and bottom hitching or, optionally, it can be ordered with a K80 ball-head hitch or swinging drawbar. It also comes as standard with a two-point hitch and tension spring to provide load compensation ensuring safe driving in all conditions, even with small or light-weight tractors.

Twelve rotors of 1.5m diameter, each with six tine arms, provide a generous overlap, which allows for highly efficient tedding and turning on a working width of almost 13.4m. The OptiTurn rotor ensures the tedder remains at the optimum height even in rough ground; the rotor guide wheels run very close to the three-dimensionally curved OptiTurn tines to pick up the crop accurately, minimising losses and

spreading evenly. The spreading angle can be variably set in four levels in a range of 13° to 19° depending on requirements. A steep spreading angle is used for intensive conditioning or a shallow angle is effective for gentle turning. The desired working height can be easily adjusted via a crank handle directly at the machine. Or the optional hydraulic adjustment allows the operator to make the adjustment from the tractor cab. This ensures that the operator can react quickly and easily to changing conditions at any time. On request, the machine can be equipped with a border swath cloth mounted on the right side in direction of travel that is folded in and out hydraulically via the operation panel. Folding the rotor booms in and out from transport into working position takes seconds. First, a double-acting electronic control unit moves the rotor booms to headland position. This hydraulic folding process is carried out by sequential control, avoiding improper

operation and preventing the resulting damage to the machine. Then, a single-acting electronic control unit lowers the rotors to working position.

Another benefit of the Vendro C 1340 is the hydraulic relief of the transport axle, available on request or as standard on the Plus model. During work, the transport axle runs along on the ground very close to the operating range of the tines, guiding them over each ground contour. To avoid damage to the sward when navigating narrow curves, the transport axle can be relieved. This reduces the weight on the axle by means of a special hydraulic system. Ensuring the sward remains intact, and neither the contact to the ground nor the function as a front guide wheel for the tines is lost. This also guarantees high forage quality for following cuts.

Krone opts for a fully mechanical drive train, comprised of the main gearbox with integrated freewheel. In combination with the drive shafts, the maintenance-free Octo-Link finger coupling and the hermetically closed rotor gearboxes, provides maximum efficiency with low fuel consumption and minimum maintenance. Thanks to the lightweight components, the machine is very easy to pull without any compromise in terms of stability or functionality.

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NEW FOR GRASS FROM CLAAS

CLAAS'S DISCO LARGE-SCALE MOWERS HAVE BEEN IN EXISTENCE FOR 25 YEARS, AND TO MARK THE MILESTONE, THE COMPANY HAS LAUNCHED FOUR NEW MOWER-ROTOR CONDITIONER COMBINATIONS. HERE, WE TAKE A LOOK AT SOME OF THESE RECENT ADDITIONS, AND AT WHAT ELSE IS NEW FOR GRASS FROM CLAAS THIS SEASON



DISCO 8500 C TREND

The new Disco 8500 C Trend was specially developed for tractors in the lower mid-range.

The new Disco 8500 C Trend's basic specification includes the extremely robust telescopic arm concept with optimised centre of gravity, Active Float ground pressure adjustment actuated from the cab and the fast-acting mechanical non-stop collision protection whereby the arm pivots up and over obstacles before automatically

resetting. In addition, the low-speed concept on the Max Cut mower bed enables the mower to be operated at 850rpm; the optimal, fuel-efficient torque characteristics for the tractor. On top of that, it features state-of-the-art drive technology with individual drive protection for each mowing



DISCO 9300 C COMFORT

The new Disco 9300 C/RC Comfort is optionally available with the innovative double roller drive with scissor gear unit.

From now on, Claas has placed the Disco 9300 C Comfort and 9300 RC Comfort above the Disco 8500 series. Thanks to the frame with optimised centre of gravity, with arms inclined to the rear, and the low-engine speed concept with reduced PTO start-up speed of 850rpm, it is now possible to harvest powerfully and efficiently with the added benefit of conditioning using a lighter

four-cylinder tractor from 180hp. The V-shaped steel tines on the Disco 9300 C Comfort are designed to ensure even higher throughputs at reduced fuel consumption. The new Disco 9300 C Comfort also features Hardox-reinforced conditioning plates for maximum durability. Conditioning intensity and deposition width are easy to adjust



The Rollant 630 RC Uniwrap has rapid bale transfer with low centre of gravity, efficient wrapper and large storage compartment for spare rolls.

ROLLANT 630 RC UNIWRAP

The Rollant has been one of the most popular fixed-chamber round balers on the market for decades. It is known for its solid, well-formed bales and short processing times. The Rollant 630 RC Uniwrap at a glance:

- ▶ The bale diameters adjustable from 1.25m to 1.35m; optional Maximum Pressure System Plus for even greater core compaction.
- ▶ Robust, laser-welded baler roller body and reinforced tailgate mounting.
- ▶ Stronger chassis frame with 20mm steel profiles.
- ▶ Large tyres up to 1.35m in diameter and low centre of gravity for

bale transfer for even more ground protection and more stability on slopes.

- ▶ New Multiflow pick-up with reduced power requirement and easier maintenance.
- ▶ Heavy-duty cutting rotor with 17 or 25 knives and PRO cutting floor.
- ▶ Optimised and strengthened drive with individually adjustable chain lubrication, oil supply for up to 14 working hours with refilling and new central lubrication for maximum durability and low wear.
- ▶ Net or film wrapping.



Flexible swath-laying without a conditioner is no problem with the new Disco 9300 Direct Swather.

DIRECT SWATHER

With the new Disco 9300 Direct Swather with innovative auger technology, farmers and contractors can now choose between swath grouping or wide deposition even when mowing without conditioning. Alternatively, Claas is introducing the new Disco 9300 C Auto Swather with tine conditioner and cross conveyor belts, designed mainly for multi-farm use.

The new Volto 1300 T/TS and 1500 T/TS have large working widths, small rotor diameters, and Max Spread rotor design.



NEW VOLTO TEDDER

Up until now, the Claas tedder programme covered working widths from 4.50m to 13.00m. Now, four new top-of-the-range models have been added to the Volto series. The Volto 1500 T with a working width of 15.10m joins the new Volto 1300 T. These new high-performance tedders feature a new frame and chassis concept with optimal ground-contour following and soil protection, very simple operation and folding

geometry, optimised rotor guidance in the form of multi-functional XXL chassis/guide wheels with a diameter of 1,050m, and a completely re-engineered, stronger Permalink drive. Furthermore, small Max Spread rotors guarantee first-class crop pick-up and uniform wide distribution. Thanks to the new frame concept, both working widths are also available in the TS version with innovative self-steering chassis.



Robert O'Shea, agri-contractor, explaining the dangers of a PTO shaft to students at Moycarkey National School in Co. Tipperary as part of the Safe Farm Futures workshop at the school.

IN SAFE HANDS

THIS SEPTEMBER, AGRI AWARE WILL LAUNCH A SHORT FARM-SAFETY COURSE FOR TRANSITION-YEAR STUDENTS, TO BE DELIVERED THROUGHOUT THE NEXT ACADEMIC YEAR. FOCUSING ON FOUR KEY AREAS, THE NEW COURSE WILL GIVE THE STUDENTS A WELL-ROUNDED GUIDE TO SAFETY ON THE FARM, ACCORDING TO THE AGRI-EDUCATION CHARITY

This transition-year course comes after a very positive year for Agri Aware, since the roll-out of its new farm-safety programme into primary schools.

Safe Farm Futures was launched in January 2024 by Minister of State at the Department of Agriculture, Food and the Marine (DAFM) with responsibility for farm safety, Martin Heydon. It was rolled out to primary schools in February, comprising an array of learning materials, worksheets and interactive resources like webinars.

Safe Farm Futures has four key areas of focus:

- ▶ Introduction to farming;
- ▶ Countryside care;
- ▶ Animals and you; and
- ▶ Moving parts.

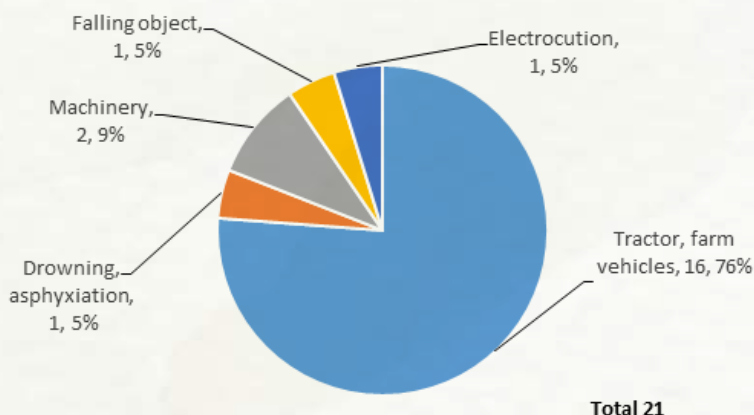
In April, Agri Aware embarked on a farm-safety workshop roadshow to complement the programme's learning materials.

Agri Aware chair, Shay Galvin explained: "Sixty interactive in-person farm-safety workshops were completed between April and May, taking place in 31 primary schools across 16 counties. In total, 2,300 students

participated in the workshops." Delivered by Agri Aware's farm-safety officer, the workshops introduced students to a range of common safety signs found on farms, as well as personal protective equipment (PPE) that should be worn for different jobs – for example, a quad-bike helmet, something that is still not commonplace despite mandatory

regulations requiring head protection to be worn.

Activities and demonstrations were included in the workshop, with one demo consisting of best practice when working around a PTO. "Educating primary school children about the dangers a PTO shaft possesses and the do's and don'ts when near one in operation is



Deaths of children on farms 2011-2020 (10 per cent of all fatalities). Source: HSA.



Speakers at the Safe Farm Futures farm-safety workshop in Moycarkey National School in Co. Tipperary: Robert Corroon, Agri Aware education officer; Ashley Traynor, Agri Aware farm-safety officer; Robert O'Shea, agri-contractor (in cab); TJ Maher, dairy farmer and IFA Animal Health Committee chair; and Marcus O'Halloran, Agri Aware executive director. Photo: Tom Ryan Casey Photography.

critical," said Shay. By the end of the 2023-2024 academic year, 647 students were registered to the Safe Farm Futures programme across 329 schools in 29 counties. "Feedback from teachers and students alike was very positive," he added.

SAFETY WINNERS

In June, just before schools finished for the summer holidays, Agri Aware and Minister Heydon travelled to Co. Tipperary to crown St Patrick's National School in Kyle Park outside Borrisokane as overall winners of the Safe Farm Futures programme for 2024. The school received a prize of €2,000 to be used for the benefit of student wellbeing.

The second prize in the programme – which was for a class submission – was won by third class in Kilmaleck National School in Co. Cavan. They won a VIP trip to a local farm of their choice. In September, Agri Aware will commence rolling out Safe Farm Futures to more primary schools, helping to ensure that farm safety is to the fore in these young minds.

TRANSITION YEAR COURSE

And, as mentioned, transition year students are on Agri Aware's agenda in September as the short course in farm safety commences, and will focus on four key areas:

- ▶ Personal safety and awareness;
- ▶ Identifying hazards and understanding warning signs;
- ▶ Safety around livestock; and
- ▶ Machinery and vehicle safety and good practices.

To further emphasise the farm-safety message, and to illustrate the four main areas, farm-safety videos will be used as an interactive learning tool.

Commenting on this, Shay said: "Videos deliver a strong visual message. Seeing best practices when it comes to farm safety through these videos is crucial as many – particularly those in rural areas, who are from or work on a farm at that age – begin operating machinery and are given more responsibility with jobs on farms. It's important that they know how to be safe first before doing any job and the programme aims to do just that."

SAFE JOURNEY

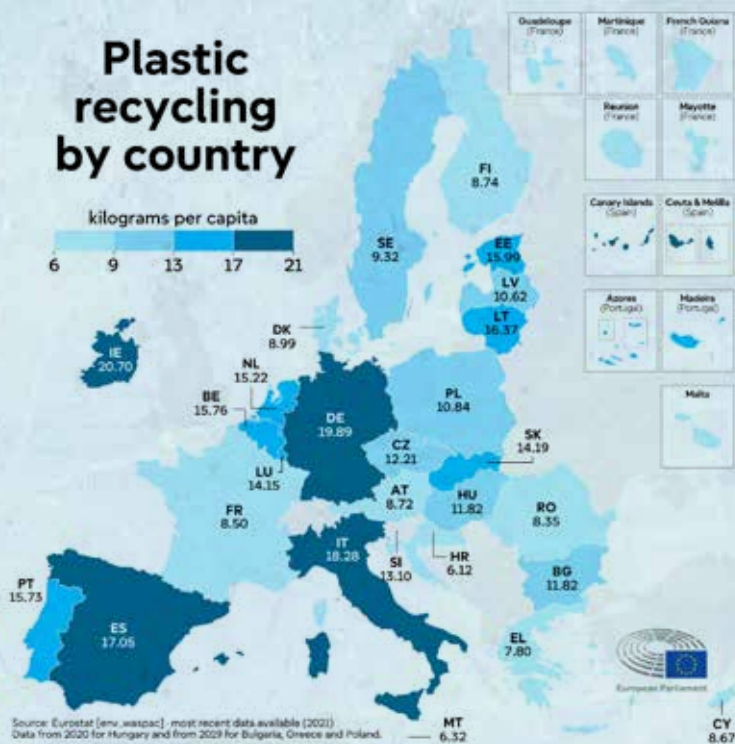
According to the Health and Safety Authority (HSA), a young person aged 14 or over should only be permitted to drive a tractor or self-propelled machine on the farm, if:

- ▶ They have attended a formal training course run by a competent training provider;
- ▶ They are closely supervised by a responsible adult;
- ▶ They have the ability to operate the controls with ease;
- ▶ All the controls are conveniently accessible for safe operation by the operator when seated in the driver's seat;
- ▶ The controls which operate the power take off (PTO) devices, hydraulic devices and engine cut-off are clearly marked to show the effect of their operation;
- ▶ The tractor is maintained so that it is safe for them to operate; and
- ▶ The ground over which the tractor is driven is free from hazards such as steep slopes or excavations, river banks, lake or pond edges, deep ditches and similar areas.

Plastic recycling by country

kilograms per capita

6 9 13 17 21



Map showing how many kilogrammes of plastic are recycled annually per capita in each EU country.



MATT O'KEEFFE
EDITOR

Source: Eurostat (enr_wastpac), most recent data available (2021)
Data from 2020 for Hungary and from 2020 for Bulgaria, Greece and Poland.

ANOTHER SOLUTION TO A PROBLEM THAT DIDN'T EXIST

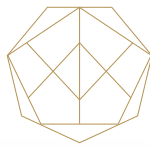
The imposition of a tax on cans and plastic bottles, requiring consumers to queue up at depositories to get that tax back, was generally accepted without analysis or criticism. This additional task to the daily grind was accepted meekly by a compliant public, afraid to be seen as less than enthusiastic about saving the planet one aluminium can at a time.

We have the highest recycling figures in the EU for plastic bottles, cans and, as it happens, silage covers. Despite this, a tax was placed on these household waste items resulting in consumers having to bring them back to a depository, to receive a voucher, which they can only redeem in the adjacent shop. Consumers already pay a fee to have their recyclables collected. This entails sorting compostables and general rubbish from recyclable materials, including, importantly, plastic bottles and cans. Consumers still pay the same fee for this service, even though they no longer put cans or plastic bottles into the recycling bins. Now they must sort these into another container, load the container onto the bike, into the car, or carry them on the bus, and bring them to a depository to secure a tax refund.

INSULT TO INJURY

To add immense insult to injury, the recycling agencies/collectors are, justifiably, demanding an increase in bin collection charges. This is because the recycling-bin contents they collect are less valuable to them as the bins no longer contain as much recyclable material that can, in turn, be sold on for a profit. The additional charge proposed by the bin collection companies would cost consumers an additional €2.50 per month or €30 per annum. This is another addition to living expenses which can be ill afforded by many families. What is even more galling is the fact that the burden is being placed on households that already recycle their cans and plastic bottles. Does anyone really believe that those who discard their cans and bottles on the streets and roadsides will learn the error of their disgusting littering practices because of a tax on the cans and plastic bottles portion of that litter? Despite reports of lower litter levels since the new recycling tax was introduced, casual observation tells another story of continuing littering practices by those who have no respect for themselves or their surrounding environment. In all likelihood,

any decrease in the level of can/bottle littering can be apportioned to some of those who live on our streets garnering a small income from picking up these tax-returnable compostables. That hardly represents an argument in favour of the new tax. Investing in increased litter compliance measures and anti-littering campaigns would be far more useful than taxing everyone for the sins of a few. *#EnoughisEnough* stretches far beyond the grievances of the farming community regarding over-regulation and compliance costs. It is not as if our recycling record is below par with EU targets. Repak reported that up to July 2023, Ireland had annually met and exceeded all EU recycling targets over the past quarter of a century. Plastic recovery was 32.7 per cent, a full 10 per cent above target. Metal recycling, including cans, was 69 per cent, well above the 50 per cent EU target. Likewise, Irish glass and wood recycling easily exceeded European targets. We have seen incremental recycling improvements every year, with 1.1 million tonnes of packaging recycled in 2022, an increase of 9 per cent on the previous year. So, where exactly is the problem the latest tax imposition is seeking to solve?



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Killarney is peppered with boutiques, craft shops, galleries and traditional pubs all dotted along a street-scape unchanged for centuries. A moment's stroll from the bustling town centre, Killarney's tranquil mountains and lakes await. Here eagles soar, wild deer roam and visitors and locals alike pause to catch their breath. Killarney National Park is Ireland's oldest national park over looked by our hotels.

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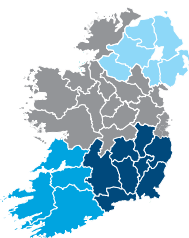
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John Laughlin
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Simon Delaney
+353 87 691 2413



Christy McGuirk
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