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AUGUST 2021



Innovation in the field

The latest research and technological developments that are driving innovation in agriculture

NEW CHIEF EXECUTIVE OF THE RDS, GERALDINE RUANE, OUTLINES HER PRIORITIES

RONAN MURPHY, CEO OF THE IRISH LIMOUSIN SOCIETY, ON HIS AMBITIONS FOR THE BREED

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Our responsibility as food producers

Amid the rising crescendo of criticism from naysayers, Irish farmers continue to produce high quality food. In addition, our food producers are the only people on the planet who can sequester and store carbon. No other sector of society has this capacity. As the scientific measurement of carbon sequestration in our soils and hedgerows becomes more exact over the coming years, we must manage our farms so that carbon storage capacity is increased over time. Gaining recognition as carbon sequesters is only one step along the journey. As our farms perform this invaluable service to society and the environment, we must ensure that due financial credit is given to the managers of this process. There are many along the food chain who will wish to take some benefit from the fact that our soils perform a dual role of food production and carbon storage, so there must be vigilance that ownership of this valuable service remains as a farm asset. Breed improvement technologies continuously increase animal and plant productivity. In relation to livestock breeding, researchers in the Netherlands are at the forefront of developing traits within the breeding process that can deliver impressive reductions in methane production in cattle over time. A one-quarter reduction in methane emissions from cattle over the next thirty years is a viable goal. With our own advanced genomic programme already acknowledged as a world leader in the science, Irish breeding researchers are well positioned to develop and refine reduced methane emission traits at an even faster pace. Our dairy, beef and sheep production indices can accommodate an additional selection criterion for reduced methane production as part of the livestock food production process.

What a pity the blunt instrument of herd cull is still unequivocally being advocated by the critics of Irish farming. Some are genuine, if misguided, in their advocacy of reduced livestock numbers as a drastic response to climate change and the need to introduce immediate mitigation strategies, though culling the entire Irish livestock population would have little, if any, impact on climate change. Neither would it necessarily have a positive impact on the Irish environment simply because much of our land is unsuitable for alternative food production. Leaving that argument aside, there is another cohort within the herd cull advocates that has an altogether more ideological opposition to livestock production. For them, climate action is a Trojan Horse mechanism to achieve other goals. Viewing animals as sentient beings comparable to humans is reasonable up to a point. What is unreasonable is forcing that ideology on others who believe that farmed animals are an acceptable and necessary part of food production and have been for millennia. The health benefits of dairy and meat consumption in a balanced diet are well proven. The increasing demand for our livestock-based food produce across the globe is based on a realisation that there are health benefits from a broad-based diet that includes meat and dairy.

We have a somewhat caustic observation in our Very End page this month highlighting the disconnection between lowering our food production and alleviating global hunger. Have we any responsibility towards the millions of people who struggle under the cruel reality of hunger and malnutrition every day of their lives? We have ample food production resources, especially grass-based meat and dairy production. Should we not make the most of those resources at the same time as we advance scientific and technological means of improving the economic and environmental sustainability of our farms?

Front Cover: Claas Lexion 5400 harvesting a crop of Cassia winter barley at 4.2 tons per acre at 15% moisture, in Athy, Co. Kildare.



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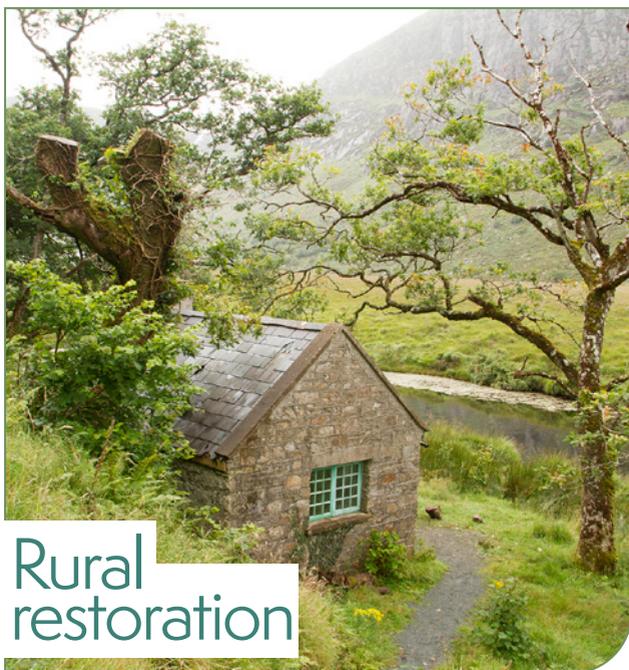
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Eoin Lowry on the commodity 'Bull Run'

A bull run on agricultural commodities is not necessarily the best news for farmers in the long run as it may lead to a period of increased volatility in the months and years ahead. That was the message Eoin Lowry had for food producers last month. The analysis by the Head of Agri at Bank of Ireland was carried in the bank's June Sectors & Insight Report and his prediction was that periods of high prices are generally followed by low prices, as more farmers across the globe plant more cereals, inevitably pushing up supply and driving prices downwards. With food prices rising at their fastest monthly rate in a decade there is certainly reason to think that a price ceiling will be reached at some stage. However, while producer prices have improved in recent months, they are far from spectacular, with many commodities only entering profitability at this stage. Most particularly, beef and sheep meat need current prices to return a profit margin reflecting investment and production costs. Nominal milk prices are still a way off the peaks experienced in 2013, though that peak was followed by a big fall the following year. The reasons for the current rise in commodity prices are varied, including pandemic-driven domestic spending on food. That was counterbalanced

by a fall in foodservice demand. Now that the world is tentatively opening up again, the hospitality sector should consolidate price gains, for the time-being anyway. There may be longer term influences that could buck the historic peak/trough trends. Extreme weather events are unpredictable and unquantifiable in terms of their impact on global food stocks. Global population continues to rise so that statistic will be reflected in increased demand for food over the coming decades. We cannot rely on open-ended Chinese demand, though even a restoration of its pig herd, using high tech production methods, will still require large tonnages of imported grain, putting a floor under world grain prices. Speculator interest in food, as Eoin highlights may be adding to the upsurge in food commodities. If demand continues, that speculation may not result in ultimate price falls. The market will ultimately decide. It is notable that our own Agriculture Minister, Charlie McConalogue, is predicting stable commodity prices for the foreseeable future. He too, is reading the tea leaves and, while unknown and unknowable factors regularly impact on food commodity prices, his optimism is clearly based on solid indications of higher prices for the foreseeable future.



Rural restoration

Now that remote working is the new norm there is an increasing realisation that everyone does not need to live in the capital. This raises all kinds of options in terms of aspiring to own a home. There are thousands of derelict and semi-derelict houses scattered across the Irish countryside. Renovation instead of new construction does not necessarily offer greater cost efficiency but often it can offer other tangible benefits. A house set in a location for a century becomes part of the landscape. A new

build can take generations to become embedded in the countryside. Likewise, 'doer-upper houses in smaller towns and villages often come with ample gardens, fit into the urban streetscape and come with a readymade community atmosphere. We need as great a focus on renewing our existing housing stock as we need on digging up land to build new homes. Restoration does not mean settling for second best. Imagination and architectural ingenuity can turn the humblest dwelling into a fit-for-purpose home with all the necessities for 21st century living.

On the environmental side, a renewal utilises an existing site. It blends into the landscape, is less intrusive than a new build and reduces the environmental impact. A newly built house uses up to 30 tonnes of carbon equivalent in its construction. With the current demand for new houses, as distinct from new homes, we are looking at adding up to 1 million tonnes of carbon equivalent per annum to our emissions over the next decade. A renewal will have a carbon demand, but it will be a fraction of a new build. While Housing Minister Dara O' Brien is becoming increasingly imaginative and radical in his approach to meeting the demand for housing, he needs to also radically reassess the potential role of housing renewal. Expedited planning permissions, reduced VAT on inputs, and a moratorium on property Tax would do a lot to encourage house renewal as a viable and attractive option to new builds in suburban Ireland. We should have a comprehensive high-speed broadband network across the country within five years. That will come at considerable cost to the State. One way of justifying the cost is to encourage more families to live outside the urban sprawl of Dublin.

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ASA Conference



The ASA has done a great job in communicating to its members and the agricultural community in 2021. Despite the pandemic, the show must go on. The Podcast initiative – Experts in their Fields – was a superb idea, with the Michael Miley Podcast being a stand-out feature. Michael's personality, knowledge and experience over many years was impressive and enjoyable to

listen to. As a former ASA President, he gave an account of growing up in Roscommon, heading to college, his first job, his career in RTE and beyond. He also spoke about his love of farming. Other podcasts in the series, which was sponsored by Ulster Bank, were Padraig Walshe, Darragh McCullough, Una Dillon and Professor Mike Gibney. It's been a busy year for ASA President, Anne-Marie Butler, a native of Kilkenny. She and her Council worked tirelessly in continuing to make the organisation relevant to its members. She has held down a demanding job in Ulster Bank, an organisation she cut her teeth in after leaving college. Having spent 13 years with the Bank, latterly as Senior Agriculture Manager, the move to close its business in Ireland meant a new start for Anne-Marie. She will join Teagasc in October as Head of Education. The ASA Conference will take place virtually on Friday September 10th, where George Ramsbottom will take over as ASA President from Anne-Marie. The 79th annual conference will be a hybrid event, as it was last year and will be live-streamed from the Killashee Hotel in Naas. Attendees will be asked to pre-register on the ASA website for the complimentary event which is due to run from 10am – 12.40pm. This year's event, titled Science: Driving Innovation & Addressing Challenges in Agri-Food, is once again sponsored by FBD Insurance. The conference will be officially opened by Minister for Agriculture, Food and the Marine, Charlie McCConalogue and it will be hosted by Agri-Broadcaster, Damien O'Reilly. The conference will also feature leading agri-industry experts from Ireland and overseas. The full line-up of and the running order for the event will be announced w/c 9th August 2021.

The Covid Olympics

While UEFA heralded the Euros as a wonderful success, the sight of 80,000 fans in full roar at the Final was a little disturbing. Maybe it's just an in-built viral anxiety at this stage of the pandemic. It was hard not to assume that such unbridled engagement was a perfect hotbed for the various virus variants. This cavalier approach in the UK to the virus is amazing. With new cases rising by the thousands daily, it was difficult to see the justification for a full stadium. Boris Johnson's Freedom Day approach to the Covid pandemic looks increasingly populist and surreal. From a purely commercial viewpoint the fact that England reached the Final delivered a big bonus to food producers. Burger, chicken and sausage sales increased every time England won and the barbecues sizzled as these islands enjoyed a welcome heatwave. Was the decision to proceed with the Olympics any better than FIFA's decision to host a continent-wide football fest? At least the precaution of banning spectators was some acknowledgement of the risks involved. The athletes will ultimately return to their home countries and we must hope that the Olympics does not become the latest vector in prolonging the agony of Covid. The Olympic Games are considered the world's foremost sports competition, with 200 nations participating. So why did the Games go ahead? The Japanese government estimated the cost would be \$15 billion in 2020, the average sponsorship over 4 years is \$2 billion dollars, and they have 14 global sponsors and 200 domestic sponsors, so could the answer be money? A deeply indebted government and organising committee looked to cut its losses. The Olympics opened on Tuesday 23rd of July and the closing ceremony is on August 8th. Let's hope by the time you are reading this piece, that the Olympics have run smoothly. There were 69 Irish athletes who qualified for Japan and gave up part of their lives to train for and participate in a once-in-a-lifetime opportunity to display their sporting prowess. No matter what the circumstances we wish them well in their endeavours.

The National Interest

The death of Des O' Malley last month prompted a series of eulogies to the former government minister who regularly spoke of the need to act in the national interest. The recent political unrest, inside parties more so than between parties, could hardly be considered as being in the national interest. If leaders must be changed, now is not the time. With a Delta variant of Covid driving up infections dramatically, tentative efforts being made to reopen the travel and hospitality sectors and an ongoing vaccination programme, what is required is personal sacrifice not personal political agendas being placed before the wellbeing of the country. Neither Fine Gael nor Fianna Fáil performed to expectations in the recent by-election in Dublin, so the knives came out for both the Taoiseach and the Tánaiste in the aftermath of Labour winning the seat. There is no interest among the general public in these power plays when concentrating on rebuilding Ireland and getting everyone vaccinated should be the priority items on the political agenda right now. The Soldiers of Destiny need to recognise that their individual destinies rest on Michael Martin bringing the country through the current crisis. Looking for his head is not a smart move. With major issues on the table for Ireland, the Green Deal, Brexit and meeting the EU challenge on global warming, on top of all the Covid issues, political instability is not in the national interest.

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InTouch

Taking control of an unpredictable autumn

Cathal Bohane, Head of InTouch Nutrition

The arrival of August brings the final of the noticeably long days, good growth levels and grass still of the highest quality. For many, silage stores are now full, and while it has been a good year for growth and supply, trying to work around the weather extremes has meant that silage will be of more variable quality, having been cut that week or two later than expected.

Keeping production levels up, maximising grass in the diets and minimising the need for supplementation are the targets now. The next few months will have variable weather, meaning the need to act fast if supplementation is needed. Maintaining production levels should be the goal, while less than a 2% per week drop is acceptable. Now is the time to cease any breeding activity on spring calving farms if it has not been done already. Now is the time to look at results rather than still trying to get cows in calf for calving in May next year. In a nutshell, you are trying to breed offspring from sub-fertile cows and only putting yourself and your system under pressure in the late spring/early summer period of 2022. Scanning now needs to be the focus when making plans for the months ahead — what is in-calf or what needs to go.

For autumn calving farms, the focus is on preparing for calving again. Again, reassess how this went for you last year. Did you have metabolic issues? How did the cows come into milk? How did they produce for the lactation? Are you dealing with different criteria this year — better body condition score (BCS) on cows or better quality feeds? While the most convenient, grazing dry cows lends itself to two excesses that will cause you issues in the long run — energy and potassium (K). We need to assess the BCS of the cows and determine whether they are good, poor or just right. Ad-lib grass will over-supply energy, and this will mean over-conditioned cows and, in combination with excess K, will lead to a “perfect storm” for milk fever. Using conserved forages to supplement will reduce energy intake and dilute these excess K levels as well as the addition of magnesium in the mix will help significantly reduce metabolic issues.

Sometimes we are too attached to our own farm and the animals within the boundaries to decide the best route of action. Setting goals and cut off dates for breeding or setting up the best possible system for our autumn dry cows and sticking to these should be a priority. Imagining that we are advising a neighbouring farm will allow us to decide with our heads rather than our hearts.

New Executive Director at FTMTA



The FTMTA has announced the appointment of Michael Farrelly to the position of Executive Director. Michael will commence in the position on Monday the 9th August 2021.

Having worked in the agricultural machinery industry for the last number of years and with a strong commercial and business background, Michael brings with him

knowledge and expertise to the role that will help develop the association to meet the evolving needs of its members and the machinery trade in Ireland. Commenting on the announcement, Diarmuid Claridge, FTMTA President, said: “On behalf of the association and the Executive Board I extend a warm welcome to Michael. Michael’s skills and knowledge will be pivotal in the growth of the association and the future services we provide to our members. I look forward to working closely with Michael over the coming months”. Michael Farrelly stated: “I am delighted to be joining the FTMTA and I am looking forward to the challenges ahead. The FTMTA membership range from world leading machinery brands, Ireland’s own indigenous machinery manufacturers who are winning on the world stage and other home-grown companies such as dealerships and distributors who are the backbone of the Irish economy. The world we live in is changing rapidly. Climate action, advancing technology and the way people work are all challenges and opportunities and I look forward to helping our members navigate their way through these exciting times.”

Glanbia delivers strong first half 2021

Glanbia plc, the global nutrition group, delivers strong performance ahead of expectations in the First Half 2021. Wholly-owned revenues are up 20% on a constant currency basis (up 11 per cent reported) versus prior year due to very strong demand, in the second quarter in particular, across both Glanbia Performance Nutrition (“GPN”) and Glanbia Nutritionals, Nutritional Solutions (“GN NS”). GPN and GN NS both delivered strong EBITA margins in H1 2021 due to positive operating leverage, mix and realisation of benefits from the GPN transformation programme. Joint Ventures delivered a performance in line with prior year. Half Year 2021 adjusted earnings per share (“EPS”) of approximately 52 cent, versus prior year up 82 per cent on a constant currency basis (up 68 per cent reported).

Bord Bia celebrates UN International Year of Fruit and Vegetables

To mark the UN International Year of Fruit and Vegetables 2021 and the launch of its 'Best in Season' campaign, Bord Bia is encouraging people to simply add one more fresh fruit or vegetable to any meal. The campaign highlights the taste, texture, and vibrancy of colour of seasonal fresh fruit and vegetables, as well as the important role they play in health and nutrition. Minister of State for the Department of Agriculture, Food and the Marine, with responsibility for Land Use and Biodiversity, Pippa Hackett recently visited Leo Murphy's broccoli and cabbage farm in Co. Meath to welcome the arrival of new season vegetable crops. The Minister stated: "By seeking Irish quality assured produce in season we support Irish producers, Irish jobs and make a strong contribution to the Irish economy. We also get quality food that has been produced and delivered to the highest standards with minimal impact on the environment". New market data shows an increase in the purchase of fresh produce in Ireland, with the total retail market for fresh produce valued at €1.78bn. Consumers increased their average annual spend on fresh vegetables by 7.5 per cent from the previous year and the total retail market for fresh vegetables, which make up 37 per cent of all fresh produce sales, is now valued at approximately €659.7m annually, an increase of 8.6 per cent on 2020.

Lorcan Bourke, Sector Manager for Fresh Produce and Potatoes, Bord Bia said: "With 2021 being designated by the UN as the International Year of Fruit and Vegetables, it is heartening to see the latest market data showing that Irish consumers are continuing to purchase more fresh produce, with the record sales achieved during the pandemic being sustained into 2021. July marks the peak growing season in Ireland and growers are working around the clock to deliver fresh fruit and vegetables to shops, often within 24 hours of produce being harvested. The 'Best in Season' campaign, which encourages people to choose locally grown, fresh, seasonal produce, is closely aligned to the UN's objectives to highlight the important role of fresh produce in nutrition, food security and human health. We're lucky to have over 50 types of fruit and vegetables grown in Ireland, giving us plenty of options to 'add one more' to meals this summer."

Previously, Glanbia guided full year 2021 adjusted EPS growth to be in the upper end of 6 per cent to 12 per cent on a constant currency basis versus prior year. As a result of the strong performance in H1 2021, Glanbia has raised its expectations for the year. Glanbia now expects to deliver full year 2021 adjusted EPS growth of 17 per cent to 22 per cent on a constant currency basis versus the prior year. While the Group remains vigilant to the continued volatile and disruptive potential of the Covid-19 pandemic, it notes that strategic actions have enabled a strong recovery in the first half of 2021 from the comparative challenges of 2020.



Future Proofing Nutrition

Maeve Regan,
Head of Ruminant Nutrition, Agritech

Currently in the agri-food sector, there is increased attention on sustainable feeding strategies and how nutrition can be manipulated to lower the carbon footprint associated with livestock.

Home-grown protein sources, alternative proteins, feed additives and incorporating a higher inclusion of native ingredients all feature highly in the combined strategy.

However, with grass being the predominant basal forage in Irish production systems and making up the largest proportion of the lifetime diet of the animal, it is imperative grassland strategies are enhanced to combat environmental issues.

The Multiple Benefits of Clover

Tailored farm soil fertility plans, liming programmes and reseedling plans are key performance indicators on Irish grass-based farms and should be the annual priority to maximise the grazing potential of the platform. Specific to the annual reseedling plan; incorporating white clover into grazing swards has multiple benefits:

- > Increased herbage quality compared to grass-only swards
- > Increased dry matter intake in summer and autumn
- > Higher milk production and liveweight gain
- > Nitrogen (N) fixation – lower requirement for N fertiliser application over the summer

Incorporating clover into silage mixtures can also assist in naturally increasing the protein content of winter diets.

Teagasc Insights

Latest Teagasc research has found that grass-clover swards, receiving 150 kg N/ha when compared to grass-only swards receiving 250 kg N/ha, grew the same level of grass/ha annually. Alongside the lower N requirements and the benefits associated with this, grass-clover swards also had a positive effect on the level of milk solids produced/cow (20 kg/cow).

From January 1st, 2020, nitrates derogation rules have specified a minimum inclusion of 1.5 kg/ha naked clover seed for all new leys. However, beyond compliance, the additional production and environmental benefits of incorporating clover cannot be ignored.

For further information, contact your local Agritech sales advisor or visit www.agritech.ie



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NDC launches new advertising campaign

The National Dairy Council is launching a new advertising campaign designed to support the foodservice industry in Ireland which has suffered considerably during the Covid-19 Crisis. The EU-funded campaign is supporting the foodservice industries impacted in Ireland, France, Denmark, Belgium and Northern Ireland. Bord Bia estimated that the food industry in Ireland contracted by half during the pandemic crisis where restaurants, pubs, hotels, coffee shops, workplace, hospitals and educational canteens all closed. The campaign will be a mix of outdoor, print and online media and is designed to reinforce the impact and to restore the consumer confidence in dairy products. Interestingly, recent research undertaken by NDC showed a 48 per cent increase in dairy consumption during the pandemic.

Nearly one-third of young adults without children indicate that their consumption of dairy products has increased since the beginning of the Covid-19 lockdown. This increase is significantly higher for young adults with children, almost half (i.e. 48 per cent) of these respondents

says their milk consumption has increased by nearly 50 per cent. As part of the campaign, NDC specially selected seven high profile cafes and food producers across Ireland who were each photographed for the campaign by renowned food photographer Mike O'Toole. Each photo showcases the proprietor and their food unique offering whether it's the World-famous seafood chowder at Nancy's Barn in Donegal or the famous all butter croissants from Bread 41 on Pearse street.

Cathy Curran, Communications Manager with the National Dairy Council said: "We are delighted to be launching this new EU campaign to support the foodservice and hospitality industries so badly affected by the impact of the Covid-19 pandemic.

Dairy products have a valuable place in cafes and foodservice due their accessible, nutritious and versatile use. The cafes chosen are geographically spread across each province and represent the cream of independent delis, cafes and food producers serving customers with the best Irish dairy produce on their menus every day."



Teagasc National Farm Survey 2020 results published

The results are representative of over 93,000 farms in Ireland and show that, taking account of the income developments across the various farm systems, the average family farm income rose by 9 per cent in Ireland in 2020 to €25,662. Production costs were lower as key farm input prices fell in 2020. It had been initially feared that Covid-19 would significantly damage food demand, particularly for beef, due to food service closure and lockdown measures in Ireland and in overseas markets. However, this was effectively offset by growth in the consumption of food at home.

A Brexit trade deal was eventually agreed, but the protracted negotiations created additional uncertainty, impacting beef prices in particular. In the Spring of 2020 there was some significant, but ultimately short-term, disruption to the beef supply chain which saw Irish finished cattle prices decline sharply. As a result, supplementary support was provided by the national exchequer under the Covid-19 State Aid Temporary Framework to beef farmers who delivered cattle for slaughter between February 1 and June 12 2020.

In spite of these challenges, farm output prices held firm overall in 2020 and a feared fall in farm incomes did not materialise, although some farm systems fared better than others. Across the key outputs categories, lamb prices performed best, recording a 13% increase in 2020 compared with 2019. Beef and dairy farmers benefitted from marginally higher cattle and milk prices in 2020. Cereal prices were up significantly in 2020, reflecting market supply and demand conditions. Lower Dairy System production costs, coupled with a further increase in milk

output volume and slightly higher milk prices, resulted in an average dairy farm income of €74,236 in 2020, an increase of 13 per cent on the 2019 level.

The cattle rearing system, which comprises farms that are mainly specialised in suckler beef production, benefitted from marginally lower production costs in 2020. However, the value of output and support payments were also down slightly in 2020. Overall, the average Cattle Rearing income of €9,037 in 2020, was unchanged on the 2019 level.

In the 'Cattle Other' system, which comprises mainly of beef finishing farms, but also includes farms selling store cattle, production costs also fell in 2020. While support payments were also lower, the value of farm output increased. In combination this resulted in an average income of €14,813 in 2020 for the Cattle Other System, an increase of 8 per cent on the 2019 level.

The Sheep system also benefited from lower production costs in 2020 and also experienced a strong increase in the value of farm output, which was driven by higher lamb prices. In common with other drystock systems, on average the level of direct payments for Sheep farm was down slightly.

The average income on Sheep farms increased by 24 per cent in 2020 relative to the 2019 level to €18,383 in 2020. The Tillage system experienced poor production conditions in 2020, which led to lower crop yields. In line with other sectors, input prices for tillage farms decreased in 2020. However, there was also a significant increase in cereal prices in 2020, partially offsetting the impact of the drop in crop yields. The average income on tillage farms fell by 1 per cent in 2020 to €32,525.



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We create chemistry

The new CEO at the RDS, Geraldine Ruane, outlines her priorities as she takes over the role at Ireland's largest venue during a pandemic, and highlights her aim to promote the values of a foundation that crosses the urban/rural divide.



Building on strong foundations

When Geraldine Ruane was head-hunted to the role of Chief Executive at the RDS from the position of Chief Operations Officer at Trinity, she said it was a “nice surprise”, and an opportunity that she was naturally drawn to given her experience working with long-established national institutions.

Born in Sligo, Geraldine spent most of her childhood in County Galway. “I come from a large family of ten so I am very much a people person.” Having studied accounting, Geraldine’s career saw her hold a number of senior executive roles in the pharmaceutical sector (Novartis, Chanelle, Schering-Plough) before becoming Chief Executive of the Ordnance Survey of Ireland – “The first woman in there after all the army men!” – and then moving on to her role at Trinity. “For some reason I am drawn to long-standing institutions. The Ordnance Survey was established in 1824, Trinity in 1592 and the RDS will celebrate 300 years in ten years’ time. I love the history and I love the values behind such organisations. It was Thomas Prior who set up the RDS in a room in Trinity College and his mission from the beginning was all about science and agriculture. What the RDS was doing then was really being a forerunner for what Teagasc is doing now: taking enlightenment ideas, ideas of rational thinking that were in vogue at the time, and scientific thinking and applying that to farming. It was about making sure Ireland could reach its potential. The RDS produced lots of publications about flax growing, saffron growing, about draining marshy land and about livestock production – it was a priority from the beginning to focus on increasing productivity and efficiency of Irish land and it was about the application of science to farming and learning from best practice.”

Geraldine also points to the work that the RDS undertook at the Botanic gardens during the potato blight as an example of its agricultural roots: “The Botanic Gardens was set up by the RDS before it was given over to the state at end of 19th century. Nowadays, we think of the work at the Botanic gardens and farming as two different areas but at the time there wasn’t so

big of a gap between the research and scientific thinking around plant growing and growing in the field. When the blight first hit Ireland, they detected it in the Botanic Gardens and because the RDS’s whole methodology was about the application of science, they set to work to try to find a cure. Unfortunately, they were unable to do so but they were at the heart of this research.”

Spring forward

Geraldine also points to the importance of the Spring Show in driving best practice in livestock: “In 1831 the first Spring Show was held to encourage best breeding practices in livestock by showcasing the best in the country. It was a very simple idea – show your cattle, see the best and aim for that the following year. Within a few short years, Irish livestock was going to Paris to show and compete with their Scottish and English counterparts counterparts, when they would previously have been deemed not at this standard.”

Looking to more recent times, Geraldine discusses how the RDS Spring Awards have built on the legacy of the Spring Show. “We want to celebrate and recognise the work being done by those in the farming and agri-food sector across the country. We have three categories: Livestock, Forestry and, more recently, we have introduced the Sustainability awards.” The development of these awards, she explains, comes from work that the RDS undertook with the Institute of International and European Affairs (IIEA), which focused on Climate Smart agriculture and how to bring sustainable practices into an Irish farming context. “So, for example, we want to award those organisations and groups that who have applied science and technology to help deliver the principles of climate-smart agriculture such as greater efficiency, reduced waste and increased profitability; individuals or farm families who are sustainably developing their on-farm activities through entrepreneurship, new product development, marketing, and improved efficiencies; as well as recognising those who are promoting the sustainable development of their

local communities.” And this message of sustainability not only aligns with the RDS’s principles to drive scientific innovation but also supports its commitment to supporting rural communities: “It is about making sure that enterprise works within the community and that rural Ireland is kept alive. We are looking at it from an innovation perspective, from a social perspective, from a farming perspective, from an economic and an environmental perspective.” “Our forestry awards,” she continues, “reflect this also. They have changed in recent years; while before we were solely focused on production, now we also have farm forestry, which is about encouraging farmers to work with the land that they have and look to see if there are areas of potential diversification. Justin Good in Cavan, for example, converted some of his beef and dairy farm and now has pigs and turkeys running around the woodland – they act as seed spreaders and are also there for the Christmas market. And our livestock awards really play into the scientific focus at the RDS, as they are really genetics focused and hark back to the original Spring Show.”

Events

As Ireland’s premier events venue, the RDS has been significantly quieter during Covid times but is slowly and safely starting to open up as restrictions lift. “We would usually be hosting hundreds of events, with an economic value to Ireland of approximately €600m. We have recognised our responsibility as Ireland’s largest venue and we are determined to open the campus in a safe way adhering to all Government guidelines.” The RDS has hosted a HSE testing site in Simmonscourt since last year and is also acting as a pilot venue, working with Government, for some events currently: “We recently held a rugby event here, we had the count for the Dublin Bay South by-election and in August we have some other events planned.” One of the biggest events in the calendar – the Dublin Horse Show – has been cancelled over the past two years. This year, the RDS will run the National Championship Competitions to continue to offer a platform for breeders. “Next year, hopefully, we will be able to bring the Dublin Horse Show back – it is a great social event and boasts an enviable reputation on the global equestrian stage.”

Priorities and a new strategy

So, what are Geraldine’s priorities as she embarks on this new journey? “A lot of people see the RDS solely as an events venue, very few people know that it is a foundation, its aim is philanthropic. Our founding mission is to see Ireland thrive culturally and economically and we work across five key areas: agriculture, the arts, enterprise, equestrian, science & technology. Part of my job is to tell the story of the RDS and I want to put an emphasis on the foundation and its values.

“With our 300-year anniversary coming up, it is an exciting time to look forward and I see a great opportunity to develop a new strategy, bringing all of our stakeholders onboard. Hopefully, with a new strategy in place, we will be very visionary over the next 5-10 years and I see collaboration between public and private industry being key in achieving this. We have big ambitions to develop the Anglesea stand and the main campus really needs more funding also – I want to scale the business and grow our events. Overall, I want to leave a legacy behind and build on the culture that the RDS already promotes – the mission of the RDS is as relevant today as it was in 1731 and I believe that with these values at its heart it has a great future.”



1731 RDS is founded

1732 Published material on agricultural innovation, including growing flax, grass cultivation, draining marshy lands, bee management, wool production, hops, saffron planting and tillage.

1742 RDS forestry premiums (grants) introduced (between 1766 and 1806 over 55 million trees were planted in Ireland on foot of the Society’s initiatives).

1800 Botanic Gardens opened by the RDS and remained in the care of the Society until 1877 when they were transferred over to the State.

1831 First Spring Show held on grounds of Leinster House, to encourage best breeding practices in livestock by showcasing the best in the country.

1845 Utilising knowledge of both agriculture and science, the RDS directed its own scientists to find remedies for potato blight & offered cash prizes for the best research.

1864 First Dublin Horse Show takes place in Leinster House to showcase the best Irish bred horses.

1881 Spring Show and Dublin Horse Show move to new lands acquired by the RDS in Ballsbridge

1988 RDS Forestry and Woodland Awards established – the only awards of their kind in Ireland which continue today as part of the RDS Spring Awards

1992 Last Spring Show held in the RDS, with farm machinery simply getting too large for the 16 hectares of the Ballsbridge site.

2016 In conjunction with the IIEA, the RDS outlined the framework of a ‘Climate Smart Agriculture’ plan for Ireland.



Limousin champion

Ronan Murphy has hit the ground running as the newly appointed CEO of the Irish Limousin Society. He spoke to Matt O' Keffe recently about the job and his ambitions for the breed.

Ronan brings a wealth of experience to the role: "My background has always been genetics and animal breeding. I graduated from UCD with a Masters in equine reproductive physiology. I was initially employed with Kilkenny-based pig breeding company Hermitage Genetics developing the breeding programme and expanding the commercial side of the business. I then became CEO at Wetherbys Ireland and that involved working closely with Wetherbys DNA Laboratory, which has responsibility for Beef Data Genomics Programme testing for the ICBF programme. From there I moved to the sport horse sector as CEO of Sport Horse Ireland. When the opportunity arose with the Irish Limousin Society, it was a natural fit for me, back into animal breeding, genetics and breed improvement, areas that I am passionate about."

Breeding excellence

Ronan says we are fortunate in Ireland to have a world-renowned genomic testing programme: "Since World War two there has been a huge emphasis on the application of science in animal breeding and particularly cattle breeding. Assisted reproduction, frozen semen, embryo transplants, sexed semen, breeding programmes and

progeny testing all contribute to making genetic gains and making animal breeding more sustainable and economically viable. Working in the pig sector was a great grounding for understanding the application of modern genetics and breeding programs to commercial animal production and keeping that commercial focus all the time is key. The pig sector survives in a free market without the benefit of CAP supports, and science and technology are crucial to that survival."

The French connection

Originating in the Limoges region of France, the Limousin Herd Book was established formally in 1886, with Limousin cattle evolving originally as a dual-purpose breed: "In more recent years, and particularly here in Ireland, we focus very strongly on its beefing qualities. Limousins were first imported to Ireland in the early 1970s with Paddy Clancy of the Clancy Brothers being one of the first pioneers of the breed."

Ronan Murphy details the strength of the Limousin in the Irish cattle herd: "Today we have 2,400 breeders accounting for 20,000 pedigree cattle. Seven clubs form the structure of the Society. We have upwards of 10,000

calves registered each year so it's quite a vibrant pedigree breed. It's had a huge impact since its introduction into Ireland and we consider it the number one suckler dam, the number one beef sire, the number one continental beef sire and number one AI beef sire. The breed has performed well in the Irish cattle production system. We haven't got it all right yet and there are certainly areas that we need to focus on, but we're starting from a very solid base with some of those early pioneers still involved. William Smith, from the Millbrook herd in Oldcastle, was one of the first Irish Limousin breeders and is still on our Council today. Trevor Masterson from Wexford is our current Society President. There is a lot of knowledge collectively on the Limousin Council."

"We launched our new dairy beef test sire selection program in April, where we're specifically choosing bulls that are suitable for easy calving with shorter gestation length for the dairy farmer"

The Limousin cross

With the increasing emphasis on dairy beef, it's notable that Limousin is a popular sire for beefing on dairy cows. Almost 50 per cent of the beef produced in Ireland is coming from the dairy herd. The Limousin Society focuses on three selection indices, looking after suckler dam production, beef sires, and dairy beef: "Areas we prioritise include gestation length, particularly when trying to tighten the calving interval in a grass-based milk production system. We launched our new dairy beef test sire selection program in April, where we're specifically choosing bulls that are suitable for easy calving with shorter gestation length for the dairy farmer. We need to also look at other traits that add value to that calf including feed conversion efficiency, average daily gain, carcass weight, getting to slaughter weight earlier, which is in line with our national sustainability objectives. The Limousin ticks a lot of boxes and we feel it produces a very commercial calf. That is reflected in the usage of Limousin, with 400,000 calves born here every year with Limousin genetics. Our objective is to continue building on those figures. As a society, we're responsible for the breeding program, improving the breed, and also the promotion and marketing of the breed. In doing that we ensure the Limousin maintains a dominant position, particularly for the commercial farmer, and that will benefit our members and everybody who's involved in breeding pedigree Limousin cattle."

Meeting market demands

Beef carcasses have to be of a size and a consistency to meet market demands, as Ronan explains: "This is an area that we're very excited about. The primal cuts on the carcass are highly heritable traits, and they respond very well to selection. We know from the data we have on kill-out and dressing percentages, for example, that the Limousin is an animal that produces an extremely high

beefing value in the carcass. That is an area that we've been looking at, potentially selecting sires with additional loin length, which will give more economic value to the processor. Moving up the chain through not just our primary producers, but our primary and secondary processors, and our retailers and our consumers we are looking at things like eating quality of Limousin beef. In France, the Limousin Rouge label is a well managed stamp of approval for Limousin meat. We know that the Limousin breed has quite a dominance of the Myostatin gene, particularly the F94L variant, which leads to higher yield of muscle and also high-quality muscle and low saturated fat, for example, which is a trait of the Limousin. It's something we'd really like to promote and market

as we go forward. The longevity of a beef breed is really about its performance in the field. As Darwin says, it's not the strongest, or the fittest that survive, but the one that's most adaptable to change and we think that the Limousin has the foundation to really respond to changing markets as we move forward."

Innovative approach

The Limousin Society CEO outlines the novel technologies being brought to bear on the beef sector: "We have a complex stakeholder group in the Irish cattle industry. ICBF for instance, collects data through programmes such as BDGP that is shared with the breed societies. That is very valuable to our members in making breeding decisions. The AI centers disseminate the genetics; the embryo transfer providers, veterinarians are all stakeholders. I see our Society as a breeding and genetic company, our primary role is to promote, develop and improve the Irish Limousin. We don't necessarily have to have our own AI or performance testing stations. But we need to collaborate with all these stakeholders to bring that information and knowledge together on which to base our decisions.

Within our own Council, we have tremendous breeders and we're extremely passionate about improving the breed. I think that's a key driver. Our third level institutions also contribute towards the development of animal breeding and genetics. Ireland's BDGP is the envy of many countries around the world. It has demonstrated what can be done.

We need to work within that framework to develop the traits that we're interested in specifically for our breed. Of course, we compete with the other pedigree breeds, and that's natural and normal. At the end of the day, we want to use all those pieces of information and technology to improve the Irish Limousin to maintain that our goal of being the top beef breed in the country."

Update from down-under

We are well into the second half of the dairy season here in Ireland but down under in New Zealand they are just getting started on their calving and milking season. Olin Greenan, who farms in the Waikato region, spoke to IFM in mid-July just as the tempo on his farm was increasing with the arrival of the first calves.

“We milk 650 cows through two milking sheds on the home farm. There are now an additional 250 cows being share-milked on another property. It’s about 10 minutes away from the home farm and Paddy Raftice, our Kilkenny member of the team, is ably managing that for us. It’s another challenge for our business and an exciting development. Incidentally, it’s a property that I managed previously. I cut my teeth as a 50:50 share-milker on the farm, so it’s quite cool to be given an opportunity to take that on again, some ten years later. The startling thing from looking at the funding application and the provisional budgets for this second venture was the increase in costs over that ten-year period. Capital and production costs are not reflected in milk

price. It hasn’t moved hugely from ten years ago. Meanwhile cost creep and inflation on input costs have increased significantly when I do a comparison to ten years ago.”

“That’s a real challenge we have here on farms. Our labour costs are rising with the Government telling farmers and other businesses to source local labour because of Covid restrictions on international travel. Wages have increased across all businesses including farming and we are at the bottom of the pyramid so the impact is all the greater. You do the cost/benefit analysis of a capital investment versus labour. We’re talking about automation in the dairy shed or in calf rearing or changing milking frequencies to alleviate ongoing labour cost increases.”

Ireland versus New Zealand

“To some extent, I would suggest that Irish milk producers are slightly ahead of New Zealand in terms of environmental restrictions and regulations that have been introduced and managed on Irish farms. In other senses, I figure New Zealand dairy farmers are ahead, in terms of clover inclusion, for instance. Even when I left Ireland some twenty years ago, there





We've got a lot of extremists here, not dissimilar to Ireland, challenging what we do. It is disappointing that your hard day's work putting food on someone's plate is not appreciated by everyone.

were all sorts of restrictions on farm inputs. Input controls have only become mandatory this year in New Zealand and what I'm talking about particularly is a cap on synthetic nitrogen of 190 kgs. Before that it was about output controls so that was quite a change. The clover story has been here for a long time because of the benefits of nitrogen fixation. In my own experience it's all well and good, but I do see in some of our pastures a lapse in the winter growing months because clover is dormant and that creates a challenge in itself. You have open pastures if you've got too much clover. There are consequences in the Spring flush if you have too much clover in the pasture. You can have severe bloat and other animal health issues. It's just finding that balance of what works well. That's not denying the fact there's probably huge opportunities to reduce the synthetic N input by developing more clover-inclusive pastures."

Economic engine

"There was a time a time when New Zealand dairying was the centre of the economy and very highly regarded. It still is the flagship income generator. Tourism is non-existent right now. Unfortunately, that is not reflected in public opinion. We've got a lot of extremists here, not dissimilar to Ireland, challenging what we do. It is disappointing that your hard day's work putting food on someone's plate is not appreciated by everyone. There is a lot of scrutiny of water quality and land use and, despite improvements, we are still getting a lot of criticism."

Pasture Summit

"I contributed to the Ireland/NZ Pasture Summit in July with live sessions beaming out of Hamilton and Moorpark. The key theme of it was how we can still push dairy production forward amidst the huge environmental constraints and the negativity around dairy. I came away very positive, despite the fact that there are some challenges there. But the important thing for me is there are such similarities between New Zealand and Ireland, and I think there's potentially an opportunity for our scientists and researchers to work together and have a united front. Another aspect of that conference was about feeding the

world. Jeremy Hill, a food scientist with Fonterra, highlighted global modelling indicating that we need animal protein in the world's diet and without that we will be unable to feed the world's growing population. The Summit also displayed New Zealand and Irish farms that are achieving important KPI's (Key Production Indices) and at the same time managing to reduce their carbon footprints. I think we need more of this sort of showcasing of people that are doing the right thing, because you can get very disillusioned when you lift a newspaper with a biased or unbalanced argument against dairy."

Fonterra milk price forecast

"Fonterra came out with a rather bullish pay-out at the start, which I'm not a great fan of. Because you can imagine the giddiness that creates amongst those who sell services and products to farmers. The eight-dollar forecast is phenomenal and the advanced payment is reflected in that. Perhaps that's one of the good stories on the rebound from Covid with a massive demand for milk products. Think back to twelve months ago and people didn't know where the markets were going. So that's quite positive. I'm just hoping that they had the utmost confidence in coming out with such an optimistic figure because we've seen it before that we can pay the consequences midseason with a price pull-back. I would rather see a conservative opening price and a top-up at the end. So, on the milk price front, the news is very good but when you drill down into that, you definitely need a good price when you factor in increased costs."

Capital structure review

"Fonterra is going through a capital structure review again, ten years after the last one. I guess that they're addressing the fact that peak milk supply has been reached in New Zealand and how Fonterra positions its business going forward in terms of capital structure and share price and so on. There's a little bit of angst amongst shareholders at the moment because as one thing gets sorted, another crops up. In fairness, I believe Fonterra has improved its communications with shareholders and suppliers in recent years."

Vaccination as part of BEEP-S

Jack O'Connor, Ruminant Marketing Manager at MSD Animal Health, looks at the benefits of vaccination as part of the Beef Environmental Efficiency Programme for Sucklers (BEEP-S)

The objective of BEEP-S is to further increase economic and environmental efficiency in the suckler herd through improvement in the quantity and quality of performance data that is collected. The programme will target the weaning efficiency of suckler cows and calves through the collection of the live weights of cows and progeny in the herd of each participant, improving the welfare of suckler calves at the time of weaning and controlling liver fluke in adult suckler cows. One of the voluntary measures under Action 2 of the BEEP S is vaccination. The objective of this action is for farmers to implement a vaccination programme to reduce the incidence of bovine respiratory disease caused by certain viruses and bacteria otherwise known as pathogens. Bovine Respiratory Disease or BRD as it is also known, refers to diseases that affect the respiratory system of cattle. The best-known example of BRD in cattle is pneumonia. It is advised that all applicants should consult with their attending veterinary practitioner for the most suitable vaccination programme for their farm. To qualify for payment, date of vaccine administration and purchase receipts must be kept on file and made available to Department of Agriculture, Food and the Marine (DAFM) upon inspection.

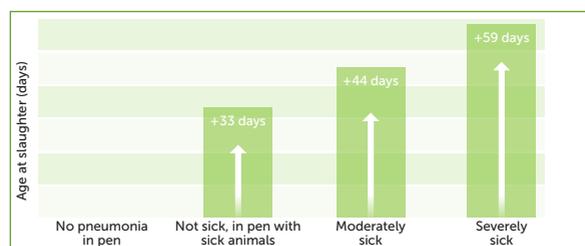
Why is vaccination part of this programme?

A correctly timed vaccination programme in conjunction with correct animal management can have both an economic and labour-saving result for the farmer.

Vaccination programmes can:

- ▶ Improve the welfare of the animals. Vaccines can reduce the risk of an animal becoming infected by certain disease pathogens
- ▶ Reduce the risk of animals becoming ill which reduces the need for antibiotic treatment
- ▶ Protect animals during risk periods. Examples are weaning, housing, mixing of groups, transport, mart trade etc.
- ▶ Reduce sick days for animals while also maintaining thrive, allowing animals to reach key target weights

Studies show beef cattle with obvious signs of pneumonia can take over 59 days longer to finish than healthy animals. Even animals showing little or no sickness can be suffering from subclinical respiratory disease which will increase finishing times to slaughter. See figure 1 below:



Negative effects of BRD on finishing times¹

Purpose of Action 2 - vaccination

If you selected vaccination as part of Action 2 of the programme you will need to familiarise yourself with the disease pathogens you are trying to protect your cattle against, the vaccines suitable for the programme and their protocols. Let's start with the disease pathogens. The vaccination pillar of the programme aims at reducing the disease incidence caused by BRD. See figure 2 below which illustrates the most common BRD pathogens the programme aims to protect cattle against through vaccination.

Pathogen name	Pathogen type	Known as
Respiratory Syncytial Virus	Virus	RSV
Parainfluenza-3	Virus	PI3
Bovine herpes virus type 1 (BoHV-1), (Infectious Bovine Rhinotracheitis)	Virus	IBR
Mannhaemia haemolytica	Bacteria	<i>Pasteurella</i>

List of disease pathogens the programme aims to protect calves against through vaccination

For the purpose of this programme, Teagasc are advocating the importance of vaccinating calves against all four pathogens listed in figure 2 where possible. If inspected, you must provide receipts to show proof of purchase and a record of vaccine administration dates in order to satisfy Action 2 of the programme. Applicants must choose one of the following vaccination protocols to qualify for payment:

Option 1 (if there is adequate time before risk period or a broader coverage including bacteria is required)

- ▶ First subcutaneous injection of RSV, Pi3 and Mannhaemia haemolytica dead vaccine, six to eight weeks before weaning/housing/sale
- ▶ Second subcutaneous injection of RSV, Pi3 and Mannhaemia haemolytica dead vaccine, two to four weeks before weaning/housing/sale
- ▶ At the same time as the second injection, a single IBR live intra-muscular, two to four weeks before weaning/housing/sale
- ▶ Option 2 (if there is a short time before risk period or if cattle can only be handled once)
- ▶ Single RSV and Pi3 Intranasal two to four weeks before weaning/housing/sale
- ▶ At the same time, a single (or two dose programme) IBR live intra-muscular injection (two to four weeks before weaning/housing/sale)

MSD Animal Health has the full portfolio of BRD vaccines to provide protection against the four pathogens listed in figure 2. MSD Animal Health are advising all farmers to implement a vaccination protocol using Bovipast RSP and Bovilis IBR Marker Live. MSD Animal Health are advising all farmers to consult with their attending veterinary practitioner prior to implementing a vaccination protocol. If inspected, you must provide receipts to show proof of purchase and a record of vaccine administration dates in order to satisfy Action 2 of the programme.

Bareille et al. 2008. Impact technique et économique des troubles respiratoires des jeunes bovins lors de l'engraissement. Rencontres autour des recherches sur les ruminants: 77-80.

RESEARCH & INNOVATION FOCUS





Putting Ireland at the forefront of carbon sequestration research

The Department of Agriculture, Food and the Marine is supporting targeted investment and research in enhancing soil sequestration and emission data, to establish the "National Agricultural Soil Carbon Observatory".

With greater emphasis being placed on the agricultural sector to achieve ambitious greenhouse gas (GHG) emission targets for 2030, the need for accurate real time data on these emissions has never been more important. Our national ambition for the achievement of climate neutrality by 2050 is further emphasized through the EU Green Deal, Farm to Fork Strategy and in the recently released "Fit for 55" package, which includes eight revisions to current legislation and five brand new proposals. Greenhouse gas (GHG) emission reduction targets pose considerable challenges for an Irish agricultural sector which is already considered to be amongst the most technically efficient production models globally. One pathway open to the sector is to further enhance soil organic carbon (SOC) sequestration while also reducing soil based emissions. Put simply, this is increasing the amount of carbon being taken up and stored by soils. While the measures and management practices needed to enhance SOC sequestration and simultaneously reduce soil based emissions are well understood we are lacking the accurate data measurement for these carbon fluxes at a landscape level. Ireland's GHG emissions are reported by the Environmental Protection Agency (EPA) using an

inventory approach. This inventory calculates the emissions associated with individual activities by multiplying the amount of an activity with an established 'emissions factor' for that activity, for example, the number of dairy cows nationally multiplied by the average emissions per cow will give a good indication as to the contribution to national emissions derived from the national dairy cow herd. This method, while accepted by the governing Intergovernmental Panel on Climate Change (IPCC), is crude and does not take into account variations in the herd such as age, genetics, or dietary impacts. As a result, these figures are known as IPCC Tier 1 emissions factors. Currently, Ireland's emissions are reported using a mixture of Tier 1 emissions factors and nationally measured and accepted emissions factors called Tier 2, which can be significantly lower than the international average figures. These Tier 2 emission factors have been established largely as a result of small scale field experiments comparing management practices and using small scale experimental equipment. However, until recent technological advances, the accurate measurement of emissions from many agricultural practices recorded in the emission inventory was not practical, or indeed possible, as these occur at a much larger land-use scale and as such can be significantly impacted by local environmental conditions such as temperature and rainfall and also agricultural management practices. To address this deficiency and help improve national emission reporting, the Department of Agriculture, Food & the Marine has provided funding to enable the



purchase of 10 Carbon Flux Towers to establish the "National Agricultural Soil Carbon Observatory" which will be managed and maintained by Teagasc. The sites chosen for these Carbon Flux Towers will encompass a range of soils adding value to existing Teagasc led projects including the industry co-funded Signpost programme. The resulting "National Agricultural Soil Carbon Observatory" will place Ireland at the forefront of EU carbon sequestration research and will also help to further emphasise our sustainable agricultural sector through the provision of accurate scientific data.

The establishment of the National Agricultural Soil Carbon Observatory will also enable Ireland to:

- ▶ Better quantify soil carbon emissions and sinks from agricultural land,
- ▶ Enable mitigation measures to increase carbon sequestration to be included in the national inventory,
- ▶ Participate in the EU ICOS (Integrated Carbon Observation System) network
- ▶ Enable Ireland to benefit from the 2018 EU Effort Sharing Regulation.

As soils affect all GHGs this infrastructure will have the capabilities to monitor and measure gas fluxes of CO₂, CH₄ and N₂O and to also measure Dissolved Organic Carbon (DOC) in the water draining from the soils. The objective of this enhanced technology function is to understand the change in total GHG emissions that occurs once land use change such as rewetting or above ground biomass production is carried out.

It is clear to see how the strategic

investment in this technology will benefit Irish agriculture and society at large through the better understanding of our GHG emissions and the highlighting of pathways through which we can achieve significant emission reductions in our efforts to combat global climate change. Ireland is an agricultural export focused country and, as such, any means by which we can further enhance our reputation for environmental sustainability and agricultural efficiency, as will occur through our investment in this specialist infrastructure, is to be welcomed.

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Pathway to success

Bord Bia's 'Pathways to Net Zero' makes carbon emissions reporting mandatory for Origin Green members

Origin Green, Ireland's national food and drink sustainability programme, recently published new procedures and guidelines that put carbon emission targets on a mandatory footing for food and drink manufacturers as the sector seeks to accelerate its contribution to the Programme for Government's aim of carbon neutrality by 2050.

This marks a significant shift for the Origin Green programme and will see member companies go beyond reductions of energy-related emissions, to include a more comprehensive assessment of their entire carbon footprint, including value chain emissions which incorporates all indirect emissions (scope 3) associated with food manufacturing such as freight and travel. Martin Hofler, Sustainability Partnership Manager at Bord Bia, explains the importance of addressing indirect emissions. "Traditionally, when we think about emissions from companies, we think of energy emissions, their use of oil, gas and other fossil fuels. However, we are seeing across the food and drink sector that a significant portion of their emissions can come from their supply chain: purchased goods and services, waste disposal, use of sold products, and transportation and distribution.

"There are also emissions associated with the raw materials that companies source from their supply chain, such as their food and drink ingredients. They all have an embedded carbon footprint that we are asking companies to measure and address.

When we look at scope 3 emissions around raw material sourcing, there is a desire for the purchasers to look at how they can engage with their supplier base to help them to make reductions, whether it is through knowledge transfer programmes or co-investing in better technologies within their supply chain. We have a number of Origin Green companies that have supported carbon neutrality projects overseas, as well as supporting global suppliers to reduce emissions."

In order to drive impact at a large scale, Bord Bia (the Irish Food Board) is initially introducing this mandatory carbon emission target to Origin Green members with a turnover

The Greenhouse Gas Protocol Corporate Accounting and Reporting Standard provides requirements and guidance for companies and other organizations preparing a corporate-level GHG emissions inventory. Initially published in 2001 by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), this standard is widely accepted by businesses as the international norm.

The Greenhouse Gas Protocol carefully defines emissions according to three scopes:

SCOPE 1: Accounts for the Direct GHG emissions that occur from sources that are owned or controlled by the company, for example, burning of fossil fuels (natural gas, kerosene, heavy fuel oil) in company-owned or controlled vehicles and boilers, leakage of refrigerants and so on.

SCOPE 2: Accounts for the Indirect GHG emissions from the generation of purchased energy consumed by the company, for example, grid electricity, acquired steam, heat and cooling.

SCOPE 3: Optional 'catchall' reporting category that allows for the treatment of all other indirect emissions, for example, business travel and freight goods.

greater than €50m. Companies must conduct baseline assessments this year to determine emissions targets from 2022 onwards. These plans will be reviewed, monitored annually, and independently verified by international specialists Mabbett.

According to Bord Bia, the interest among companies has been very high, and close to 150 food and drink companies attended the 'Pathways to Net Zero' launch. To support this new development, Bord Bia has prepared comprehensive guidelines for companies on how to decarbonise their operations and their supply chains. The



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advice on net zero target setting and implementation is based on the United Nation's 'Measure, Reduce, Compensate' model. This model encourages everyone in society to take action to help achieve a climate neutral world by mid-century, as enshrined in the Paris Agreement.

The 'Pathways to Net Zero' builds on several Origin Green initiatives already in place, such as the Origin Green Sustainability Charter which members sign up to requiring them to set and deliver on clear sustainability targets as part of their five-year sustainability plans with a specific focus on raw material sourcing, manufacturing process and social sustainability.

These plans are also monitored annually and independently verified by Mabbett.

Speaking about the 'Pathways to Net Zero', Origin Green Director, Deirdre Ryan said: "Accelerating the transition to a zero-carbon economy by 2050 is required to avoid the catastrophic impacts of climate change. Business leaders are now shifting their focus from what is achievable to what needs to be done, and there has been increasing

interest among Origin Green companies wishing to reduce emissions within their own operations and also along their supply chain. In developing the 'Pathways to Net Zero' framework, which sits alongside other key independently audited initiatives, we are providing Irish food, drink and horticulture businesses with the practical know-how to not only set ambitious carbon reduction targets, but more importantly, to make the changes necessary to achieve them."

Tara McCarthy, Bord Bia CEO, added: "Our €13bn food and drink export industry has established a hard earned, global reputation as a leading producer of high-quality sustainable food and drink. Maintaining this reputation, which must continue to be evidence-based, is more important than ever in the face of continued global trading volatility. But, not at any cost. We acknowledge that Ireland's agri-food sector needs to do more, and faster. Origin Green has, and will, continue to deliver impact by providing a co-ordinated national approach to reducing emissions across the supply chain as a part of the Irish Government's wider Climate Action response."

Almost 300 food and drink companies across Ireland are verified members of Origin Green, representing over 90 per cent of food and drink exports. To date, companies have set over 2,400 sustainability targets, reaffirming the industry's commitment to continuous improvement. Over a five-year period – the duration of a firm's sustainability plan – food and drink manufacturers in Ireland delivered an 11 per cent reduction in energy use per unit of output and a 17 per cent reduction in water use per unit of output.

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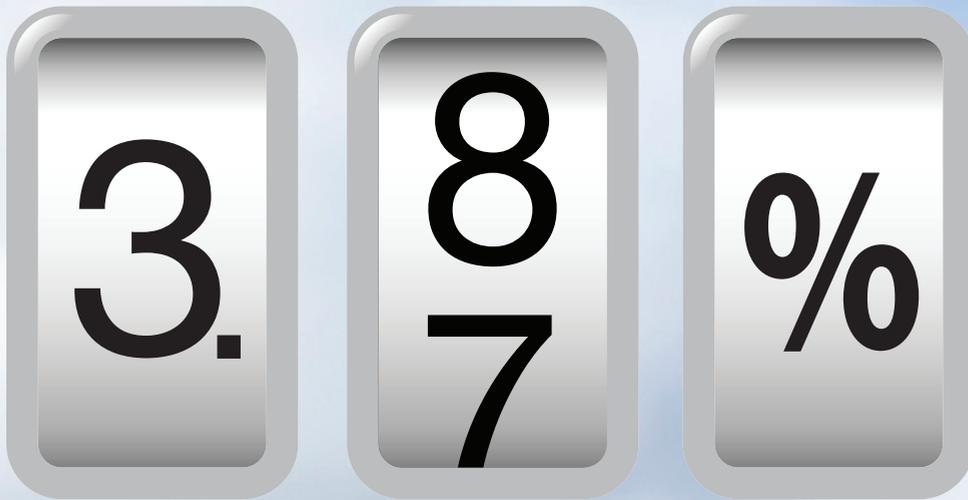


Farm Insurance

Zurich Insurance plc is regulated by the Central Bank of Ireland.

*From January to December 2020, on average we paid out on 99% of motor, home, van, farm and windscreen insurance claims.

BEAT THE DROP



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Lush spring grass that is low in fibre can increase the risk of acidosis in the rumen, leading to poor digestion and a drop in milk solids output.

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For more management tips on maintaining milk solids, visit [Alltech.com/Ireland/beat-the-drop](https://www.alltech.com/Ireland/beat-the-drop) or call the **BEAT THE DROP milk solids helpline** on **059 910 1320** 





Reaching finishing weight faster



Kevin Graham,
Beef Specialist Alltech Ireland

The importance of nutrition

An energy-dense diet can be formulated by utilising the forages at your disposal, which is imperative to achieving good live weight gains and reducing time to slaughter. Feeding a consistent mix of ingredients to the animals each day is critical in ensuring the health of the rumen stays intact and performs at the optimum level. The rumen is the engine of beef production, efficiently utilising ingested feed and converting it to beef. If there are inconsistencies in the diet composition or mix quality, sub-acute ruminal acidosis (SARA) will become a problem. This problem surfaces when excess acid levels are produced in the rumen due to excessive volumes of rapidly fermentable carbohydrates and a lack of physical fibre. Ruminant animals rely on microbes in the rumen to convert feed components into useable sources of energy and protein. For optimum rumen health, the pH needs to be kept relatively constant. This provides a healthy environment for the rumen microbes and, ultimately, optimises rumen performance. Signs of SARA can be obvious, with loose dung a telling sign, along with cattle off their feed and noticeably falling behind the rest of their group.

Preventing SARA can be achieved through:

- ▶ Feed consistency
- ▶ Physical fibre inclusion
- ▶ A nutritionally balanced diet
- ▶ Inclusion of a live yeast

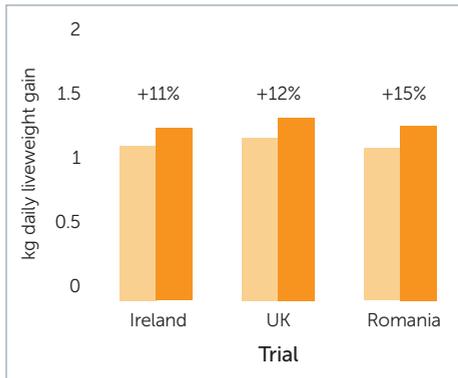
Optimising rumen function

The rumen is the main stomach in adult cattle. It is where many different types of bacteria are present to help break down the fibre, starch and sugars present in finishing diets. The rumen is capable of storing a large amount of material. With beef systems that achieve the highest level of performance, the focus is on feeding this rumen to make it more efficient, getting more results from the overall diet. A healthy rumen is capable of converting finishing diets efficiently into beef production. However, one key challenge faced by the rumen is excess acid, which is created when different feeds are broken down. This acid reduces the pH in the rumen and can cause issues such as subacute ruminal acidosis and acidosis. (Image 1 is an example of where the rumen lining has been eroded due to excess acid). As a result, the bacteria in this rumen slowed down, and utilisation of the diet was reduced. In such a case, the farmer will notice loose manure and cattle that are off their feed and not performing to their full potential.

To date, 2021 has been somewhat a different year for beef finishing enterprises. The challenges of inclement wet weather in May delayed the turnout of animals, affected silage quality and overall yields. There is also the issue of increased animal feed costs. These challenges emphasise the importance of knowing your farming system, and careful planning for the forthcoming winter has been heavily highlighted. With cattle soon arriving indoors for finishing and the autumn sales beginning to gather pace, the attention on most beef farms turns to achieving the best level of animal performance at the least cost.

Many beef finishers have recognised that to maximise animal performance during the finishing period, newly arrived animals need to adapt to their new environment and diets as quickly as possible. Cattle coming home from marts or even coming from pasture and going indoors for finishing are subject to many different stress factors, such as weaning, mixing with new groups, new surroundings and changes in their diet. If these factors are not managed correctly, animals will not reach their full potential, resulting in a longer finishing period and higher feed costs.

One of the main challenges during this arrival period is getting cattle started on a new diet and contending with issues such as poor rumen health. To reduce these issues, greater emphasis needs to be placed on nutrition and management throughout the finishing period.



Control
YEA-SACC

- Teagasc Research Centre, Grange, Ireland
- Harper Adams University, UK
- Institute for Ruminant R&D, Romania

Looking for the extra +10% performance

Alltech has been providing nutritional solutions for more than 30 years, and the addition of their product Yea-Sacc®, a live yeast culture, has been proven to optimise rumen health, leading to improved levels of animal performance. Yea-Sacc allows animals to settle on a diet faster, helping to maintain a healthy rumen. Through extensive scientific research, it has been proven to help maintain a stable rumen pH while promoting consistent feed consumption. Creating a stable pH allows the rumen microbes to work more efficiently (Displayed in Image 2). It has also been shown that Yea-Sacc increases the number of fibre-digesting bacteria, which leads to additional energy being extracted from the diet. The inclusion of Yea-Sacc in the finishing diet gives animals the best opportunity to fulfil their potential. The quicker adaption onto the finisher diet improves daily gains and reduces the days to slaughter. Numerous independent studies have been conducted by Teagasc Grange and Harper Adams, where results showed consistent improvements in daily weight gains by 11% (Fallon et al., 2003). The consistent results across all studies show the reliability of Yea-Sacc, and it can be the final addition to your diet to ensure your animals are performing at their highest capabilities. Further studies in Harper Adams have revealed that animals fed Yea-Sacc were brought to finish 21 days earlier than the control animals (Marsh et al., 2005).

References:

- Marsh, S. P., Kneale, C. M., & Wilde, D. Effect of yeast culture (Yea-Sacc1026) on the performance of cereal fed beef cattle.
- Fallon, R & Early B. Effect of Yea-Sacc 1026 inclusion level on the lifetime performance of bulls fed on a concentrate diet.



Image 1: Unhealthy rumen wall



Image 2: Healthy rumen wall from a diet including Yea-Sacc®



Leading sustainable growth

James Maloney, Senior Regional Development Executive at Enterprise Ireland, highlights the importance of encouraging collaboration, identifying market opportunities and how sustainability will be at the heart of all research and innovation efforts for the agri-industry going forward.

In times of crisis, Ireland's largest indigenous industry – the agri-food sector – has been a beacon of light. During the financial crisis, food exports were our biggest success story; and now, in Covid times, the strength of our food supply chain ensured that access to safe, nutritious food was not an issue throughout the pandemic. James Maloney points to the importance of this sector. "Ireland's agri-food sector employs 150,000 people (60,000 directly and 90,000 indirectly), while almost three-quarters (70 per cent) of these jobs are located outside Dublin and Cork. The sector spends more than €11bn annually on materials, with over 70 per cent of these materials sourced in Ireland – it is a massive portfolio for us.

The agriculture and food sector has always held its own; it is our 'go to' place when times are tough and, as a country, we rely on it heavily." The big challenge hurtling down the tracks he believes is the climate agenda and all research & development projects will have to address this issue to remain relevant.

Support

James notes that Enterprise Ireland's support for the industry comes in many guises. "As well as funding key projects, we are instrumental in connecting research and development partners, we help identify market opportunities and encourage collaboration, as well as providing mentorship and guidance for business looking to grow. If you look at R&D, Enterprise Ireland has supported many key centres in the country, such as the Meat Technology Centre in Teagasc, the Food for Health Centre in UCD, the Dairy Processing Technology Centre (DPTC) in Limerick, and the Teagasc Moorepark expansion. And we also provide support to companies that are looking to develop their R&D programmes. During the period between 2013-2018 we provided funding of €274 million to clients across the food industry and leveraged €1.5 billion of investment from the industry for expansion, job creation and new innovations.



Irish companies have also had a high success rate in winning European research and innovation funding and will also have further opportunities for food, agriculture and climate projects via Horizon Europe, the €95.5bn EU Framework Programme for Research and Innovation.”

Beyond the funding, James stresses that support is tailored to develop in the specific areas of innovation: “That can be through our research centres, supporting staff or through our own advisory network, led by Tom Kelly, where we can link companies with specialist advisors in the relevant subject to help companies on their innovation journey.”

Innovation

Pointing to some examples of important and groundbreaking projects that Enterprise Ireland has backed, James states: “We recently supported the innovative collaboration between agri-tech company Devenish and Accenture to launch a sustainable farming initiative that will accurately measure on-farm carbon emissions and, uniquely, carbon sequestration. This project – Agrinewal – is projected to enable over five million tons of carbon to be sequestered by 2030 and Enterprise Ireland has provided €400,000 in funding. Meanwhile, through our Regional Economic Development Fund (REDF) in UCD we provided funding of €3 million for the AgriTech Centre of Excellence. We have also supported the FoodWorks programme in Ashtown with programme applicants eligible for a €35,000 feasibility study.” While Enterprise Ireland’s remit is not to fund the primary producer, its work indirectly impacts the farming community daily. “Outside of driving the research and innovation on an academic level, we are working with food companies, machinery companies, services such as Herdwatch, Moocall – all of which indirectly benefits the farmer in terms of their ability to be more efficient.”

Collaboration

Collaboration is another area, he states, that needs to be nurtured. “The knowledge we have at academic level, supported through the Enterprise Ireland research centres, has to filter down through whole value chain, so everyone can understand the importance of reducing carbon emissions. Enterprise Ireland’s new Climate Enterprise Action Fund supports Irish companies to build the capabilities required to deliver sustainable products, services and business models. We are also currently helping Bord na Móna with its transition from brown to green. Location, energy sources and access to talent are key issues for foreign direct investment (FDI) in food and this has to be looked at if we want to attract more FDI for the sector.”

Dairy expansion

The big question that keeps raising its head, James says, is should we be supporting dairy expansion? “We have a lot more to learn at every level and the narrative has to change. This has become an issue, particularly in the dairy sector, because in

Ireland it’s one of our larger industries. But there is lots of great work being done on increasing efficiency in the sector through genomics, pasture management and technology and this needs to be highlighted. We have to keep looking at how Irish farms are sequestering carbon and understand the ways we can produce food more efficiently. This is so important for our agri-food sector. Irish farmers and Irish companies in this sector know they have a challenge ahead, but I think they are already moving forward to tackle it.

“Our ethos has always been to produce more – more milk, more cheese, more butter; and we worked on low margins. For solutions to climate change, we have to look at how this economic system has been set up and the drive for cheap food. Will that have to change in a carbon economy? Can we simply be more efficient than we are currently? We will all have to work closer together to meet these challenges – right across the value chain and the economic benefit will have to be shared by all.”

Enterprise Ireland can support companies that employ 10 people or more and have an export focus. Its teams of mentors and advisors are on hand to offer guidance and consultancy and can oversee a feasibility study for potential business development. Companies can also apply for grant support towards the cost of hiring a Green consultant/trainer to undertake a short in-company assignment. For more information, visit www.enterprise-ireland.com

A new era

At the time of our interview, James had just finished judging for the Enterprise Ireland Innovation Arena Awards 2021. “We had 55 applicants, and shortlisted 28 which we interviewed over three days. We were really impressed with the entries. A strong theme we are seeing is a concentration on how we can benefit more from our natural resources.

There is a huge interest in seaweed and how it can be used to reduce our reliance on chemical fertiliser and there is some really good science there. There are engineering solutions for measuring carbon, with complex satellite systems using LIDAR; and a focus also on food waste, as well as exploring ways that businesses can be more lean. Meanwhile, traditional engineering companies have developed their machines to see how they could be re-designed to make them more efficient and safer using less inputs and materials.”

High on the agenda for most entries was related to the next phase of CAP and where we will be in ten years’ time. “I believe there will be a very big shift in the coming decade and the change will be a lot more rapid than developments that we have witnessed before. It will be accelerated and we all need to work together and be prepared for what is coming down the line.”



A new Dawn

Dawn Farm Foods secures funding for innovative food-related software development, which will predict human sensory quality attributes of food products for taste, health benefits and food waste reduction

A research and development partnership between Dawn Farm Foods, Crème Software and University College Dublin's digital development hub, CeADAR, has secured €1.87m from the Disruptive Technologies Innovation Fund. The funding will be invested in development software used to predict human sensory quality attributes of food products for taste, health benefits and food waste reduction.

The project will use sensor technology to create a digital connection between the consumer, the food scientist and the factory floor to enable real-time product development in a cost-efficient and sustainable manner. This platform aims to reduce the new product development cycle by at least half, transforming how the food industry can accelerate development in a way that reduces food waste and energy and water usage. Here, Conor Cahill, head of science and innovation at Dawn Farm Foods, explains the applications and outcomes of this new software.

It's a smart, sensory-based, new product development (NPD) platform tool. Consumers are looking for healthier and more sustainable food products using natural ingredients with less additives or processing aids. Achieving this outcome can be difficult and technically challenging in a manufacturing environment. All food ingredients are naturally variable, both physically and in chemical composition. In any prepared food manufacturing setting, it's the transformation of these ingredients during processing that is crucial to

determining the finished quality of that product.

The software will connect the sensory science of taste, flavour, colour, aroma, and texture through using quantitative rapid sensory analysis with data collected from in-line sensors in our manufacturing environments. This connection between the sensory science and the factory floor will enable our team of food scientists to develop new, healthier, more sustainable products, better tasting products. To date, companies use data to drive production efficiencies and performance. This application will seek to create a connection to the factory floor using affordable and reliable sensors that will enable a real-time digital twin factory in a cost-efficient and sustainable format.

The project aim is to use recent advances in digital technology to connect our large banks of sensory data from a slice of pepperoni or a plant-based mince, sensory data that is linked to consumer preferences. This new approach will be transformational to the food industry. While the idea of the internet of things and smart machine learning has been around for a long time, we are now taking advantage of this technology by connecting the factory to our sensory platform in real time.

Our team of food scientists will use this platform to develop product formulations and production processes based on the sensory feedback we receive from our customer: This smart machine learning tool will look for insights between the sensory data collected to understand



SIGNPOST

Farmers for Climate Action

The Signpost Programme is a collaborative programme to lead climate action by Irish farmers and support the transition towards more sustainable farming systems

The main objectives of The Signpost Programme are to:

- Reduce greenhouse gas emissions
- Reduce ammonia emissions
- Reduce nutrient loss to the environment and contribute to improved water quality and biodiversity
- Save farmers money and improve efficiency of production systems

Open the camera on your phone & scan the QR code to find out more!



The Signpost Programme is a collaborative partnership of farmers, industry and State Agencies, working together for climate action.

For further details of the partners please refer to
www.teagasc.ie/signpost



The Disruptive Technologies Innovation Fund was established by the Irish government in association with Enterprise Ireland under the National Development Plan in 2018 to invest in research and innovation in life sciences, medical devices, ICT, AI, manufacturing, and environmental sustainability. Its purpose is to drive collaboration between Ireland's world-class research base and industry for the development and adoption of new technologies.

what the optimum settings required are to deliver a set of new recipes that will result in a new low fat pepperoni or a new plant-based mince.

If we successfully connect the sensory data to in-line sensory analysis, the artificial intelligence tools within the software platform will be able to tell us the optimum and precise cooked programme that will deliver a particular texture, colour or even flavour to strict set of sensory parameters while maintaining the highest levels of food safety and confidence in our process. This approach will reduce the time it takes to deliver new product innovations by up to 50 per cent while reducing energy use, water use and food waste.



This will offer new and innovative solutions based on production data, sensory data linked to the latest insight-led R&D, and innovation based on the latest consumer trends.

This will mean that intelligent devices, both in our sensory R&D lab and in our manufacturing environment, can share relevant insights with each other from the start to the end of the process. Ultimately, it allows you to test multiple scenarios for new products and new recipes, enabling us to create products that historically could have taken years to develop. Now, we will be able to do it in a matter of months using this machine learning tool.

This self-learning design tool will offer new and innovative solutions based on production data, sensory data linked to the latest insight-led R&D, and innovation based on the latest consumer trends. This software tool will do the analytics for you, enabling real-time idea generation and recipe selection. The software will give our experienced team of food scientists deep insights and guidance on how to formulate recipes, run virtual factory simulations that consider the needs of all the stakeholders, from raw material selection to what are the likely sensory outcomes for that product formulation when it's cooked on a pizza, in a sandwich or as part of a meal at home.

If you want to develop a new beef steak strip and your consumer preference is for a particular tenderness and grilled appearance, our team of culinary and food

scientist will select the required sensory attributes based on the feedback from this software tool to deliver a more reliable outcome when the product is taken to the factory for trials. Dawn Farms has a 30-strong team of food scientists and researchers, and culinary expertise with a strong focus on functional and sustainable food innovation. This sensory-based platform is very exciting for our teams: by lowering product development costs, our teams will be able to run multiple new product scenarios to see how each might perform or behave in a factory environment. This platform will create a closed loop of continuous reinforcement learnings that will predict online production outcomes with a high level of accuracy. Traditionally, that could take months or even years of research. Machine learning is opening the world: computer models deliver intelligence around how your facility works and how it behaves. We believe we are the first in the food industry to use recent advances in digital technology to connect and predict the quality of any finished product. This approach will transform and accelerate new product development using new levels of process confidence, food safety and design capability. This disruptive technology research project will start this summer – setting up the hardware, installing sensors – effectively creating a pilot digital environment, connecting our sensory science database with real-time sensors suitable for a production environment. It will take time to build, test and validate a scalable industrial software platform that will predict human sensory quality attributes. There will be a large amount of data and modelling required to build and teach this continuous reinforcement learning tool the required intelligence that can deliver valuable insights that will be validated by traditional NPD and sensory science.

That is going to take time and we look forward to working with our partners on this journey.

The intellectual property likely to emerge from this programme is a patentable knowledge around using process sensors to predict human sensory outcomes. If successful, this disruptive innovation will ensure any food business will be in a position to develop similar models based on their own data sets and conditions.

We are delighted to be partnering with Crème Software and CeADAR on this pioneering work. The food sector is operating in a dynamic market and the smart combination of culinary science and technology is the optimum way of bringing safe, great tasting and sustainable food to our customers.



Kerry's Global Technology Innovation Centre is a hotbed of ideation and innovation. Here, Therese O'Rourke, European Chief Technology Officer at Kerry's Global Technology Innovation Centre, outlines some of the work taking place at, what she calls, the engine of the organisation.

Located across 30 acres in Naas in Co. Kildare, the centre houses 20 collaboration spaces, 14 labs and six suites where it brings together Kerry's taste and nutrition technologies and expertise. We work with combined technologies from all across the world and work out how to apply it to different areas. For example, we may acquire a strain of probiotics in Canada that is used in pharmacy tablets and then we can use a whole suite of other technology and ways of working to bring that into different areas, such as an addition to your soft drink. We like to say that our Naas facility is where innovation meets enterprise.

I lead our Development and Applications (D&A) and our regulatory teams. The D&A team works with our customers to create the next innovative food, beverage or meat product; our regulatory team is charged with helping us to anticipate changes in the regulatory landscape. One of the areas that I lead is around customer innovation: taking our existing technologies – such as protein or taste/flavour – and combining them to help our customers evolve their end-product.

Our industry has really evolved in the past couple of years and its being driven by millennials and the younger generation who are looking for new experiences. They

have a heightened awareness around how food and beverages are made, and of the organisations that make these products. That consumer is demanding lots of different things. First and foremost, that the product tastes amazing. They are looking for the authentic, for the multi-sensorial. They want it to give them some physical benefit, to enhance their immunity or bulk up their muscle. These consumers are increasingly curious around the origin of ingredients, that they are sourced close to where the product is made and consumed, so provenance is becoming more important. The product must look great when it's on a plate because it will go on social media. It needs to be cool enough that you want to be associated with that product. At the top of that staircase of demands is purpose and sustainability. To meet these consumer needs, our customers are looking for partners to help them create products that taste great, are good for you, look great in a final build or final beverage and have really strong sustainability credentials. A customer will ask us how they can evolve their food, their beverage, their meat product to meet the evolving needs of this consumer and our teams are involved right from the start, working with their marketing insights team and creating the first kind of ideations concept. Our teams can replicate the manufacturing processes of our retail clients and 'back of house' processes of our food service customers on a pilot scale to make a beverage or make a burger.

Seeds of success

In a recent visit to our 'meat' lab, I was presented with what looked like hamburgers and chicken wings, rashers and chicken pieces. In reality, there was no meat in

HATCHING A PLAN

Like many organisations, one of our global customers, Bimbo, has a major focus on sustainability. The company has committed to using only eggs from cage-free birds. Those eggs are more expensive, so the challenge was becoming a purposeful company in a way that is economically viable. Through our scientific capability, we worked with Bimbo to reduce their usage of eggs. By using less, there's no net impact in the cost. Egg plays a particular function in a product such as a doughnut: it's a

binding agent and it adds texture and we were charged with replicating that in a sustainable, clean label, low-cost way. Our enzyme team worked with our application team to reformulate the doughnut using a reduced level of egg, without compromising on that tasty spongy experience that we all love. It was a clean label solution, so they didn't need to declare anything different on the pack. Following this reformulation, Bimbo called us out as one of their core innovation partners globally.

what was being presented to me, but it looked, it tasted, it felt like meat. The team had created the burger patty in the 'full build' so I can consume it in the way I would at McDonald's.

Everything that makes meat taste great is due to its animal origins: the succulence of a burger, the marbling of fat, the flavour of roast beef. Our teams have the technical depth to recreate that eating experience without the meat. They understand how to mimic that and bring it together with our plant-based protein using our masking capability.

One of the challenges in the plant-based area is these plant proteins don't taste very good, and consumers are looking for plant-based proteins that are allergen-free. Wheat is an allergen, as is soy and it brings with it environmental considerations around deforestation. Pea protein is good in terms of its nutritional profile, but it's quite challenging on taste. Our taste team works with the application team to create a blank canvas and then adds in the beefy note, the succulence, that umami, all the great stuff that we love about a burger.

Benefits in kind

The Covid-19 pandemic has increased the interest and curiosity in foods with benefits. At Kerry, that's been a huge accelerator for our proactive health business, which

encompasses some of our key immune-enhancing brands and digestive health enhancing brands like Wellmune® and Ganeden BC30™.

A leading global tea brand was looking for new innovative health and wellness solutions to put into their expanding range of functional teas. The concepts had to fit with global market trends using ingredients with science-backed research to offer them a strong consumer message that would help them win in this space.

The customer chose us as their key innovation partner to help them develop a tea that would support healthy digestion. Over a 12-month period, our technical teams worked together to develop a tea containing Kerry's Ganeden BC30™, a probiotic that is scientifically proven to help support digestive health and the immune system. Tea was a new application for our ingredient and our technical teams worked together to come up with innovative ways to overcome challenges such as ensuring the probiotic could be retained within the teabag itself and to ensure it retained its stability when hot water was poured on the teabag! Our customer launched six new products across two markets with many more launches planned. Our customers want partners who can help them get products to market fast and then replace them with the next bigger and better product, and that is what Kerry can offer them.

ASA CONFERENCE 2021

Science: Driving Innovation and Addressing Challenges in Agri Food

Save the date

10th September 2021

Live streamed from The Killashee House Hotel.
Details of line up and registration to be released mid-August

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Kevin Moran

The clover journey

Matt O’Keeffe reports on the innovative farming methods underway on two farms that participated in the recent IGA Summer Tour, backed by AIB.

Kevin Moran farms at Caherlistrane near Headford in Galway. He has been farming and milking cows since 2013. Working with a combination of long-term leased and owned land, Kevin has built up a herd of 270 cows. The overall farm stocking rate is 2.57 LU/hectare. The farm is managed to maximise milk output with all replacement stock contract reared from 3 months of age until the point of calving. The priorities on the Moran farm include achieving a high labour efficiency and delivery on both environmental and economic key production indices. There is ample cubicle space for the cows on the farm with 330 cubicles in place. A 44-point rotary parlour ensures that the milking of the 270 spring-calving cows is carried out efficiently from both time and labour perspectives.

Impressive figures

Calving efficiency is excellent by any standards with the calving interval at 363 days, six-week calving rate of 98 per cent, an empty rate of 8 per cent and a tight calving season of eleven weeks. When the Irish Grassland Association ran a webinar, as part of its Summer Tour, from the Galway

farm in late July the herd was still performing well. Milk yield stood at 22 litres with butterfat of 4.51 per cent and protein measured at 3.7 per cent. Total milk solids were 1.86 kgs per cow per day. Despite the heat-restricted grass growth conditions Kevin was only putting 0.8 kgs of concentrate into the cow diet. The AI season had gone well with 97 per cent of the cows submitted for AI in the first three weeks and the entire herd submitted within the first six weeks of the AI season. Tail painting is the heat detection system and is clearly working very well. Kevin is zealous in his record keeping and has the full data on herd performance since the herd was established. Back in 2016 the milk solids yield per cow was 333 kgs. They moved up incrementally and last year hit 462 kgs. He estimates that the full 2021 milking season will deliver a milk solids yield per cow of 515 kgs. The Galway milk producer has a goal of producing one kilo of milk solids per kg of concentrate per kg of cow liveweight.

Soil fertility

The Moran farm grew 15.6 tonnes of grass dry matter per hectare last year. This most impressive figure is clearly due to attention to detail and investment in soil fertility. Having started out at a very low soil fertility base, fertility has been built up well since Kevin started farming. 96 per cent of the



Sustainability
Programme

Meeting our targets. Then setting new ones.

We're a world leading agri food company with sustainability at the very core of our business. With a strategy that stretches from the farm gate to the dinner table we are proud to have reached our 2020 sustainability targets ahead of schedule.

We're also the only meat processor involved in the EIT Food Project, working with over 50 like-minded

global companies to make future food production more sustainable.

Now we're going even further, working towards new targets validated by the Science Based Targets Initiative (SBTi) to fully align our sustainability strategy with the global climate change goals set out in the 2015 Paris Agreement.

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farm is now at optimum pH. Optimum P has been achieved on 89 per cent of the farmland and 81 per cent of the farm is at optimum rating for K. Those figures are the basis for such high productivity. 219 kgs of nitrogen were spread per hectare last year and a new innovation was introduced. Kevin began incorporating clover into the swards with the ultimate aim of having a significant clover presence across the farm in the coming years.

Kevin Moran rationalises his approach to clover inclusion in the sward: "My aim is to have a sustainable milk production system here, both from an environmental and economic viewpoint. If I can reduce the carbon footprint of milk production on the farm that should deliver both an environmental and economic return. With clover there will be less N fertiliser spread and that lowers the carbon footprint. The introduction of clover and any negatives associated with it are outweighed by the positives. We are perfecting the incorporation methodology. We have made mistakes, such as some paddocks, post clover incorporation, being hit by drought, so that the clover seed did not establish. But that can happen with any reseed. Over-sowing into the grass sward will continue to be the main incorporation strategy. It's quicker to get the clover established and adopting a large-scale sward renewal programme wouldn't be practical for me. Especially as the grass swards are fresh, clean and productive. We have found the best approach to clover establishment is to sow the seed in April/May, add granular lime and ensure that the soil fertility status is high. That's very important."

From Galway to Cork

Virtual bi-location allowed the IGA to continue its Dairy Summer Tour 200 kms from the Moran farm. The IGA Dairy organising committee split its resources to deliver a farm profile from Roscarbery immediately after the broadcast from Headford. The theme of clover inclusion was again the main item on the agenda. John Joe O'Sullivan farms with his son Andrew in West Cork and has had some clover-rich swards on his farm since he began farming in the 1970's. John Joe outlined his approach to both establishing and maintaining clover in his swards: "Clover is unforgiving in its establishment. Either you get it right or it won't grow. The pH needs to be in excess of 6.4 so well limed soils are a necessity. Lime is applied annually as needed. The P and K indices also need to be right for clover to thrive in the sward. It takes two years for the full benefits of clover seeding to be fully seen. Clover-rich swards need a lower nitrogen input than pure grass swards. High N impacts on the clover content and its survival. Another critical aspect of managing a clover-rich sward, as we see it, is to graze at lower covers in year one, say about 1100 kgs. That's to allow the new clover plants to establish and compete with the grass."

Sward management

In line with Kevin Moran's practices, John Joe O' Sullivan believes April/May is the best time to renew a sward with clover seeds oversown on the existing grass sward. He also

points out that allowing higher covers of clover/grass to build up is detrimental to the clover content in the long run. Carrying a lower cover into the Winter facilitates higher production during the following season. Attention to clover does not mean undermining the role of grass, as John Joe confirms: "you do need to feed the grass early in the year to ensure plenty of forage is available in early Spring before the clover gets going. It's a balancing act so that neither the clover nor the grass dominates the sward. Both are important to overall productivity."



John Joe O'Sullivan

Cow management with clover

Unusually, John Joe and Andrew run a 12-hour grazing system, using strip fences through the season. This encourages the cows to graze into the sward, balancing the lush clover content with a little stem to avoid digestive or bloat issues. Bloat oil can be introduced where necessary and the O' Sullivans try to ensure that the cows do not go into clover-rich swards too hungry. This helps to avoid excess clover leaf intake in a short time, which could lead to bloating problems.

Innovative farmers

The O' Sullivan herd won the Protein 350 Award 20 years ago, an acknowledgement of the commitment to protein, butterfat and temperament breeding over many years with their British Friesian/Holstein cross herd. A five-year carbon footprint measurement as part of the European Dairyman Study confirmed the fact that the farm lowered its footprint through clover use. On a side note, the beehives on the O'Sullivan farm produce excellent clover-flavoured honey.

Futureproofing

Stephanie Roy at Macra na Feirme outlines the purpose and importance of the Macra Agricultural Skillnet programme, which is upskilling young farmers and helping to create a more sustainable future

Macra Agricultural Skillnet, established by our contracting organisation, Macra na Feirme in 2015 is one of the major networks serving our members, those involved in farming and a wide range of agri businesses. Our purpose is to drive upskilling and sustainability on all levels in the industry. We achieve this by developing and delivering a wide-ranging programme of subsidised training events, further education and development opportunities. Macra Agricultural Skillnet significantly contributes to the work of Macra na Feirme through joint delivery across a range of programmes. The Network supports our Macra na Feirme clubs and regions, our Young Farmer Development Groups and discussion groups in delivering and part funding local training needs which include workshops, information sessions and technical seminars.

We work with private companies to deliver education and training opportunities to as many enterprises in the industry as possible. Among the partnerships we have established over the last number of years are those with the Irish Farmers Journal, Teagasc, ASA, UCD, Irish Grain and Feed Association, UCC and Farm Business Skillnet, where we delivered high impact education and training programmes. Macra Agricultural Skillnet welcomes enquiries on our training programmes from members, member companies and the wider agribusiness sector. The Network can deliver part-funded, specific and bespoke training programmes for the industry and for companies that may not have the capacity to deliver in house training programmes for their staff. Macra Agricultural Skillnet is co-funded by Skillnet Ireland and member companies. Skillnet Ireland is funded from the National Training Fund through the Department of Education and Skills.

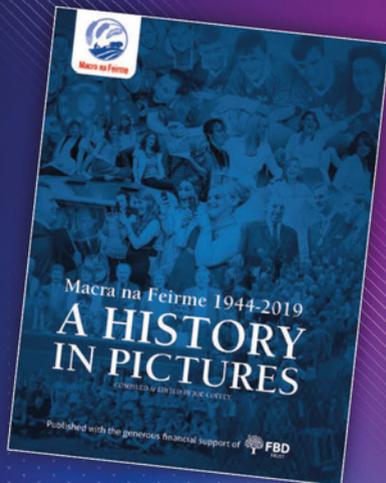
Course Profile

Macra Agricultural Skillnet has partnered with University College Cork to offer a Diploma in Leadership for the Agri-food Sector as a part of the Graduate Development Programme. This programme is designed to meet the needs of SMEs in Ireland in providing sectorally-relevant graduate training programmes that meet the developmental needs of young graduates entering the agri-food sector. This agri-food specific graduate development

programme which leads to a Level 7 Diploma in Leadership for the Agri- Food Sector offers a valuable bridge between University and working life and provides relevant business, management, leadership and professional development skills to young graduates in SME companies, without burdening the companies with the expense of developing an in-house programme. This programme is designed to meet the management and leadership development needs of young agri-food graduates in the first three years of their

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New manager

Lisa Reidy has been named the new Macra Agricultural Skillnet Network Manager. Lisa hails from Nenagh in County Tipperary where her father owns a suckler beef and calf rearing farm. She graduated from University College Dublin with a Bsc in Agricultural Science in 2018, specialising in Food and Agri-Business Marketing. Having completed an internship with Agri-Aware as part of her degree, Lisa was introduced to working in the Food and Agriculture Industry. Lisa joined

Macra na Feirme in September of as the as the Events and Marketing Coordinator. In this role Lisa coordinated all aspects of Macra's diverse range of national events, activities and projects throughout the year alongside maintaining Macra na Feirme's online presence and social media output. During this time, she also spent nine months as Acting Communications and Public Relations Manager as maternity cover. "I look forward to starting my new role as Macra Agricultural Skillnet Network Manager and becoming responsible for its continued expansion, management and development. Our training network plays an integral role in supporting the agricultural industry and provides relevant, current and enterprise led training for young farmers."

working life. Alongside the core technical business skills and best practice tools, the programme will equip participants with motivation and coaching skills that will enhance their professional identity and capability. As a result of this programme, participants will be able to embrace new challenges within their organisation and help to grow and have a lasting impact on their company in this fast-paced industry.

Continuing Professional Development Framework

The Development and Implementation of an Accredited Continuing Professional Development Framework in Agriculture is a 2019 research report funded by Skillnet Ireland and Macra Agricultural Skillnet. The research and report were undertaken by Limerick Institute of Technology and Broadmore Research. The report outlines how a Continuous Professional Development framework in Agriculture could be developed and uses comparisons from other EU and OECD member states of CPD frameworks especially from sole trader or majority single worker/employee industries such as the trades. Within the commissioned research report, CPD frameworks are outlined whereby the CPD entity "certifies" training programmes from any training provider as meeting CPD standards. That entity is also the repository for storing trainee information. Training that is marketed as CPD without a recognised industry framework fails to recognise the value of transferability of skills and employees across an industry. A framework for CPD in farming is deemed necessary and essential to progress any meaningful commitment to CPD for farmers.

Macra na Feirme is encouraging the Department of Agriculture and Minister for Agriculture to convene a broad stakeholder forum as outlined within the commissioned research report with the aim of seeking stakeholder input into the formation of a CPD Framework body. The formation of a stakeholder group is the recommended next step to further explore an appropriate framework.

Testimonials

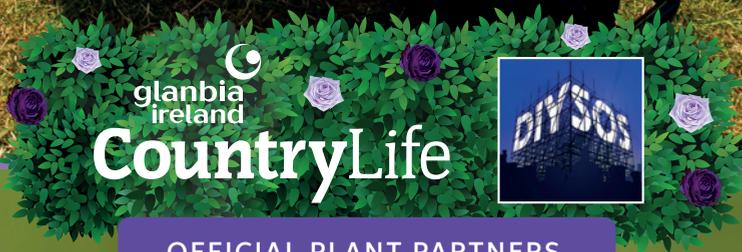
Audrey Reyburn, AI course

Some people may have thought I was a bit strange deciding to train as an AI technician, as this career path couldn't have been further away and more different than my current profession as an Intellectual Disability Nurse. However, over the past three years I had recently established myself as an Easycare Sheep breeder and I felt I would like to develop practical skills relating to my farming life. I developed an interest in ultrasound scanning and wanted to train as a technician. After doing some research into the course I discovered that I needed to complete Artificial Insemination training before I could progress to train as an Ultrasound Scanning technician. From my initial contact with Dunmasc Genetics, to enrolling with Macra Agriculture Skillnet and participating in the AI technician training the process couldn't have been smoother. The course duration was 5 days – one-day theory and the rest practical. The training group was small, 12 participants in total, which was great as our trainer Stephen Dowling and his assistant Sean were able to give individual support and advice when needed. There was a relaxed atmosphere whilst training and always time for a laugh too! Although I was the only female participant, on that specific training, I felt very much included. Stephen presented the theory content of the course online in a well-balanced way, between information and diagram format and encouraged all of us to contribute knowledge from our own farming experience. For the practical sessions, the trainer's demonstrated great patience (as did the cows) to ensure each one of us grasped the technique correctly and gained confidence in conducting our new skill. Animal welfare throughout the programme was always top priority as was the area of health and safety. There were times I have to admit that I found the going tough, as there is definitely a "knack" in the AI technique but the encouragement and support given by the trainers was fantastic. I highly recommend this course as it not only enables you to become a DIY AI Technician but it also facilitates further progression into the field of Ultrasound Scanning and opens up the possibilities to a career in the area of genetics.

WIN A Garden Makeover



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T&C's apply: Winner selected by 21st Nov 2021 and Glanbia CountryLife's decision is final. Prize includes a bespoke garden design, products and plants to the total value of €5,000, along with 2 days garden landscape support. Winners must be available for PR purposes. Full T&C's available on CountryLife.ie.



As a direct result of this course, the farm discussion group Deirí Le Cheile was founded, and a number of successful farm discussion meetings have been held to date.

Fiona Shanahan

Roles for Non-Farming Partners in the Farm Business

I could not recommend the Roles for Non-Farming Partners in the Farm Business course highly enough. I am currently working off farm in a financial role and as a result I have brought these skills with me to the farm business to assist in the financial management of the farm. I am also involved in determining the future direction of our business and life, which are so intertwined when it comes to farming.

This course provided a great insight to the varying roles held by the non-farming partner in the farm business with key insights provided from some non-farming partners with varying levels of experience in this sector. A key outcome of the course was the identification of the important role that non-farming partners hold in the farm business however this role can often be seen as invisible with the non-farming partner more guilty than anyone of not giving themselves enough recognition for the valuable contribution they make.

As a direct result of this course, the farm discussion group Deirí Le Cheile was founded, and a number of successful farm discussion meetings have been held to date. With a broad range of topics such as financial management, effective teams building, developing office management skills and maintaining health and wellbeing being covered off, there is something for everyone seeking to improve their skill set and to bring added benefit to their life and farm business. The most important aspect of this course for me has been the invaluable support network of likeminded women that I have been introduced to which has given me an opportunity to build some trusting relationships which I have no doubt will last a lifetime!

Neilus Horan

Grass Management

I would definitely recommend the Macra Skillnet Grass Management course. The course is a mix of practical and theory and runs over the entire growing season. Through the course, we have improved grass utilisation and we are now feeding higher quality grass and making better quality silage. The cows are producing more kgs of milk solids per cow while we have reduced the meal intake during the grazing season. The farm has become more efficient and, in turn, more profitable.

Nigel Condell

Graduate Development Programme - Diploma in Leadership for the Agri-Food Sector with UCC

As an Animal Nutritionist with Specialist Nutrition I wasn't really sure what to expect from the course, or how it would be relevant to my job. However, I was really surprised with how much we learned that is relevant to what I do, and some of which I'm already doing without realising it, or understanding why I do it. For example, learning more about the LEAN principles of working with a team to collaboratively improve our performance and reducing waste and unnecessary practices has meant my time is now more efficiently spent, and ultimately our clients and the business both benefit. Unfortunately, due to Covid restrictions, the course had to be delivered remotely but even though we were not in a classroom, the interaction between the lectures and students was excellent, access to the lecturers and being able to ask questions were welcomed and encouraged, and they delivered easy to understand material, made relevant to our day jobs and the work we do every day. This course has definitely improved a number of skills that maybe weren't as sharp as I thought they were, improving the quality of my work, greater interaction with clients, and always thinking about the business and ways in which we can build on our successes.



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Jean-Michel Lequin,
Danone, Wexford.
Photograph Nick Bradshaw

Newdelivery

Danone Wexford produces Europe's
first formula milk in a tab format

Food and beverage multinational Danone has launched the first ever formula milk in Europe to be sold in a pre-measured tab and is producing this format innovation at its facility in Wexford, through a manufacturing partnership with Japanese food manufacturer, Meiji. The exclusive memorandum of understanding (MOU) between Danone and Meiji covers the production of this format innovation through which Danone is combining its formula milk recipes with Meiji's patented tab production technology. Jean Michel Lequin, director of Danone's Wexford formula milk production facility, explains: "At Danone, we've seen how in other food categories – like coffee and culinary stocks – introducing portion-controlled and dosed formats has been a game changer for consumers, who look for more convenience and ease. That's why we've worked with Meiji to set up a production line for pre-measured formula milk tabs at Danone's formula milk production facility in Wexford. We believe this format innovation has the potential to revolutionise the formula milk category in Europe." The new formula milk tabs dissolve easily, with one tab equal to one standard scoop of powdered formula. Danone expects the new format will help to cut down on mess when making a formula feed, particularly useful at night-time, and will be a more accurate, convenient and hygienic option. The format will launch, initially in the UK, exclusively via the health and beauty retailer, Boots, under the Aptamil brand with plans to roll it out in Europe in 2022. Danone's Wexford factory is one of the leading manufacturing facilities in Danone's global network, employing 350 people and producing dairy products for consumers in 41 countries. Last year, it became the first formula milk production site in the world to be certified carbon neutral by the Carbon Trust, an independent global

climate change and sustainability consultancy. Speaking about the production of this format innovation in Wexford, Minister of State at the Department of Agriculture, Food and the Marine (DAFM), Martin Heydon said: "Ireland has a strong record in food research and innovation, and this, along with the worldwide reputation of our grass-fed dairy production system, makes it an attractive location for new product development. I'm very pleased that Danone, a global company, chose its Wexford plant as the location to produce this innovative new product."

We believe this format innovation has the potential to revolutionise the formula milk category in Europe."

New standards

Danone is a member of Origin Green, and Danone Dairy Ireland became B Corporation-accredited in 2019 – the first FMCG to achieve the accreditation in Ireland. Certified B Corporations meet the highest standards of overall social and environmental performance; transparency and accountability; and work toward reduced inequality, lower levels of poverty, a healthier environment, stronger communities, and the creation of more high-quality jobs with purpose. Once certified by non-profit B Lab, B Corporation companies are legally required to consider the impact of all decisions on their workers, customers, suppliers, community and the environment. There are over 3,900 B Corporations around the world and Danone hopes to have all its businesses globally accredited by 2025.

Messages:

- ▶ **Steps to overcome drought conditions.**
- ▶ **Nitrogen: apply the 2nd last application, but use it wisely!**
- ▶ **You must reach target grass covers in August.**
- ▶ **This year should be a big August reseeding year.**
- ▶ **No/Low antibiotic use; the next 5 months vital in dealing with Mastitis.**
- ▶ **How can I be good to myself? No one else can control!**
- ▶ **Achieving replacement heifer targets delivers profit. Weigh them!**

Overcoming Drought

- ▶ Some parts of the country are suffering near drought conditions after recent dry, extremely warm weather.
- ▶ How do you define drought?
- ▶ The Farmers Journal every week, give the “Soil Moisture Deficit” for all areas around the country.
- ▶ At levels between 50-75mm, grass growth is restricted, but new research shows that it sets in at lower levels on light soils. Above 75mm drought conditions exist where no growth takes place. The recent high temperatures will have pushed many farms towards drought conditions.
- ▶ This information should be used to size up the growth potential of your farm and the actions you need to take. PastureBase is proving very accurate in predicting the following week’s potential grass growth.
- ▶ What should you do to compensate for poor growth due to drought? Measure grass twice every week.
- ▶ What to do! Keep grazing out paddocks until all grass is nearly used up.
 - ▶ This overcomes the dilemma as to the length of the drought and the steps you need to take to overcome it.
 - ▶ It ensures that no grass is wasted by leaving too much grass post grazing or in dung-pads or by wilting/decaying away in dry weather. Also, if you have “saved” a bank of grass and the rain comes it “rots” fast so that you lose a lot of grass.
 - ▶ Also, because there is a void for grass when rain comes, you can then feed meal/silage as a supplement.
 - ▶ But how do you extend rotations when grass is getting scarce until the rain comes?
 - ▶ Feed more meals, the amount can be calculated based on the amount of grass you have but it could rise to 3-6 kgs, or even higher. Research at Moorepark last drought showed dairy ration and soya hulls to be best.
 - ▶ Where high meals are fed (4kgs), feed a 16% protein ration.
 - ▶ Feed maize (some farmers may have it) as it would be ideal with grass.
- ▶ Graze silage ground. Think of zero grazing silage ground from an outside farm (cheap).
- ▶ If grazing silage ground (heavy covers) pre-cut it. Only cut one day’s feed at a time, being very careful to estimate the quantity made available to herd for the day. Remember a cow will eat 18 KgsDM per day and from this you calculate the herd demand.
- ▶ Feed baled silage where silage is plentiful. If it is very good, milk yield and protein will decrease very little (Moorepark).
- ▶ Reduce stocking rate now, if you have too many cattle sell them now, as it will reduce the demand for grazed grass now and winter feed later on. Cows not in calf fall into to this category also.
- ▶ What might seem a rather radical suggestion would be to go on once per day milking (OAD), as it reduces the demand for grass/feed, cow body condition will improve, milk yield will decrease 26% (MS/cow decrease by 20%), and work load will be reduced.
- ▶ Should you apply Nitrogen?
 - ▶ Yes, if some grass growth has taken place since last nitrogen was spread (20-35 units of CAN would be advised).
 - ▶ No, if little or no growth occurred since last spreading - soil moisture deficit of over 60mm.
- ▶ When the drought is coming to an end with the arrival of rain, and this is very important advice, it is then you need to be very pro-active:
 - ▶ Apply N immediately, remembering that it will take 3 weeks to have adequate pre-grazing covers.
 - ▶ So, you must continue feeding meal/silage so that the rotation is 30 - 35 days.
 - ▶ If you don’t do this you will have to house stock in Sep/Oct, which could put pressure on winterfeed stocks.
- ▶ Some of the suggestions made in this section will be appropriate for anyone who is “tight” in grass. Refrain from topping, as grass shortage means paddocks will be well grazed out. A few seed heads may look bad but in an overall context they have no adverse effect.
- ▶ **Water availability** is essential for animal welfare and performance:
 - ▶ Water is the animals’ most important nutrient,
 - ▶ When temperatures increase from 18 to 30 degrees celsius, water consumption increases by 29%,
 - ▶ Cows provided with shade during summer consume 18% less water per day,
 - ▶ Cows will drink at least 5-6 times their milk yield per day, more if eating meal or very dry roughage,
 - ▶ Limiting water availability severely and rapidly depresses performance,
 - ▶ Drinking rates vary from 1 to 3.5 gallons/minute,
 - ▶ As cows consume water up to 14 times per day it is important to have water available within 300 meters and it should be available at or near milking parlour.

Use Nitrogen Wisely

- ▶ Now is the time to take stock of how much Nitrogen you have used so far this year relative to what you are allowed to use. Overuse will result in penalties.

Stocking Rate/Year		August	September	Total for Year	
Kg/ha Organic N	Cows/ha	(units/Acr)	(Units/Acr)	Kg/ha	Units/Acr
155 - 170	1.82 - 2.0		14	164	133
170 - 180	2.00 - 2.12		20	192	155
180 - 190	2.12 - 2.24		28	216	175
190 - 200	2.24 - 2.35	26	20	250	202
200 - 210	2.35 - 2.47	28	28	275	223
211 - 250	2.47 - 2.94	25	18	242	196

Table 1: Recommended Rates of N for Different Stocking Rates

- ▶ Study Table 1 and decide what level of Nitrogen you can use for your own farm.
- ▶ Farmers stocked at less than 2.24 cows/ha should only put on Nitrogen once, late August, over the next two months. All other farmers should apply 28 units/acre in August (protected Urea). Response is much better in August.
- ▶ This Nitrogen should all be blanket spread as there is no reduction in grass yield for August – September blanket spread applications.
- ▶ The August Nitrogen should be applied early in the month as you will grow 10-15% more grass because growth rates are higher early in the month than late August. If you have some clover in the sward and you want to encourage its contribution to grass growth, reduce the nitrogen rate to half in those fields. If you have a lot of clover in the sward do not apply any N until mid-September (30 units/acre)

Period	Grass Grown (kgs)	No.Grazing's	N/ha (kgs)	Meal (kgs)	MS/cow sold
1 Jan -10 April	1450	1	85	210	105
11 April - 1 June	+ 3800	+3	+75	+70	+110
2 June - 5 Aug	+ 4500	+ 3	+ 40	+ 70	+ 110
6 Aug - 1 Dec	+ 5350	+ 3	+50	+ 150	+ 150
Totals	16,000	10	250	500	480

Table 2: Moorepark Roadmap to Increase Grass Utilisation: Self-sufficient farm stocked at 2.8 cows/ha, Utilising 13tDM/ha.

- ▶ It is time now to review how your grassland management KPI's compare with Moorepark targets to the 5th August (Table 2) so as to grow 16tons DM/ha, spreading 250kgs N and feeding 500 kgs meal to produce 480 kgs MS/cow.
 - ▶ To achieve this standard, you must have the following by the 5 August:
 - ▶ 10,650kg DM grown = 67% of annual amount.
 - ▶ 7 Grazing's complete = 70% of annual amount,
 - ▶ 200kgs N used = 80% of annual amount.
 - ▶ 350 kgs meal fed = 70% of your annual amount.
 - ▶ 330 kgs MS/cow sold = 69% of your annual amount.
- ▶ Use the percentages to extrapolate your yearly achievement from your present figures.

Reach Target covers by building grass in August

- ▶ To make “real money” you must rely solely on grass to feed

cows, which is a big challenge in autumn as grass growth decreases relative to demand.

- ▶ The following target covers (kgs DM) per cow must be achieved:
 - ▶ 1st August 200
 - ▶ 15th August 300
 - ▶ 1st September 400
 - ▶ 15th September 450
 - ▶ 1th October 400
- ▶ Grass build-up starts in August:
 - ▶ In the South on 10th August
 - ▶ In the North on 15th August.
- ▶ Rotation length must be 24-26 days in August.
- ▶ Build up farm cover by increasing grazing rotation to 30-35 days from mid September on.
- ▶ The following possible ways to build up grass should be applied:
 - ▶ **Reduce stocking rates** by taking away calves or cattle, selling cull cows, drying off very poor yielders. Stock cows at 2.9 cows/ha for grazing.
 - ▶ **Reduce 2nd cut silage** (particularly if you have enough pit silage)
 - ▶ **Introduce meals** (expensive option), but will be necessary at high stocking rates. A grass budget will tell you when to start but early rather than too late. An alternative to meal is to feed good quality round bales and this is the preferred option for high stocked farms.
 - ▶ **Apply more nitrogen** (stay within your limits) in August as you get a better response than in September.
 - ▶ **Graze out** pastures well (3.5-4.0 cms) as there is a temptation to leave too much after each grazing in August.
 - ▶ Set up a ‘3rd cut-graze’ bank of grass.
 - ▶ Protect **regrowths** 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; ‘3rd-cut-graze’ because:
 - ▶ It brings in a bank of high-quality grass for grazing in September.
 - ▶ Allows you use 2-3000 gallons (16-24 units N) of slurry per acre on it at closing, saving bag N.
 - ▶ Allows you put on 55-65 units of Nitrogen (discount the slurry N) to cover the 6-week closed-up period and the extra Nitrogen 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 set aside 10-15% of the farm for this purpose by stocking the cows at 2.9 – 3.0 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 6 weeks and it should result in 7-10 days grazing in late September.
 - ▶ An interval of 3-5 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, 40-45 kg DM/day, it will not be necessary to do any of the above to build up grass. It will happen naturally.

Reseed - early August

- ▶ With plenty of winter feed made this year, and Nitrogen restrictions coming, it is an opportune time to reseed underperforming fields.
- ▶ Reseeding with perennial ryegrass, even though costing €250-300 per acre, will pay for itself in 2 years by growing much more quality grass.
 - ▶ You will have more spring and autumn (500-800 kg DM/ha).
 - ▶ You will grow 3ton/ha more grass compared with old grasses, worth €500 per year more profit per hectare.
 - ▶ Silage quality will be 5-8DMD units better,
 - ▶ Less stem/seed-heads and topping during summer.
 - ▶ New grasses respond 25% better to fertiliser than old grasses.
 - ▶ At high stocking rates, trials have shown an increase of 7.7% in milk production with perennial swards over old permanent swards.
 - ▶ The return on money invested in reseeded is 96%.
- ▶ Every day extra you keep grass in the cow's diet is worth €2.80/day in profit.
 - ▶ Perennial ryegrass is the best way to grow more grass in the shoulders of the year.
- ▶ Reseeding must be done in August:
 - ▶ September is too late as it results in weed grasses dominating with poor perennial establishment (50-80% of the sown grasses)
 - ▶ Clover will only prosper if sown in August.
 - ▶ Anecdotal evidence of Sept/Oct reseeds doing well is false because even weed grasses look green.
- ▶ It is important to do the job correctly and the following must be adhered to:
 - ▶ Kill off old grasses and weeds with Round-up/Gallup,
 - ▶ Leave for 6-7 days before eating off or baling and then ploughing or tilling with one or two pass system, leaving a fine, firm seed bed by rolling prior to sowing (neglected in most situations)
 - ▶ Apply lime, up to 3 tons/acre, (required Ph is 6.3-6.7) if necessary and 3 - 4 bags 10:10:20 (more if Index 1) plus 1 bag CAN before sowing.
 - ▶ Sown the seed, only 1cm deep if clover included, lightly chain harrow in or use a ring roller, but it must be rolled after sowing.
 - ▶ Watch out for pest attacks in autumn sown crops, particularly, slugs, leatherjackets, frit fly, and rabbits.
 - ▶ Spray for weeds, particularly docks with clover-safe spray 4-5 weeks after sowing when the docks are the size of a 20cent piece.
 - ▶ Graze early, at 600-700kg DM/ha, and often to promote tillering. It would be a good idea to roll again before this grazing to prevent pulling by stock.
 - ▶ Being a bit old fashioned, but from experience, and where there are no stones, I favour shallow ploughing (less than 15cms).
 - ▶ The next big decision is which varieties of grass to sow,
 - ▶ It is best to take independent, professional advice on this as it is an investment that will influence your profit for the next 10-20 years.
 - ▶ In principle, put in 3 varieties and clover for grazing mixes, and even in silage ground being cut twice.
 - ▶ Sow 14-15 kgs/acre to ensure thick establishment,
 - ▶ James Humphreys, Moorepark/Solohead suggests the following:
 - ▶ Grazing:
 - ▶ 5 Kgs Aberchoice
 - ▶ 5 Kgs Abergain
 - ▶ 2 Kgs Abercianti Red Clover
 - ▶ 1.5 Kgs Buddy White Clover,
 - ▶ 1.0 Kgs Aberlasting White Clover
 - ▶ Silage:
 - ▶ 5 Kgs Astonenergy
 - ▶ 5 Kgs Astonconqueror
 - ▶ 3 Kgs Milvus Red Clover
 - ▶ 1.0 Kgs Crusader White Clover,
 - ▶ 1.0 Kgs Chieftain White Clover
 - ▶ Silage (3 - 4+ Cut on outside blocks) Mix:
 - ▶ 9.0 Kgs Astoncrusader
 - ▶ 4.0 Kgs Milvus Red Clover
 - ▶ 1.0 Kgs Barblanca
 - ▶ Why red clover?
 - ▶ Very high production for the 3 to 6 years, delivering an annual production of 13 -16 tons DM/ha
 - ▶ It fixes more than 300kg N/ha (240 units/acre)
 - ▶ But it has a high requirement for P & K
 - ▶ Very suitable for a 4-cut silage system with zero grazing in the autumn.



ICMSA

THE FAMILY FARM ORGANISATION

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IRISH CREAMER MILK SUPPLIERS ASSOCIATION

- ▶ White clovers are more persistent in sward, with a recommendation to oversow every 5-6 years and reseed every 10+ years.
- ▶ Mixes species: I work on the principle of relying on research and 'proven by good farmers' before I recommend a new practice. Therefore, that's my position on 'mixed species'.

Mastitis/SCCs - a serious matter

- ▶ Because we are heading into a no/low antibiotic era for mastitis control now is the time to sort out your SCC issues.
- ▶ Some farmers think this day will never come. Well it is here!
- ▶ Any farmer, and there are huge numbers out there, with herd SCC's over 150,000 is heading for serious control issues.
- ▶ High herd SCC suggests:
 - ▶ Old herd of cows with many problem cows,
 - ▶ Poor milking routine and milking machine working poorly,
 - ▶ No, or inadequate teat dip being used,
 - ▶ Stray electricity (have this checked out)
 - ▶ Good earthing of electric fences.
- ▶ A lot of clinical cases suggests:
 - ▶ Chronic cows (cannot be cured)
 - ▶ Milking machine problems (pulsation, poor reserve, bad liners, etc)
 - ▶ Poor milking routine (too rough with cows when taking off clusters)
 - ▶ Stress (examine all aspects).
- ▶ Sorting out the problem involves:
 - ▶ Identifying problem cows,
 - ▶ Identifying the cause of the problem.
 - ▶ Very, very few farmers, who have a problem, keeps records of mastitis.
 - ▶ ICBF have a wonderful data base to help you
 - ▶ Record mastitis cases through the ICBF Annual Events
- ▶ You must fill the clinical mastitis record card
 - ▶ This records the date a cow gets mastitis, the quarter and the type (all vital information),
 - ▶ This is vital if you have employed staff or if you use a relief milker
- ▶ You must get, at least 3 somatic tests done for each cow in the herd every year.
 - ▶ Even now get 2-3 milk recordings done between now and year end.
 - ▶ High SCC cows can be managed differently (a separate mob is very advantageous to reduce the spread) or culled if justified.
- ▶ A sensitivity test may have merit in identifying the type of bug causing the problem.
 - ▶ But sampling must be done very hygienically
 - ▶ Cows must not have been treated with antibiotic (only fresh cases)
 - ▶ Some would argue that this is a wasted exercise because 70-80% of the bugs causing problems during lactation are staph. Aureus and they are hard to kill.
- ▶ Get the milking machine tested again, now.
 - ▶ Little things do make huge changes
 - ▶ Change the liners now at 2,000 milkings.
 - ▶ Worn rubberwear must be replaced

How can I be good to myself?

- ▶ Avoid "work stress" by:
 - ▶ Working a reasonable day length,
 - ▶ Getting involved in community activities,
 - ▶ Meeting and talking to 'positive' people often,
 - ▶ Taking a holiday.
- ▶ A reasonable work day is within all farmers reach:
 - ▶ Milk cows at 8am and again at 4pm, because research says there is no loss of milk if cows are milked at 16 to 8 hour milking intervals.
 - ▶ 13 times per week milking does not reduce milk yield, therefore, don't milk the cows on Sunday evenings.
 - ▶ Get the Farm Relief Service to milk them one other evening per week.
 - ▶ Get contractors/farm relief service to do some general work if you are overworked
 - ▶ You should not be working more than 10 hours per day and if so ask yourself how you can organise yourself.
 - ▶ Insist on a family holiday. On holidays leave the mobile on the 'off' button so that you remove yourself from farm life to a relaxed frame of mind.

Replacement must meet weight target

- ▶ Why?
 - ▶ They will reach optimum service weights,
 - ▶ They will have earlier onset of puberty,
 - ▶ Greater milk production in first lactation,
 - ▶ Every 50 kgs extra first calving liveweight resulted in 300 kgs extra milk in the first lactation.
- ▶ Table 3 lists out the weights of heifers and weight gains

Mature cow Weight	450	500	550	600	650
R1 (6months) Wt.	135	150	165	180	195
R1's ADG** (Kgs/day)	0.57	0.63	0.68	0.73	0.78
R2 Target Weight (Kgs) 18 months old	315	350	385	420	455

Table 3: Liveweight targets (*) for Replacements relative to Mature Cow Weight so as to achieve optimum first-calving weight. (Source:NZ)

* Because most R2's are calving down at 1 year and 11 months, these targets must be 5% better.

** Average Weight gain from weaning to 6 months.

- ▶ Two messages arise:
 - ▶ Light animals must be managed to achieve targets on 1st November,
 - ▶ Heavy, 20+kgs over target must be managed so that so that they do not get too fat/heavy because they will struggle to go in calf and will milk less over their lifetime.
- ▶ The appropriate actions are obvious. Act now.
- ▶ Not only is this message, weight and act, essential for farmers who rear their own but contract rearers must also be checked for this information.

"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change". (Charles Darwin)



DEVOTION FROM THE GROUND UP



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FROM
THE
GROUND
UP



New Landini Series 5 offers versatility and performance

Landini has extended its range with the new Series 5 tractors, offering utilities offer comfort, versatility and performance – with the Landini 5-120 Dynamic model already being nominated as a finalist for the ‘Tractor of the Year 2022’ awards. “With performance comparable to machines in a higher category, the new Series 5 Stage V is perfect both for working in the open field and on the farm, performing any task with maximum efficiency and offering excellent operator comfort,” comments Antonio Salvaterra, Marketing Director of Argo Tractors. “The Landini brand has always been characterised by passion and innovation, which guide us along a path of research and development, designed and manufactured to meet the needs of every farm, with particular attention to the human factor and to style: a winning mix that has led to the Landini 5-120 Dynamic model being nominated as a finalist for the ‘Tractor of the Year 2022’ award in the Best Utility category.”

Three models are available, powered by FPT F36 4-cylinder, 16-valve, 3.6-litre, turbo intercooler engines with Common Rail electronic injection, delivering up to 115 hp. Thanks to EGR/DOC/DPF/SCR technology, the new Series 5 are Stage V compliant, meeting European regulations. The exhaust gas treatment system is integrated under the bonnet, thus safeguarding full visibility from the operator area.

There are eight possible transmission configurations: from the Speed Four 12 AV + 12 RM with mechanical reverse shuttle to the T-Tronic 48 AV + 16 RM with Hi-Medium-Low, hydraulic reverse shuttle and creeper. The Landini Series 5 with hydraulic reverse shuttle can also be equipped with Park Lock, a mechanical

transmission locking device that makes it possible to safely park the tractor even on steep slopes.

The further refinement of the transmissions further increases the efficiency of the tractor in terms of power transmitted to the wheels and lower fuel consumption. The Common Rail system delivers the exact amount of fuel required for reduced fuel consumption and improved performance. Also contributing to savings is the Engine Memo Switch system, which allows the ideal engine speed to be memorised and recalled for the implement in use. The 135-litre fuel tank and 13-litre urea tank ensure a long working range.

To maximise traction and grip, the Series 5 is equipped with Twin Lock, the simultaneous integral locking of the front and rear differentials. The system automatically engages and disengages the differential lock and four-wheel drive, making the operator’s job easier and more efficient. In addition, thanks to the IBS (Integrated Brake System) with oil-bath brakes integrated into the front axle, 4-wheel integral braking is possible, reducing stopping distances by 50%.

The versatility of the Landini Series 5 takes another step forward thanks to the new hydraulic circuit, aimed at greater productivity, which has a flow rate of up to 82 l/min for services and 32 for steering, as well as 35 litres of oil that can be extracted to move, for example, tipping trailers.

Up to 6 hydraulic spool valves are available: 3 mechanically controlled, 1 electrically controlled and, as an option, 2 mid-mounted valves for front hitch and front loader





that can be combined together. There are four types of spool valves (standard, kick-out, floating and hydraulic motor) with versatile and customisable configurations. The optional flow selector allows managing up to 7 hydraulic connectors. Versatility is also ensured by the three types of hitch systems available: mechanical, mechanical with ELS (Ergonomic Lift System), which speeds up headland manoeuvres and increases productivity, and electronic, which can repeat operations and find positions to ensure precision and performance, as well as compensating for the pitching of implements during road transport. The power take-off (PTO) has two speeds, which become 4 on request (540/540E/1000/1000E rpm). The hydraulically-controlled clutch engages the PTO gradually to achieve smooth engagement and avoid abrupt shaft starts. In addition, the PTO has remote controls on the fenders for easy attachment of implements, and the Auto PTO function, available with an electronic hitch, automatically engages and disengages the PTO when the hitch is operated during headland turns. The Total View Slim cab can be rigid or mechanically suspended on two points and, in this case, contributes - together with the suspended front axle - to isolating the operator from vibrations and increasing comfort during transport and at work. The 4-pillar structure maximises the glazed area to provide a 360° field of vision, facilitating work in tight spaces and even at night thanks to up to 10 LED lights. The transparent hatch ensures a full view when using the front loader.

The steering wheel is adjustable and telescopic, the controls are ergonomic and intuitive. The interior is automotive in style, with air conditioning ensuring an ideal working environment at all times. Also included are DAB radio and Bluetooth with integrated hands-free microphone. Satellite guidance, controlled by a convenient touch screen display, allows precise steering management while implement configuration and control can benefit from the ISOBus system. The tractor fleet can also be monitored by the Landini Fleet Management telematics system for efficient control of consumption parameters, hours and areas worked, with a view to improving profitability, productivity and remote diagnostics.



As I pen this month's column I am sitting outside my house and the weather dial on the wall is reading 15 degrees – the exact week before it was reading 29 degrees. I spent that week checking in with farmers and contractors that were harvesting winter barley and the reports were all good. It was frantic on the roads and in the fields with every combine that could move being put in to use. This is going to be a good year for the tillage farmer and it is long overdue. Now temperatures have dropped and we are expecting some rain over the next few days, it will give us all a chance to catch up on some paper work and routine maintenance before it all kicks off again. I have been following with interest over the last two years how the European machinery market has been performing. With factories closing due to Covid-19 and some only operating at half capacity, the findings of CEMA – the association that represents the European agri machinery industry – are very interesting. Each month CEMA carries out a survey of all agri-manufacturers across Europe to see what state the business is in. They look at current order books in factories and look at trends and future business potentials etc. The findings are very positive indeed, with participating factories all reporting record levels of orders and profit projections looking good for 2021. This puts the machinery industry at a 13-year high. The last 18/19 months has seen the machinery industry just take off. In Ireland alone, this year, to date, sees the Irish tractor market up by 27 per cent year-on-year; the loader market is up 61 per cent and the telehandler market 27 per cent. Self propelled are up 19 per cent. I don't have exact combine figures yet, but industry sources are saying it could see the market up 25 per cent at least year-on-year.

While order books are good and demand is strong for machinery, the elephants are in the room. All key materials for machinery manufacturers have almost doubled in prices over the last 12 months for example. Steel has gone from €550 per ton to €1,250 per ton. Rubber is up 67 per cent; copper up 63 per cent. And there is also a shortage of components. This will lead to price increases across the board for farm machinery delivered to the farm gate.

Now the farm machinery industry is in a healthy state both home and abroad and that is good to see, but as I have been saying over the past few months, if you are buying machinery get into your local dealer to begin negotiations asap, ahead of possible price increases as I believe there will be longer lead-in times for machinery delivery going forward.

Meanwhile, as the saying goes, 'the cow and the crop pays for everything' and, with this in mind, beef has hit a eight-year high with €5 /kg being quoted. Sheep is up to €6.50 /kg and the big three co-ops are holding milk prices as we go to press. On the grain front, at the start of the harvest it is looking like prices for green barley will be running around €175 + excluding bonuses, up from €139 last year and straw is running at around €20 to €24 for 4x4s and €60 for 8x4x4 out of the field. We have had a favourable start to harvest 2021 and over the next month, weather permitting, we will be in full swing harvesting, getting in some second cut silage and finalising the hay. So stay safe, clean the machinery daily and run checks regularly: this will hopefully prevent machine fire and damage.

Until next month, farm wisely and farm safely.

Pöttinger launch next generation of Forage Wagons

Pöttinger's new JUMBO 7000 has been designed for maximum performance and efficiency. All the core components have been completely redesigned and engineered for tractors outputting up to 500 hp. The JUMBO comes with numerous patented technical innovations that the company states make harvesting a more efficient. The third generation of this high-performance series has also been given an appealing facelift. To keep the forage clean, the 7-row controlled floating pick-up with a working width of 2,300 mm ensures maximum performance for tidy and loss-free collection in a single pass. The pick-up's new hydraulically adjustable drive system adapts the speed automatically to the driving speed. There is less of a dragging effect and the jockey wheel steering system can be engaged to enable even better ground tracking.

Thanks to the POWERCUT short-length chopping system with an asymmetric array of 48 knives and a theoretical chopped length of 34 mm, this offers high quality forage. The long arc of the knives delivers a slicing cut along the full length of the blade and the forage is chopped right through exactly and uniformly. This makes the chopped material an ideally structured ruminant stimulating forage. The multi-purpose rotor loader wagon combines essential performance features for forage harvesting with those required for transport: highest throughput, clean crop intake, precise chopping quality, and high operational reliability for a loader wagon, and the flexibility and volume of a transport wagon. The new models have been engineered for tractors between 200 and 500 hp. This makes it the first loader wagon to reach the magical power limit of 500 hp, placing it well within the throughput capacity of a forage harvester.

According to the company, great attention has been paid to implementing a modern and innovative driveline concept: the driveline has a double wide-angle PTO shaft without a clutch and is powered by a Powerband. Optimum power transmission to the rotor is ensured by angular/planetary gears in the rotor drive. The Powerband delivers maximum power transfer in all operating conditions, offering smooth running and a damping effect in changing operating conditions. This protects the driveline and reduces maintenance and wear costs to a minimum.

75 per cent of the rotor's width is fitted with a new high-strength case-hardened steel that offers high wear resistance in areas subjected to a lot of wear. The company states that increases service life by 25 per cent. With the new unloading beater driveline that delivers 210 kW, unloading capacity has been increased by another third: unloading takes about 1 minute. The beater drive switch integrated into the angular gearbox is activated by the belt tensioner to ensure friction-locked start-up. The soft start protects not just the beater driveline elements but also the scraper floor drive and the chains. The innovative shape of beater rotor with a V-twist conveys the crop uniformly and with no power peaks. They reliably loosen even highly



compacted forage. The moveable front panel provides a significant increase in volume of 4.3 m³ for the same length of wagon. This also makes the loader wagon much more compact. It is now more manoeuvrable in small fields and on narrow field tracks.

The patented, intelligent front panel enables a unique loading and unloading strategy. Available as an option, its length of 830 mm means it has a particularly generously dimensioned upper forage compression flap. An additional dynamometer bolt is fitted in the intelligent front panel to enable a new control concept. The loading pressure is now measured at the front panel. With the combination of all measuring points (loading torque sensor, dynamometer bolt, compression flap sensor), the degree of compaction and the desired filling level can be directly regulated. As a result, the parameters can be perfectly adjusted to the forage harvesting requirements. With the active forage compression flap, unique loading rates of up to 400 kg/m³ can be achieved if required, depending on the DM content. Three predefined modes can be selected for loading, ranging from light loading to medium compression to high compaction, enabling adaptation to different types of crop, the dry matter content and the degree of filling. The POWER CONTROL system and the EXPERT 75 and CCI 1200 ISOBUS terminals replace the numerous implement-specific units on-board and enable professional operation of all ISOBUS-compatible machines, regardless of whether they were made by PÖTTINGER or other manufacturers.

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Prepare now for winter with an Abbey Machinery Diet Feeder

Diet feeding is a part of a sustainable, profitable, environmentally friendly way of farming. According to Abbey, their Diet Feeders' unique chopping and mixing action helps the animal to digest the maximum amount of nutrients from the feed they have eaten, to drive performance and even to reduce environmental emissions – from both nitrogen and methane. This raises feed efficiency improving milk and meat yield per kg dry matter intake. So, how does the supplementation of diet feed support increased sustainability? A spokesperson from Abbey explains that grass-grazed cows without a properly balanced diet can result in high emissions of ammonia; without a balanced diet the cow will excrete protein in their urine in a very volatile form resulting in high emissions of ammonia, which can lead to Sub Acute Ruminant Acidosis (SARA) and high ammonia emissions. "Using an Abbey Diet Feeder can help reduce this by balancing fermentable energy in feed. Creating a mix from cereal grains, fibre from high dry DMD, dry silage and chopped straw fed for a short period morning and evening pre-grazing can balance the qualities of good grass in a consistent manner reducing ammonia emissions. Abbey Diet Feeders provide mix quality and a unique tub design allowing for complete movement and mixing of feeds. Also integral to Abbey feeders is the raised top knife auger for faster breakdown of dry material to maintain consistent mix." "Abbey Machinery's feeders provide a unique low auger profile inflected top knife for



improved bale processing and mixing. In addition, there is a wider base for improved support, strength and working life. Abbey's long counter knife comes further up the feeder from the floor aiding a faster breakdown process of material. The doors in the feeder have a large opening for an even discharge of material. A balanced feeding approach allows the cow to utilise the qualities of good grass in a consistent manner while reducing ammonia emissions. A dry silage, straw and cereal based diet feeder mixed buffer feed offered to cows for 30 minutes morning and evening will ensure better rumen function. Diet feeding has significant advantages to both dry cow and milking cow health and production, it stimulates appetite whether at grass or indoors, aids cows in maximising their potential in terms of fertility and milk solids production. Use of native cereals and home-produced silages in buffer diets at grass help to make efficient environmentally friendly use of grass proteins."



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where, along with Michael Sheehan (PAC Chair), we had an early afternoon meeting that we expected would last about half an hour, but ran to almost the whole afternoon. It has to be said that after that meeting there was a marked change in Teagasc's attitude towards agricultural contractors.

Changing of the Guard

September will see the changing of the guard at Teagasc. After 14 years at the helm, Professor Gerry Boyle will step down from his role as leader. Best known to his staff as "the Director" he has led Teagasc with distinction since his appointment in 2007 when he joined on a seven-year contract, which was followed by two extensions. During this time, he has led Teagasc through many changes, from the CAP Reform, climate change and other legislation that had a direct impact on the services that Teagasc supply and, of course, the financial crash of 2009/10, which brought savage cuts to the Teagasc Budget. And, more recently, he has led the team during the Covid-19 situation, which I'm sure caused massive upheaval to training, advisory and research programmes. A 'no nonsense man' when he set targets, he expected them to be achieved. He motivated his staff of over 1,000 people and was well versed on the progress of all research and training projects and always gave credit to those involved. I often met with Gerry, along with our Chairman or indeed other agricultural contractors who had specific expertise. I remember one occasion

I met Gerry many times over the years at the Teagasc events to which I'd been invited and he would always greet everyone by name. He had no pretensions about his standing in Ireland or the European Union, or of the many honours he received during his time as Director, which include the Academic Palm from the Government of France, election as President of Euragri (the EU network for public agri-food research and innovation organisations) and for the last five years he has served as member of the Climate Change Advisory Council. Farmers and the wider agricultural sector will never know how much they are indebted to Gerry Boyle for his leadership of Teagasc. One only has to visit the Teagasc website and take a tour around all the different sections to realise the scale of Teagasc's work, much of which has been started under Gerry Boyle's leadership. I wish Gerry a long and enjoyable retirement and thank him on behalf of PAC Ireland for his years of progressive leadership. I must also welcome Professor Frank O'Mara as the new Director of Teagasc. Gerry will be a hard act to follow but I am sure that with your years of distinguished service within the organisation you will settle into your new role very quickly.

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VALTRA

Lemken drilling combination with front hopper

Lemken, the specialist for professional arable farming, has optimised the front hopper and coulters bar system: the latest innovations to the Solitaire 23+ front hopper and OptiDisc 25 coulters bar add even greater versatility to the Lemken range of seeding machines. The ISOBUS capabilities of the combination ensure precise, convenient adjustment as well as optimal utilisation of the machine fleet. ISOBUS technology is new in the Solitaire 23+.

Adjustments, for example to the seeding rate or width section control, can be made via the MegaDrill control on the tractor terminal. This takes strain off the operator and ensures the efficient use of consumables and seeding without overlap of up to four width sections.

Combined with the rotary harrow Zirkon 12 and the OptiDisc 25 coulters bar, the Solitaire 23+ front hopper forms a compact, agile drilling combination. This delivers a better distribution of weight compared to rear-mounted systems, allowing smaller tractors to be used for efficient drilling technology. The front hopper is suitable for both seeds and fertiliser. In addition to the 4 and 4.5 metre folding versions already on the market, the OptiDisc 25



coulters bar will be available in 3 and 4 metres rigid and 5 and 6 metres foldable versions. These new folding variants feature an additional transport system for road use. The transport support wheels take loads of up to 3.5 tonnes off the tractor's rear axle, ensuring that the tractor's maximum permissible axle load and gross weight are complied with. The proven parallelogram-controlled double disc coulters are at the heart of the OptiDisc 25 coulters bar and depth control rollers ensure seeds are placed precisely at the pre-set depth with both mulch and conventional tillage. Also, coulters pressure can be mechanically or hydraulically adjusted independently of the seed depth. The Solitaire 23+ front hopper is available now and the new OptiDisc 25 coulters bars from January 2022.

COMPACT-SOLITAIR PRECISE WITH HIGH IMPACT

Contact your local dealer to arrange demo of LEMKEN 3 meter Compact Solitaire.



The Compact-Solitaire can be used for both mulch and conventional plow seeding. It combines high impact with optimum seedbed preparation and can be combined with a wide range of tillage implements. Convince yourself of the many advantages:

- Large seed hoppers for high area output
- Versatile due to combination also with precision seeder Azurit
- Large volume wheels for optimum reconsolidation and precise depth control
- Optimum seedbed through use of power harrow/ compact disc harrow under all operating conditions
- Exact placement depth and optimum soil contact through OptiDisc double disc coulters

Kverneland 853 Pro Bale Chopper

The Kverneland 800 series range of choppers are designed to run smoothly, offer increased capacity, reach longer blowing distances and do the job in less time, by getting the bedding or feeding material to the "working heart" of the chopper as quickly and blockage free as possible. Flexible loading is provided by enabling loading either from the wide rear tailgate or from the top, handy if you want to load from a tractor. The hydraulically operated rear door provides a self-loading facility for easy loading of square and round bales. The FUNNEL design of the chamber ensures no sharp corners for material to accumulate and cause blockages.

The Drum Feed Control System (DFCS) patented system, is designed to handle even the most difficult material. It includes a powerful electric cylinder and a comb positioned above the drum. During loading the system is engaged, which means that the comb is in a lowered position, ensuring that blockages of the flywheel is minimised during

the loading and start up process. Once the flywheel speed is at a sufficient level, all you need to do is to push a button and the DFCS 'fingers' will be gradually disengaged and open for full flow through the flywheel resulting in perfect flow. The progressive release of the 'fingers' offers a more gentle start, protecting the machine and minimizing the risk of blockages. As a bonus, this system means excellent cleaning of the chamber after each operation.

Bolt on or off additional knives is a matter of minutes as required while at the flywheel, bolt on paddles can be easily replaced in under an hour if necessary. Once at the flywheel, with 6 paddles, there's generous room for material flow through the chute, while the 2 speed gearbox on high speed means plenty of power to blow further, between 18 and 20 metres for bedding or at lower speed for feeding purposes. The flywheel housing on the 863 model has been increased to 350mm to allow the maximum room for high capacity output.

The range starts from the mounted 852 model and trailed models 853 Pro up to 863 Pro and 864. As with all Kverneland machines, the range is covered by Kverneland's two-year warranty program.



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New Ceus 3000-TX and 4000-TX disc & tine combination cultivators

Amazone is now offering two new rigid models of its trailed Ceus disc & tine combination cultivator in working widths of 3m and 4m. The successful combination of discs and tines can therefore also be used on smaller farm sizes and with tractors from 150 HP. The new Ceus 3000-TX and Ceus 4000-TX are equipped with central running gear and impress with their precision and versatility for both stubble and primary soil tillage, deep loosening and seedbed preparation.

According to the company, the combination of discs and tines means that the Ceus produces a perfect mix at working speeds of up to 15 km/h. Straw, stubble or catch crops are finely shredded by the up-front discs and then, in conjunction with the following tine segment, the organic matter is evenly mixed, even where large quantities prevail. The leading disc element is equipped with large diameter discs which shred the organic matter and leave a fine crumbed soil structure for optimum sowing conditions. The discs are available in smooth and serrated versions and the stone release system via rubber spring elements is maintenance-free.

With a tine spacing of 40cm, the company states that the following tine segment reliably incorporates any organic matter and is easy to pull while maintaining a high level of through-passage. The depth of the tines can be adjusted down to 30 cm. However, it is also possible to work

shallowly, so that the point runs just below the working depth of the disc harrow in wet and heavy conditions. This loosens the horizon and creates a rough structure in the soil, thereby significantly reducing the risk of capping on these types of soil.

A selection of different C-Mix shares is available for the tine segment. Plus, the C-Mix Clip quick-change system, which enables the points to be exchanged easily and conveniently, is also offered. Various hard-wearing HD shares are also available for an extended service life. The C-Mix Super tines are equipped with a pressure spring overload safety protection system for high levels of operational reliability.

As an option, the new C-Mix Ultra tines with automatic overload protection via hydraulic cylinders can also be specified for the Ceus-TX. Here, the trip force can be infinitely adjusted up to 800kg. On the one hand, this ensures that the desired working depth of up to 30cm is precisely maintained. Whereas on the other, the C-Mix Ultra system protects the cultivator from extreme loads by means of highly-damped resetting of the tine after tripping. The tine segment is followed by a set of levelling tools, which can be equipped with smooth or serrated discs or spring tine levellers from choice. The height and inclination of the side discs can be adjusted separately to ensure optimum match up from bout to bout.



In the field

Noel Dunne chats to Patsy Condron from Ballylinan about the performance of the new Claas Lexion 5400.

As the 2021 harvest sprang into action, I took to the fields to catch up farmer Patsy Condron, who had taken delivery of a new combine for the season. Patsy, from Ballylinan, farms and operates a contracting business. A few days previous, Patsy had just taken delivery from Wayne Barry from Kellys of Laois a new Claas Lexion 5400. This combine is new to the UK and Ireland and, as I travel along with Patsy in the cab, he fills me in on its performance. "The main reason I buy Claas is because of the service and the back-up I get from Kelly's of Laois." On the performance of the combine he finds it 20 per cent quieter than the last model, noting that it is faster and more fuel efficient. The new drum system, he says, is bigger and flattens the crop as it comes in, making it flow more evenly through the machine. This makes for more output in a day, and better grain and straw quality ultimately, which is what both farmers and contractors want. In the cab, Patsy shows me on screen how the combine and crop is performing.

This is a fully telematic system that both talks to the farmer and dealer. This is a very important development in combines and the information gathered will help yield mapping and crop management going forward, as well as allowing the dealer to keep a eye on how the machine is performing. The on-screen data was showing us that moisture was 15 per cent, yield was at 4.2 tons per acre and we were travelling at a speed of 3.5 kilometers per

hour.

"This machine is completely different to my last machine. I like a lot of things about it: the cab is bigger and quieter, the new air flow system is better and the new drum system is better, even though I am only on it a few days I have found it easy to operate." This machine has a grain tank capacity of 10,000 litres and runs on a Mercedes 340hp engine. There are five models available in the 5000 series. The new threshing system sees the drum increase from 600mm on the old machine to 755mm on the new machines. This, along with the APS SYNFLOW WALKER system, (accelerated pre separation) offers better straw quality with less stress on the system making the combine more fuel efficient.

This year, the harvest got off to a great start with conditions excellent for harvesting.

Yields are up and straw is in good condition. Grain and straw price are also strong. Sales of new combines this year look likely to be up. When I spoke to some operators around the country I asked them when do they change a combine? The answer was generally if you are doing a 1,000 acres + a year and you have a machine financed over a 5 or 7 years it is wise to keep the machine up-to-date and to keep the maintenance as low as possible. There is no money in being stopped in the middle of the harvest. There has also been a strong demand for second-hand combines, with farmers in some cases opting to buy their own machine now as in the past weather has been a major factor and being dependant on the local contractor often resulted in farmers having to wait to get cut.



Manual Handling: Protect your Back



Ciaran Roche, FBD's Risk Manager
FBD Insurance, outlines the risks
involved in manual handling on
the farm

The modern farm is a very different working environment to the one our ancestors worked on a hundred years ago, with mechanical aids available to assist in almost every task. Despite this, every farmer will typically have a working day that includes some element of manual handling. Manual handling involves the lifting, putting down, pushing, pulling, carrying or moving of a load, where there is a risk of injury, particularly of back injury.

Injuries due to manual handling activity are the most common cause of workplace injury in Ireland. These injuries represent almost one third (29%) of all non-fatal accidents reported to the Health and Safety Authority.¹ With this in mind, FBD is reminding you to “watch your back”, and think twice before carrying out manual handling activity. In particular, you should think logically and plan work activities in order to avoid and reduce manual handling activities. Ask yourself if it can be done differently to minimize the distance travelled, or the weight of the

load, or the twisting movements required. Where manual handling can't be avoided use mechanical aids such as a trolley. Several manual handling jobs on the farm need more than one person, if this is the case, ask for help if you need it. Don't put you back at risk, it's not worth it.

If you're planning to build a new milking parlour, hay shed or other building on your farm, think about this at design stage. How can it be designed in a way that will reduce the amount of manual handling needed?

When you're buying products such as cement bags, calf nuts or anything else which may need to be handled check if it comes in a smaller size, which would reduce the risk to your back. It's a good idea to attend a manual handling training course and learn how to lift safely, but remember this course is not the solution for all manual handling ills, as training on its own will not prevent injury. The only sure way is to plan ahead and use logical thinking in advance of tasks, to reduce or eliminate manual handling at source.

For further information and advice on manual handling, visit the Health and Safety Authority website.

¹www.hsa.ie/eng/publications_and_forms/publications/corporate/annual_review_of_workplace_injury_illness_and_fatality_statistics_2018-2019.pdf

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Measurable progress on river quality should not be watered down

By now everyone connected to farming or the wider agri-food sector will be familiar with the general media reaction to any story or development concerning farmers and the environment. We have been cast as the 'panto baddie' and the overwhelming majority of coverage will reflect that unfair and inaccurate caricature. No opportunity is missed to link farming or farm-related activity to a perceived deterioration in the environment while a studied silence is maintained where other actors are concerned. Neither do we often find the non-farming media making the essential connection between farming and the availability of superb quality foods in our shops and markets at historically affordable low prices.

In order for farmers to remain the environmental 'fall guy' and the popular scapegoat for environmental outrage, it's necessary to maintain the fiction that farming and the food in our supermarkets are two separate elements – as if the food magically appeared there on the shelves.

I have pointed out this disconnect repeatedly. I will not allow the myth that holds the farmers – and the farmers alone – as somehow responsible for everyone else's role in an increasingly unsustainable and lop-sided supply-chain. ICMSA has never denied our role and our duty in doing what's within our power to tackle climate change.

But we will not now, nor ever, allow this fantasy that we farmers can, or should, carry the environmental can for everyone else from our farm gates to their fridges.

As part of that commitment, we watch very carefully the reporting on, for instance, water quality. It's been very instructive down through the years to read report after report from the various arms and agencies of Government criticising declining water quality and attributing it to farmers, while buried in the back pages of local newspapers we find local councils accused of untreated discharges of a scale and duration that would have had any individual farmers the focus of swooping inspectors.

That's why we were so struck by the reportage – or non-reportage – around the publication of the EPA 2020 Water Quality Report. The report's findings were categorical: while challenges remain and while vigilance must remain high, undeniable progress has been made. What was even more interesting was the relationship between better water quality and initiatives like ASSAP, GLAS and TAMS. Where we all get on the same page and where the official response is not just heaping more and more regulation onto the farmers then real meaningful progress can and is being made.

There are challenges and they will be dealt with, but 89 per cent of rivers have satisfactory BOD levels. On P levels, 71 per cent of rivers have satisfactory levels. On N levels, it's 53 per cent. We're not where we want to be yet and ICMSA will work towards making those figures better. But progress has been made and it should be acknowledged. If we work together in a co-operative and feasible way that takes account of real practical day-to-day farming, then I have no doubt that we can all move forward. The answer is assuredly not more and more regulation and the further stereotyping of farming as the 'panto baddies' of the environmental debate.

On the subject of everyone playing – or paying – their part in the transition to lower emissions farming and food production, a perfect example is provided by the costings increase announced recently for TAMS. DAFM deemed a rise in costings of approximately 10 per cent as appropriate. Meanwhile, construction costs have risen by three to four times that over the last 18 months. This is precisely the kind of non-response that makes all of us committed to the successful transition of Irish farming to lower emissions hold our heads in wonder and despair. TAMS has been an unqualified and indisputable success. It is – almost literally – a grassroots dairy moderniser and has moved countless dairy farmers onto a much more sustainable basis through better buildings and layout. Everyone understands it and everyone respects its ambition and results. Here is a scheme that has worked efficiently in a way that improves individual dairy farms as well as benefitting our national sustainability and environmental targets. Why would we not keep that going? Answers on a postcard to Kildare Street.



ACORNS, the development initiative aimed at supporting early-stage female entrepreneurs living in rural Ireland, has launched a call for applications for the latest cycle – ACORNS 7.

The call for applications for those with new businesses, or well-developed ideas, to join the Government-backed programme was announced by the Minister for Agriculture, Food and the Marine, Charlie McConalogue. A total of 50 new entrepreneurs will be selected and the free initiative will run over six months from October 2021 to April 2022 with the deadline for applications midnight on September 10, 2021.

According to the Department, career change is a strong trend in new female-led businesses being established in rural Ireland: “Among the 50 new businesses that took part in the last cycle of ACORNS during the Covid-19 pandemic, many changed their career direction completely to establish their businesses. A desire to make lifestyle changes was a common thread among the participants. Resilience and flexibility – especially during the challenging economic circumstances – was particularly evident.

There was great variety and diversity in the new businesses.” Entrepreneurial spirit

ACORNS (Accelerating the Creation Of Rural Nascent Start-ups) is funded under the Department’s Rural Innovation and Development Fund. Programme organisers are looking for female entrepreneurs living in rural Ireland, who wish to start and develop new businesses or who have recently started a venture.

Based on a belief that entrepreneurs learn best from each other, ACORNS is centred on interactive round table sessions facilitated by successful female entrepreneurs who have started and grown businesses in rural Ireland. These are known as ACORNS Lead Entrepreneurs, and they give their time free of charge to encourage and support the new business owners. There is no charge for those participating in ACORNS. This year’s voluntary Lead Entrepreneurs are Anne Reilly, PaycheckPlus; Caroline Reidy, The HR Suite; Eimer Hannon, Hannon Travel; Larissa Feeney, Accountant Online; Mary B Walsh, Ire Wel Pallets; Norma Dinneen, Bó Rua Farm and Triona MacGiolla Rí, Aró Digital Strategies. In addition, Monica Flood, formerly Olas IT and a Going

Pictured at the launch with Charlie McConalogue TD, Minister for Agriculture, Food and the Marine, are (l-r) Larissa Feeney, Accountant Online and ACORNS Lead Entrepreneur, and ACORNS previous participants Joanne Butler, OURganic Gardens and Anna Carmody, Little RED Edu.
Photo: James Connolly

for Growth Lead Entrepreneur, will facilitate an ACORNS Plus round table for selected previous participants who are committed to driving forward the growth of their businesses. Significant growth

The previous cycle of the programme was held during nationwide restrictions to reduce the spread of the Covid-19 pandemic. According to the Department, despite the challenges that they were facing the participants in the previous cycle were very positive, and their businesses grew. Over the six-month period of the programme, the combined turnover of the overall group doubled from €1.8 million to €3.6 million. Six new businesses started to trade during the programme and there were seven new exporters. At the end of the cycle, the participants employed 107 people, an increase of 29. A further 150 past participants were actively involved in other Community aspects of the initiative during the sixth cycle.

Commenting at the launch, Charlie McConalogue T.D., Minister for Agriculture, Food and the Marine, said: "Along with my Department, I am delighted to be in a position to support such a successful and progressive initiative. Now in its seventh year, and going from strength to strength, ACORNS continues to support early stage female entrepreneurs living in rural Ireland. This innovative programme is funded through the Rural Innovation and Development Fund. Over 300 female entrepreneurs have taken part in ACORNS to date and a significant proportion of these are still actively involved. The progress made by participants in previous years has been remarkable, with many reporting increased sales, exports and job creation. This is an incredible opportunity and a wonderful support for rural-based female entrepreneurs, particularly in the current environment and I encourage those who have recently started or are about to start a new business to apply to participate in this very exciting initiative."

Larissa Feeney, Accountant Online and one of the Lead Entrepreneurs, said: "Starting a new business may seem like a lonely road. It is so important to realise that you are not alone in the challenges that you are facing as an early stage entrepreneur and that your problems are not unique. The ACORNS round tables really help here in building confidence, motivation and sharing insights. While the businesses are all different, the issues that they encounter are often similar."

Fitzsimons Consulting, specialising in entrepreneurship and growth, developed the initiative. Founder Paula Fitzsimons noted: "What the ACORNS participants achieved during the last cycle in challenging circumstances was remarkable – new sales, additional employees, and new exporters. We are delighted that, through the support of the Minister and his Department, we are in a position through ACORNS to continue to support entrepreneurial women in rural Ireland, as they start and develop their businesses."

Any woman with a new business based in rural Ireland – or a well-developed idea for a new venture they want to get off the ground – can get more information and register to receive an

Eligibility Criteria

To be considered for ACORNS, applicants must:

- ▶ Have set up a new business which has generated sales no earlier than the 1st January 2019; or be actively planning a new venture and have made good progress towards getting the new venture off the ground. Indicators of actively planning a business would include organising the start-up team, sourcing equipment / facilities, money saved for the start-up, writing the business plan, etc.
- ▶ They must own or part-own the business which must be located in a rural area, that is in an area outside the administrative city boundaries of Dublin, Cork, Galway, Limerick and Waterford.
- ▶ If selected, applicants must be available to attend the launch Forum and first round table session on 11th and 12th October, 2021. It is hoped that this can take place in person, subject to prevailing circumstances and government guidelines.
- ▶ They must expect to become an employer within three years.

Foodforthought

Minister Pippa Hackett's ideological purity cannot be impuned. Last month the Minister of State said that: "The world does not need Ireland to feed it". The Minister's full statement was more nuanced than the headline statement suggested in her call for a balance to be struck between production and environmental protection. The issues of food production and environmental protection are not exclusive. However, the question arises as to whether someone else should feed the 40 million people we provide food for? Is it the case that the anonymous 'they' should not be allowed to make up their own minds what they eat, even if well respected dietary professionals including Dr Alice Stanton (see July IFM) advocate a balanced diet including meat and dairy to sustain a healthy body and mind. A balanced diet, or a balanced debate for that matter, it seems, isn't always on the table. Should a varied diet, including all the choices on the Food Pyramid, not be an option for those who want to eat what we produce (there are more of them every year)?

Last January Minister Hackett attended a virtual gathering of agriculture ministers for a global forum for food and agriculture. Top of the agenda was – surprise, surprise – feeding the world. Global hunger is on the increase. According to the World Food Programme of the United Nations, the number of people experiencing ongoing food insecurity has doubled from 130 million to 270 million, with more than 30 million suffering from hunger. The Covid pandemic is believed to have

added an additional 130 million more people into the chronically hungry category, including an extra seven million children severely undernourished. The Berlin Summit attendees, including Pippa Hackett, committed to safeguarding global food security.

The Minister of State's interpretation of this commitment does not appear to involve Irish food producers continuing to make their current contribution to global food security by exporting enough food to feed 40 million people. The double-think involved in these international commitments to safeguarding global food security is nowhere more evident than in the EU's Farm to Fork initiative. The USDA has estimated that reducing inputs and intensiveness to the extent proposed under Farm to Fork would lower EU food production by at least 10 per cent.

The US Agriculture Department further emphasised the impact of Farm to Fork by estimating that the EU's plan would increase the numbers of people going hungry every day by 22 million. This is at the same time as arable land is becoming less available as it is increasingly utilised for habitation and as freshwater resources diminish further in countries already in deficit. The German agriculture minister Julia Klöckner admitted at the Berlin Summit that one fifth of the countries across the globe do not have enough land or resources to feed their populations. They rely on countries like Ireland to produce surplus food and export it to countries that have a food production deficit.





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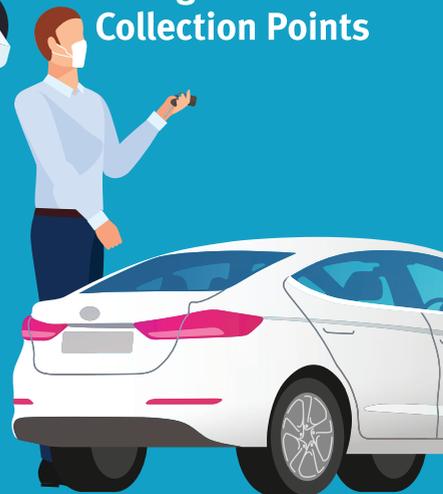
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